INTERACTIVE BROKERS LLC AGREEMENTS AND DISCLOSURE DOCUMENTS

The documents in this package contain the terms and conditions of your customer account with Interactive Brokers LLC and also contain important information regarding the risks and characteristics of the securities, commodities and other investment products that may be traded in your account. Please read all of these documents carefully.

This package contains:

- **Interactive Brokers LLC Customer Agreement**
- **Futures Arbitration Agreement**
- **Options Clearing Corporation Characteristics and Risks of Standardized Options**
- **Disclosure of Risks of Margin Trading**
- **Portfolio Margin Risk Disclosure Statement**
- **Risk Disclosure Statement for Futures and Options Pursuant to CFTC Rule 1.55(c)**
- **CFTC Rule 15.05 Notice to Non-U.S. Traders**
- **Disclosure Regarding IB's Procedures for Allocating Equity Option Exercise Notices**
- **Day Trading Risk Disclosure**
- **Risks of After-Hours Trading**
- **Disclosure Concerning Auto Trading Service Providers**
- **Master Securities Lending Agreement for Interactive Brokers LLC Fully-Paid Lending Program**
- **Agreement and Limited Power Of Attorney For Participation in Interactive Brokers Stock Yield Enhancement Program**
- **Disclosure Regarding Interactive Brokers Pre-Borrow Program**
- **Disclosure Regarding IB's Business Continuity Plan**
- **Interactive Brokers Group Privacy Statement**
- **Required Disclosures and Supplemental Agreement for Security Futures Trading at Interactive Brokers**
- **FINRA/NFA Disclosure for Security Futures Trading**
- **Disclosure for Bond Trading**
- **General Disclosure on Mutual Funds**
- **Disclosure Regarding Leveraged & Inverse Funds**
- **ISE Disclosure for Option Orders Over 500 Contracts**
- **Disclosure Regarding Floor/Pit Based Exchanges**
- **Order Routing and Payment for Order Flow Disclosure**
- **Notice Regarding Pre-Arranged Trades on U.S. Futures Exchanges**
- **Interactive Brokers LLC Australian Financial Services Guide**
- **Interactive Brokers LLC Australian Product Disclosure Statement for Futures and ASX CFDs**
- **Interactive Brokers LLC Australian Product Disclosure Statement for Exchange Traded Options**
- **Interactive Brokers LLC Australian Product Disclosure Statement for Foreign Exchange Contracts**
- **Trading on ASX 24 Customer Agreement**
- **Supplemental Agreement & Disclosures for Trading on the Australian Stock Exchange Limited**
- **ASX Explanatory Booklet: Understanding Options Trading**
- **ASX Explanatory Booklet: Understanding CFDs**
- **Interactive Brokers LLC Australian Best Execution Policy**
- **NYSE Euronext Risk Disclosure**
- **Hong Kong Additional Provisions**
- **Hong Kong Risk Disclosure Statements**
- **Hong Kong Client Standing Authorities**
- **Notice Regarding NFA's BASIC System**
- **FINRA Investor Protection Information Resources**
- **Risk Disclosure Statement for Forex Trading and IB Multi-Currency Accounts**
- **Anti-Money Laundering Notices**

  Trustee Certification

For IRA Account Holders:

- **Interactive Brokers LLC IRA Agreement**
- **Interactive Brokers LLC Roth IRA Agreement**
- **Principal Trust Company Disclosure Statement for Traditional IRA, SEP-IRA and SIMPLE IRA Accounts**
- **Principal Trust Company Disclosure Statement for Roth IRA Accounts**
- **Principal Trust Company Self-Directed Individual Retirement Trust Agreement & Amendment**
- **Privacy Notice of Principal Trust Company**
- **Internal Revenue Service letter dated 07/29/2003 approving the Delaware Charter Guarantee & Trust Co. Traditional IRA and Roth IRA Trust**

Notice Regarding Anti-Money Laundering and Customer Identification Procedures: To help the U.S. government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to obtain, verify, and record information that identifies each person or entity who opens an account. We are required by law to ask you to provide your name, address, date of birth and other information about you, your organization or persons related to your organization that will allow us to identify you before we approve your account. We also will ask you to provide certain identifying documents, such as your driver's license or passport or your organization's articles of incorporation and may obtain credit and other consumer reports to assist us in verifying your identity and in determining whether you satisfy our account criteria. Unless you provide the requested information and documentation, we may not be able to open your account. By applying for an IB account, you agree to provide accurate and truthful information as requested by IB and you consent to IB's acquisition of credit and other consumer reports about you for the purposes described above.

Interactive Brokers LLC Customer Agreement

1. Customer Agreement: This Agreement ("Agreement") governs the relationship between Customer and Interactive Brokers LLC ("IB"). If this Agreement varies from the IB website, this Agreement controls. This Agreement cannot be amended or waived except in writing by an IB officer. Customer Service employees cannot amend or waive any part of this Agreement. Customer acknowledges that IB may revise this Agreement by sending notice of the revised Agreement by e-mail or upon Customer log-in. Customer's use of IB after such notice constitutes acceptance of the revised Agreement.

2. No Investment, Tax or Trading Advice: IB representatives are not authorized to provide investment, tax or trading advice or to solicit orders. Nothing on IB's website is a recommendation or solicitation to buy or sell securities, futures or other investments.

3. Responsibility for Customer Orders/Trades: **Customer acknowledges that IB does not know whether someone entering orders with Customer's user name/password is Customer. Unless IB is notified and agrees, Customer will not allow anyone to access Customer's account. Customer is responsible for the confidentiality and use of Customer's user name/password and agrees to report any theft/loss of such user name/password, or any unauthorized access to Customer's account, immediately by telephone or electronically through the IB website. Customer remains responsible for all transactions entered using Customer's user name/password.**

4. Order Routing: Unless otherwise directed, IB will select the market/dealer to which to route Customer's orders. For products traded at multiple markets, IB may provide "Smart Routing", which seeks the best market for each order through a computerized algorithm. Customer should choose Smart Routing if available. If Customer directs orders to a particular market, Customer assumes responsibility for knowing and trading in accordance with the rules and policies of that market (e.g., trading hours, order types, etc.). IB cannot guarantee execution of every order at the best posted price: IB may not have access to every market/dealer; other orders may trade ahead; market centers may not honor posted prices or may re-route orders for manual handling; or market rules, decisions or system failures may prevent/delay execution of Customer's orders or cause orders not to receive the best price.

5. Order Cancellation/Modification: Customer acknowledges that it may not be possible to cancel/modify an order and that Customer is responsible for executions notwithstanding a cancel/modify request.

6. Order Execution: IB shall execute Customer orders as agent, unless otherwise confirmed. IB can execute Customer orders as principal. IB may use another broker, or an affiliate, to execute orders, and they have benefit of all IB's rights hereunder. IB may decline any Customer order, or terminate Customer's use of IB's services at any time in IB's discretion. All transactions are subject to rules and policies of relevant markets and clearinghouses, and applicable laws and regulations. IB IS NOT LIABLE FOR ANY ACTION OR DECISION OF ANY EXCHANGE, MARKET, DEALER, CLEARINGHOUSE OR REGULATOR.

7. Confirmations:

A. Customer agrees to monitor each order until IB confirms execution or cancellation. Customer acknowledges that confirmations of executions or cancellations may be delayed or may be erroneous (e.g. due to computer system issues) or may be cancelled/adjusted by an exchange. Customer is bound by the actual order execution, if consistent with Customer's order. If IB confirms execution or cancellation in error and Customer delays reporting such error, IB reserves the right to remove the trade from the account or require Customer to accept the trade, in IB's discretion.

B. Customer agrees to notify IB immediately by telephone or electronically through the IB website if: i) Customer fails to receive an accurate confirmation of an execution or cancellation; ii) Customer receives a confirmation that is different than Customer's order; iii) Customer receives a confirmation for an order that Customer did not place; or iv) Customer receives an account statement, confirmation or other information reflecting inaccurate orders, trades, balances, positions, margin status or transaction history. Customer acknowledges that IB may adjust Customer's account to correct any error. Customer agrees to promptly return to IB any assets erroneously distributed to Customer.

8. <u>Proprietary Trading - Display of Customer Orders:</u> Subject to all laws and regulations, Customer authorizes IB to execute proprietary trades of itself and its affiliates, though IB may simultaneously hold unexecuted Customer orders for the same products at the same price.

9. <u>Customer Qualification:</u> Customer warrants that his, her or its application is true and complete; will promptly notify IB of any information changes; and authorizes IB to make any inquiry to verify information.

A. <u>Natural Persons:</u> Customer warrants that Customer is over 18; is under no legal incapacity; and has sufficient knowledge and experience to understand the nature and risks of the products to be traded.

B. <u>Organizations:</u> Customer and its authorized representatives warrant that Customer: (i) is authorized under its governing document(s) and in the jurisdictions in which it is organized and/or regulated to enter this Agreement and trade (including on margin if applicable); (ii) is under no legal incapacity; and (iii) that persons identified to enter orders have proper authority and have sufficient knowledge and experience to understand the nature and risks of the products to be traded.

C. <u>Trusts:</u> "Customer" refers to the Trust and/or Trustees. Trustee(s) represent(s) that there are no Trustees other than listed in the application and certifies(y) that IB may follow instructions from any Trustee and deliver funds, securities, or any other assets to any Trustee or on any Trustee's instructions, including delivering assets to a Trustee personally. IB, in its discretion, may require written consent of any or all Trustee(s) prior to following instructions of any Trustee. Trustee(s) certify that Trustee(s) has (have) the power under the Trust documents and applicable law to enter this Agreement, open the type of account applied for, and enter transactions and issue instructions. Such powers include, without limit, authority to buy, sell (including short), exchange, convert, tender, redeem and withdraw assets (including delivery of securities to/from the account) to trade securities on margin or otherwise (including purchase/sale of options), and trade futures and/or options on futures, for the Trust. Should only one Trustee execute this Agreement, Trustee represents that Trustee has the authority to execute this Agreement, without consent by the other Trustees. Trustee(s) certifies(y) that all transactions for this account will comply with the Trust documents and applicable law and that all trading in this Account will be consistent with the powers delegated to the Trustee(s) by the Trust document(s) and with the fiduciary duties of the Trustee(s) to the Trust and/or the beneficiary(ies) of the Trust. Trustee(s) also certifies(y) that Trustee(s) will inform any beneficiary(ies) of the Trust of the activity in the Trust's account(s) as required by the Trust document and applicable law. Trustee(s), jointly and severally, shall indemnify IB and hold IB harmless from any claim, loss, expense or liability for effecting any transactions, and acting upon any instructions given by the Trustee(s). Trustee(s) will notify Interactive promptly if the authority of the Trustee(s) change in any manner material to this Agreement, including but not limited to any change affecting the accuracy of any warrants made herein.

D. <u>Regulated Persons and Entities:</u> Unless Customer notifies IB otherwise, Customer represents that Customer is not a broker-dealer; futures commission merchant; or affiliate, associated person or employee thereof. Customer agrees to notify IB immediately by telephone or electronically through the IB website if Customer becomes employed or associated with a broker-dealer or futures commission merchant.

10. <u>Joint Accounts:</u> Each joint account holder agrees that each joint holder has authority, without notice to the other, to: (i) buy/sell securities, futures or other products (including on margin); (ii) receive account confirmations and correspondence; (iii) receive and dispose of money, securities or other assets; (iv) enter, terminate, or agree to modify this Agreement; (v) waive any part of this Agreement; and (vi) deal with IB as if each joint holder was the sole holder. Notice to any joint holder constitutes notice to all joint holders. Each joint account holder is jointly and severally liable to IB for all account matters. IB may follow instructions of any joint holder and make delivery to any joint account holder individually of any account property.

Upon death of any joint holder, the surviving holder shall give IB notice by telephone or electronically through the IB website and IB may, before or after notice, initiate proceedings, require documents, retain assets and/or restrict transactions as it deems advisable to protect itself against any liability or loss. The estate of any deceased joint account holder shall be liable and each survivor will be liable, jointly and severally, to IB for any debt or loss in the account or upon liquidation of the account. Unless Customers indicate otherwise, IB may presume that account holders are joint tenants with rights of survivorship. Upon death of any joint holder, the account shall be vested in the surviving holders, without in any manner releasing the deceased joint holder's estate from liability.

11. Margin:

A. Risk of Margin Trading: **Margin trading is highly risky and may result in a loss of funds greater than Customer has deposited in the account. Customer represents that he or she has read the "Disclosure of Risks of Margin Trading" provided separately by IB.**

B. Requirement to Maintain Sufficient Margin Continuously: Margin transactions are subject to initial and maintenance margin requirements of exchanges, clearinghouses and regulators and also to any additional margin requirement of IB, which may be greater ("Margin Requirements"). IB MAY MODIFY MARGIN REQUIREMENTS FOR ANY OR ALL CUSTOMERS FOR ANY OPEN OR NEW POSITIONS AT ANY TIME, IN IB'S SOLE DISCRETION. Customer shall monitor his, her or its account so that at all times the account contains sufficient equity to meet Margin Requirements. IB may reject any order if the account has insufficient equity to meet Margin Requirements, and may delay processing any order while determining margin status. Customer shall maintain, without notice or demand, sufficient equity at all times to continuously meet Margin Requirements. Formulas for calculating Margin Requirements on the IB website are indicative only and may not reflect actual Margin Requirements. Customer must at all times satisfy whatever Margin Requirement is calculated by IB.

C. IB Will Not Issue Margin Calls: **IB does not have to notify Customer of any failure to meet Margin Requirements prior to IB exercising its rights under this Agreement. Customer acknowledges that IB generally will not issue margin calls; generally will not credit Customer's account to meet intraday or overnight margin deficiencies; and is authorized to liquidate account positions in order to satisfy Margin Requirements without prior notice.**

D. Liquidation of Positions and Offsetting Transactions:

i. IF AT ANY TIME CUSTOMER'S ACCOUNT HAS INSUFFICIENT EQUITY TO MEET MARGIN REQUIREMENTS OR IS IN DEFICIT, IB HAS THE RIGHT, IN ITS SOLE DISCRETION, BUT NOT THE OBLIGATION, TO LIQUIDATE ALL OR ANY PART OF CUSTOMER'S POSITIONS IN ANY OF CUSTOMER'S IB NON-IRA ACCOUNTS, INDIVIDUAL OR JOINT, AT ANY TIME AND IN ANY MANNER AND THROUGH ANY MARKET OR DEALER, WITHOUT PRIOR NOTICE OR MARGIN CALL TO CUSTOMER. CUSTOMER SHALL BE LIABLE AND WILL PROMPTLY PAY IB FOR ANY DEFICIENCIES IN CUSTOMER'S ACCOUNT THAT ARISE FROM SUCH LIQUIDATION OR REMAIN AFTER SUCH LIQUIDATION. IB HAS NO LIABILITY FOR ANY LOSS SUSTAINED BY CUSTOMER IN CONNECTION WITH SUCH LIQUIDATIONS (OR IF THE IB SYSTEM DELAYS EFFECTING, OR DOES NOT EFFECT, SUCH LIQUIDATIONS) EVEN IF CUSTOMER RE-ESTABLISHES ITS POSITION AT A WORSE PRICE.

ii. IB may allow Customer to pre-request the order of liquidation in event of a margin deficiency, but such requests are not binding on IB and IB retains sole discretion to determine the assets to be liquidated and the order/manner of liquidation. IB may liquidate through any market or dealer, and IB or its affiliates may take the other side of the transactions consistent with laws and regulations. If IB liquidates any/all positions in Customer's account, such liquidation shall establish Customer's gain/loss and remaining indebtedness to IB, if any. Customer shall reimburse and hold IB harmless for all actions, omissions, costs, fees (including, but not limited to, attorney's fees), or liabilities associated with any such transaction undertaken by IB. If IB executes an order for which Customer did not have sufficient equity, IB has the right, without notice, to liquidate the trade and Customer shall be responsible for any resulting loss and shall not be entitled to any resulting profit.

iii. If IB does not, for any reason, liquidate under-margined positions, and issues a margin call, Customer must satisfy such call immediately by depositing funds. Customer acknowledges that even if a call is issued, IB still may liquidate positions at any time.

iv. Customer acknowledges that IB also has the right to liquidate all or part of Customer's positions without prior notice: (i) if any dispute arises concerning any Customer trade, (ii) upon any "Default" as described in 16 below, or (iii) whenever IB deems liquidation necessary or advisable for IB's protection.

12. Universal Accounts: An IB Universal Account is two underlying accounts: an SEC-regulated securities account and a CFTC-regulated commodity account. Customer authorizes transfers between the securities and commodity accounts to cover Margin Requirements and other obligations, and acknowledges IB may liquidate positions to cover obligations in the other account. Customer authorizes IB to provide combined confirmations/statements for both accounts. **Customer acknowledges that only assets in the securities account are covered by SIPC protection and excess coverage and not assets in the commodity account.**

13. Short Sales: Customer acknowledges that short sales must be done in a margin account, subject to Margin Requirements; that prior to selling short, IB must believe it can borrow stock for delivery; and that if IB cannot borrow stock (or re-borrow after a recall notice) IB may buy-in stock on Customer's behalf, without notice to Customer, to cover short positions and Customer is liable for any losses/costs.

14. IB's Right to Loan/Pledge Customer Assets: As allowed by law, IB is authorized by Customer to lend to itself or others Customer securities or assets. IB may, without notice, pledge, re-pledge, hypothecate or re-hypothecate Customer's securities and assets, separately or together with those of other customers, for any amount due in any IB account in which Customer has an interest, without retaining in IB's possession or control a like amount of assets. For loans of securities, IB may receive financial and other benefits to which Customer is not entitled. Such loans could limit Customer's ability to exercise securities' voting rights.

15. Security Interest: All assets of any kind held by or on behalf of IB for Customer's account are hereby pledged to IB and are subject to a perfected first priority lien and security interest in IB's favor to secure performance of obligations and liabilities to IB arising under this or any other Agreement.

16. Event of Default: A "Default" occurs automatically, without notice upon: (i) Customer breach/repudiation of any agreement with IB; (ii) Customer failure to provide assurance satisfactory to IB of performance of an obligation, after request from IB in IB's sole discretion; (iii) proceedings by/against Customer under any bankruptcy, insolvency, or similar law; (iv) assignment for the benefit of Customer's creditors; (v) appointment of a receiver, trustee, liquidator or similar officer for Customer or Customer property; (vi) Customer representations being untrue or misleading when made or later becoming untrue; (vii) legal incompetence of Customer; (viii) proceeding to suspend Customer's business or license by any regulator or organization; (ix) IB having reason to believe that any of the foregoing is likely to occur imminently.

Customer unconditionally agrees that, upon a Default, IB may terminate any or all IB's obligations to Customer and IB shall have the right in its discretion, but not the obligation, without prior notice, to liquidate all or any part of Customer's positions in any IB account, individual or joint, at any time and any manner and through any market or dealer. Customer shall reimburse and hold IB harmless for all actions, omissions, costs, fees (including, but not limited to, attorney's fees), or liabilities associated with any Customer Default or any transaction undertaken by IB upon Default.

17. Suspicious Activity: If IB in its sole discretion believes that a Customer account has been involved in any fraud or crime or violation of laws or regulations, or has been accessed unlawfully, or is otherwise involved in any suspicious activity (whether victim or perpetrator or otherwise), IB may suspend or freeze the account or any privileges of the account, may freeze or liquidate funds or assets, or may utilize any of the remedies in this Agreement for a "Default".

18. Multi-Currency Function in IB Accounts:

A. Customers may be able to trade products denominated in different currencies using a base currency chosen by Customer. Upon purchase of a product denominated in a different currency from the base currency, a margin loan is created to fund the purchase, secured by the assets in Customer's accounts. If Customer maintains positions denominated in foreign currencies, IB will calculate Margin Requirements by applying exchange rates specified by IB. IB WILL APPLY "HAIRCUTS" (A PERCENTAGE DISCOUNT ON THE FOREIGN CURRENCY EQUITY AMOUNT) TO REFLECT THE POSSIBILITY OF FLUCTUATING EXCHANGE RATES BETWEEN THE

BASE CURRENCY AND THE FOREIGN CURRENCY. CUSTOMER MUST CLOSELY MONITOR MARGIN REQUIREMENTS AT ALL TIMES, PARTICULARLY FOR POSITIONS DENOMINATED IN FOREIGN CURRENCIES, BECAUSE FLUCTUATION IN THE CURRENCY *AND* THE VALUE OF THE UNDERLYING POSITION CAN CAUSE A MARGIN DEFICIT.

B. Customer agrees that IB's obligations to Customer shall be denominated in: (i) the United States dollar; (ii) a currency in which funds were deposited by Customer or were converted at the request of Customer, to the extent of such deposits and conversions; or (iii) a currency in which funds have accrued to the customer as a result of trading conducted on a designated contract market or registered derivatives transaction execution facility, to the extent of such accruals. Information regarding Customer's currency conversions is provided on the IB customer statements. Customer further agrees that IB may hold customer funds in: (i) the United States; (ii) a money center country as defined by the US Commodity Exchange Act & regulations thereunder; or (iii) the country of origin of the currency. In addition, Customer acknowledges and authorizes IB to hold Customer's funds outside the United States, in a jurisdiction that is neither a money center country nor the country of origin of the currency in order to facilitate Customer's trading in investments denominated in that currency.

19. Foreign Currency Exchange ("Forex") Transactions:

A. HIGH RISKS OF FOREX TRADING: **FOREX TRADING IS GENERALLY UNREGULATED, IS HIGHLY RISKY DUE TO THE LEVERAGE (MARGIN) INVOLVED, AND MAY RESULT IN LOSS OF FUNDS GREATER THAN CUSTOMER DEPOSITED IN THE ACCOUNT. Customer represents that he or she has read and acknowledges the "Risk Disclosure Statement for Forex Trading and Multi-Currency Accounts" provided separately by IB.**

B. For Forex transactions, IB generally will act as agent or riskless principal and charge a fee. IB may effect Forex transactions through an affiliate or third party, which may profit or lose from such transactions. Customer agrees that IB may transfer to or from Customer's regulated futures or securities account(s) from or to any of Customer's non-regulated Forex account any funds or assets that may be required to avoid margin calls, reduce debit balances or for any other lawful reason.

C. Netting: (i) Netting by Novation. Each Forex transaction between Customer and IB will immediately be netted with all then-existing Forex transactions between Customer and IB for the same currencies to constitute one transaction. (ii) Payment Netting. If on any delivery date more than one delivery of a currency is due, each party shall aggregate the amounts deliverable and only the difference shall be delivered. (iii) Close-Out Netting. If Customer: (a) incurs a margin deficit in any IB account, (b) defaults on any obligation to IB, (c) becomes subject to bankruptcy, insolvency or other similar proceedings, or (d) fails to pay debts when due, IB has the right but not the obligation to close out Customer's Forex transactions, liquidate all or some of Customer's collateral and apply the proceeds to any debt to IB. (iv) Upon Close-Out Netting or any "Default", all outstanding Forex transactions will be deemed terminated as of the time immediately preceding the triggering event, petition or proceeding. (v) IB's rights herein are in addition to any other rights IB has (whether by agreement, by law or otherwise).

D. Nothing herein constitutes a commitment of IB to offer Forex transactions generally or to enter into any specific Forex transaction. IB reserves the unlimited right to refuse any Forex order or to decline to quote a two-way market in any currency.

20. Commodity Options and Futures Not Settled in Cash: Customer acknowledges that: (A) commodity options cannot be exercised and must be closed out by offset; and (B) for futures contracts that settle not in cash but by physical delivery of the commodity (including currencies not on IB's Deliverable Currency List), Customer cannot make or receive delivery. If Customer has not offset a commodity option or physical delivery futures position prior to the deadline on the IB website, IB is authorized to roll or liquidate the position or liquidate any position or commodity resulting from the option or futures contract, and Customer is liable for all losses/costs.

21. Commissions and Fees, Interest Charges, Funds: Commissions and fees are as specified on the IB website unless otherwise agreed in writing by an officer of IB. Customer acknowledges that IB deducts commissions/fees from Customer accounts, which will reduce account equity. Positions will be liquidated if commissions or other charges cause a margin deficiency. Changes to commissions/fees are effective immediately upon either of: posting on the IB website or email or other written notice to Customer. IB shall pay credit interest to and charge debit interest from

Customer at interest rates and terms on the IB website. Customer funds will not be disbursed until after transactions are settled. Terms and conditions for deposit and withdrawal of funds (including holding periods) are as specified on the IB website.

22. Account Deficits: If a cash account incurs a deficit, margin interest rates will apply until the balance is repaid, and IB has the right, but not the obligation, to treat the account as a margin account. **Customer agrees to pay reasonable costs of collection for any unpaid Customer deficit, including attorneys' and collection agent fees.**

23. Risks of Foreign Markets; After Hours Trading: **Customer acknowledges that trading securities, options, futures, currencies or any product on a foreign market is speculative and involves high risk. There also are special risks of trading outside ordinary market hours, including risk of lower liquidity, higher volatility, changing prices, un-linked markets, news announcements affecting prices and wider spreads. Customer represents that Customer is knowledgeable and able to assume these risks.**

24. Knowledge of Securities, Warrants and Options; Corporate Actions: Customer acknowledges Customer's responsibility for knowing the terms of any securities, options, warrants or other products in Customer's account, including upcoming corporate actions (e.g., tender offers, reorganizations, stock splits, etc.). IB has no obligation to notify Customer of deadlines or required actions or dates of meetings, nor is IB obligated to take any action without specific written instructions sent by Customer to IB electronically through the IB website.

25. Quotes, Market Information, Research and Internet Links: Quotes, news, research and information accessible through IB (including through links to outside websites) ("Information") may be prepared by independent Providers. The Information is the property of IB, the Providers or their licensors and is protected by law. Customer agrees not to reproduce, distribute, sell or commercially exploit the Information in any manner without written consent of IB or the Providers. IB reserves the right to terminate access to the Information. None of the Information constitutes a recommendation by IB or a solicitation to buy or sell. Neither IB nor the Providers guarantee accuracy, timeliness, or completeness of the Information, and Customer should consult an advisor before making investment decisions. **RELIANCE ON QUOTES, DATA OR OTHER INFORMATION IS AT CUSTOMER'S OWN RISK. IN NO EVENT WILL IB OR THE PROVIDERS BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR INDIRECT DAMAGES ARISING FROM USE OF THE INFORMATION. THERE IS NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, REGARDING THE INFORMATION, INCLUDING WARRANTY OF MERCHANTIBILITY, WARRANTY OF FITNESS FOR A PARTICULAR USE OR WARRANTY OF NON-INFRINGEMENT.**

26. License to Use IB Software: IB grants Customer a non-exclusive, non-transferable license to use IB Software solely as provided herein. Title to IB Software and updates shall remain the sole property of IB, including all patents, copyrights and trademarks. Customer shall not sell, exchange or transfer the IB Software to others. Customer shall not copy, modify, translate, decompile, reverse engineer, disassemble or reduce to a human readable form, or adapt, the IB Software or use it to create a derivative work, unless authorized in writing by an officer of IB. IB is entitled to immediate injunctive relief for threatened breaches of these undertakings.

27. LIMITATION OF LIABILITY AND LIQUIDATED DAMAGES PROVISION: **CUSTOMER ACCEPTS THE IB SYSTEM "AS IS", AND WITHOUT WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, PURPOSE OR APPLICATION; TIMELINESS; FREEDOM FROM INTERRUPTION; OR ANY IMPLIED WARRANTIES ARISING FROM TRADE USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE. UNDER NO CIRCUMSTANCES SHALL IB BE LIABLE FOR ANY PUNITIVE, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL LOSS OR DAMAGES, INCLUDING LOSS OF BUSINESS, PROFITS OR GOODWILL. IB SHALL NOT BE LIABLE TO CUSTOMER BY REASON OF DELAYS OR INTERRUPTIONS OF SERVICE OR TRANSMISSIONS, OR FAILURES OF PERFORMANCE OF THE IB SYSTEM, REGARDLESS OF CAUSE, INCLUDING, BUT NOT LIMITED TO, THOSE CAUSED BY HARDWARE OR SOFTWARE MALFUNCTION; GOVERNMENTAL, EXCHANGE OR OTHER REGULATORY ACTION; ACTS OF GOD; WAR, TERRORISM, OR IB'S INTENTIONAL ACTS. CUSTOMER RECOGNIZES THAT THERE MAY BE DELAYS OR INTERRUPTIONS IN THE USE OF THE IB SYSTEM, INCLUDING, FOR EXAMPLE, THOSE CAUSED INTENTIONALLY BY IB FOR PURPOSES OF SERVICING THE IB SYSTEM. IN NO EVENT SHALL IB'S LIABILITY, REGARDLESS OF THE FORM OF ACTION AND DAMAGES SUFFERED**

BY CUSTOMER, EXCEED THE HIGHEST TOTAL MONTHLY COMMISSIONS PAID BY CUSTOMER TO IB OVER THE 6 MONTHS PRIOR TO ANY INCIDENT.

28. Customer Must Maintain Alternative Trading Arrangements: Computer-based systems such as those used by IB are inherently vulnerable to disruption, delay or failure. **CUSTOMER MUST MAINTAIN ALTERNATIVE TRADING ARRANGEMENTS IN ADDITION TO CUSTOMER'S IB ACCOUNT FOR EXECUTION OF CUSTOMER'S ORDERS IN THE EVENT THAT THE IB SYSTEM IS UNAVAILABLE. By signing this Agreement, Customer represents that Customer maintains alternative trading arrangements.**

29. IB and Its Affiliates: A copy of IB's audited financial statements shall be posted on the IB website and, upon request, mailed to Customer. Customers shall rely only on the financial condition of IB, and not on its affiliates, which are not liable for IB's acts and omissions.

30. DISCLOSURE STATEMENT: **THIS STATEMENT IS FURNISHED TO YOU BECAUSE RULE 190.10(c) OF THE COMMODITY FUTURES TRADING COMMISSION REQUIRES IT FOR REASONS OF FAIR NOTICE UNRELATED TO IB'S CURRENT FINANCIAL CONDITION: (A) YOU SHOULD KNOW THAT IN THE UNLIKELY EVENT OF THIS COMPANY'S BANKRUPTCY, PROPERTY, INCLUDING PROPERTY SPECIFICALLY TRACEABLE TO YOU, WILL BE RETURNED, TRANSFERRED OR DISTRIBUTED TO YOU, OR ON YOUR BEHALF, ONLY TO THE EXTENT OF YOUR PRO RATA SHARE OF ALL PROPERTY AVAILABLE FOR DISTRIBUTION TO CUSTOMERS; (B) NOTICE CONCERNING THE TERMS FOR THE RETURN OF SPECIFICALLY IDENTIFIABLE PROPERTY WILL BE MADE BY PUBLICATION IN A NEWSPAPER OF GENERAL CIRCULATION; (C) THE COMMISSION'S REGULATIONS CONCERNING BANKRUPTCIES OF COMMODITY BROKERS CAN BE FOUND AT TITLE 17 OF THE CODE OF FEDERAL REGULATIONS PART 190.**

31. Consent To Accept Electronic Records And Communications

IB provides electronic trade confirmations, account statements, tax information and other Customer records and communications (collectively, "Records and Communications") in electronic form. Electronic Records and Communications may be sent to Customer's Trader Workstation ("TWS") or to Customer's e-mail address, or for security purposes may be posted on the IB website and customer will need to log in and retrieve the Communication. By entering into this Agreement, Customer consents to the receipt of electronic Records and Communications. Such consent will apply on an ongoing basis and for every tax year unless withdrawn by Customer. Customer may withdraw such consent at any time by providing electronic notice to IB through the IB website. If Customer withdraws such consent, IB will provide required tax documents in paper form upon request by telephone or via the IB website. However, IB reserves the right to require Customer to close Customer's account.

In order to trade using the IB TWS, and to receive Records and Communications through the TWS, there are certain system hardware and software requirements, which are described on the IB website at www.interactivebrokers.com. Since these requirements may change, Customer must periodically refer to the IB website for current system requirements. To receive electronic mail from IB, Customer is responsible for maintaining a valid Internet e-mail address and software allowing customer to read, send and receive e-mail. Customer must notify IB immediately of a change in Customer's e-mail address by using those procedures to change a Customer e-mail address that may be available on the IB website.

32. Miscellaneous:

A. This Agreement is governed by the laws of the State of New York, without giving effect to conflict of laws provisions. Courts of New York have exclusive jurisdiction over disputes relating to this Agreement, except when arbitration is provided. **IN ALL JUDICIAL ACTIONS, ARBITRATIONS OR DISPUTE RESOLUTION METHODS, THE PARTIES WAIVE ANY RIGHT TO PUNITIVE DAMAGES.**

B. Customer agrees to the provision of this Agreement in English and represents that Customer understands its terms and conditions. This Agreement contains the entire agreement between the parties, who have made no other representations or warranties. If any provision of this Agreement is unenforceable, it shall not invalidate other provisions. Failure of IB to enforce any term or condition of this Agreement is not a waiver of the term/condition.

C. Customer consents to recording of all telephone conversations. Customer acknowledges the IBG Privacy Statement and consents to collection/use of Customer information as described therein.

D. Customer may not assign or transfer any rights or obligations hereunder without the prior written consent of IB. Upon notice to Customer IB may assign this Agreement to another broker-dealer or futures commission merchant. This Agreement shall inure to the benefit of IB's successors and assigns. IB may terminate this Agreement or its services to Customer at any time. Customer may close its account upon notice to IB electronically through the IB website, but only after all positions are closed and all other requirements specified on the IB website regarding account closure are satisfied.

E. Customer authorizes IB, directly or through third parties, to make any inquiries that IB considers necessary to conduct business with Customer. This may include ordering a credit report and performing other credit checks in the event of any default or breach of the obligations herein by Customer, or verifying the information Customer provides against third party databases. Any information obtained is maintained in accordance with the Interactive Brokers Group Privacy Statement.

33. Mandatory Arbitration:

A. This agreement contains a pre-dispute arbitration clause. By signing an arbitration agreement the parties agree as follows:

- ALL PARTIES TO THIS AGREEMENT ARE GIVING UP THE RIGHT TO SUE EACH OTHER IN COURT, INCLUDING THE RIGHT TO A TRIAL BY JURY, EXCEPT AS PROVIDED BY THE RULES OF THE ARBITRATION FORUM IN WHICH A CLAIM IS FILED.
- ARBITRATION AWARDS ARE GENERALLY FINAL AND BINDING; A PARTY'S ABILITY TO HAVE A COURT REVERSE OR MODIFY AN ARBITRATION AWARD IS VERY LIMITED.
- THE ABILITY OF THE PARTIES TO OBTAIN DOCUMENTS, WITNESS STATEMENTS AND OTHER DISCOVERY IS GENERALLY MORE LIMITED IN ARBITRATION THAN IN COURT PROCEEDINGS.
- THE ARBITRATORS DO NOT HAVE TO EXPLAIN THE REASON(S) FOR THEIR AWARD. UNLESS, IN AN ELIGIBLE CASE, A JOINT REQUEST FOR AN EXPLAINED DECISION HAS BEEN SUBMITTED BY ALL PARTIES TO THE PANEL AT LEAST 20 DAYS PRIOR TO THE FIRST SCHEDULED HEARING DATE.
- THE PANEL OF ARBITRATORS WILL TYPICALLY INCLUDE A MINORITY OF ARBITRATORS WHO WERE OR ARE AFFILIATED WITH THE SECURITIES INDUSTRY.
- THE RULES OF SOME ARBITRATION FORUMS MAY IMPOSE TIME LIMITS FOR BRINGING A CLAIM IN ARBITRATION.
- IN SOME CASES, A CLAIM THAT IS INELIGIBLE FOR ARBITRATION MAY BE BROUGHT IN COURT.
- THE RULES OF THE ARBITRATION FORUM IN WHICH THE CLAIM IS FILED, AND ANY AMENDMENTS THERETO, SHALL BE INCORPORATED INTO THIS AGREEMENT.

B. Customer agrees that any controversy, dispute, claim, or grievance between IB, any IB affiliate or any of their shareholders, officers, directors employees, associates, or agents, on the one hand, and Customer or, if applicable, Customer's shareholders, officers, directors employees, associates, or agents on the other hand, arising out of, or relating to, this Agreement, or any account(s) established hereunder in which securities may be traded; any transactions therein; any transactions between IB and Customer; any provision of the Customer Agreement or any other agreement between IB and Customer; or any breach of such transactions or agreements, shall be resolved by arbitration, in accordance with the rules then prevailing of any one of the following: (a) The Financial Industry Regulatory Authority; or (b) any other exchange of which IB is a member, as the true claimant-in-interest may elect. If Customer is the claimant-in-interest and has not selected an arbitration forum within ten days of providing notice

of Customer's intent to arbitrate, IB shall select the forum. The award of the arbitrators, or a majority of them, shall be final, and judgment upon the award rendered may be entered in any court, state or federal, having jurisdiction.

C. No person shall bring a putative or certified class action to arbitration, nor seek to enforce any pre-dispute arbitration agreement against any person who has initiated in court a putative class action; or who is a member of a putative class who has not opted out of the class with respect to any claims encompassed by the putative class action until:

- the class certification is denied; or
- the class is decertified; or
- the customer is excluded from the class by the court. Such forbearance to enforce an agreement to arbitrate shall not constitute a waiver of any rights under this Agreement except to the extent stated herein.

THIS AGREEMENT CONTAINS A PRE-DISPUTE ARBITRATION CLAUSE IN PARAGRAPH 33. BY SIGNING THIS AGREEMENT I ACKNOWLEDGE THAT THIS AGREEMENT CONTAINS A PRE-DISPUTE ARBITRATION CLAUSE AND THAT I HAVE RECEIVED, READ AND UNDERSTOOD THE TERMS THEREOF.

Interactive Brokers Futures Arbitration Agreement

Any controversy or claim between Interactive Brokers LLC ("IB") and the undersigned ("Customer") arising out of or relating to Customer's Account with IB, to transactions between IB and Customer, to the Customer Agreement with IB or any other agreement between IB and Customer, or to the breach of any such transaction or agreement shall, except as provided below, be resolved by arbitration before a forum chosen in accordance with the procedure set out below. If, by reason of any applicable statute, regulation, exchange rule or otherwise, Customer's advance agreement to submit a controversy to arbitration would not be enforceable by IB, this provision shall not permit Customer to enforce IB's advance agreement to submit to arbitration. Any award rendered in any arbitration conducted pursuant to this agreement shall be final, binding and enforceable in accordance with the laws of the State of Connecticut and judgment may be entered on any such award by any court having jurisdiction thereof.

At such time as Customer notifies IB that Customer intends to submit a controversy to arbitration, or at such time as IB notifies Customer that IB intends to submit a controversy to arbitration, Customer will have the opportunity to choose a forum from a list of three or more qualified forums provided by IB. A "qualified forum" is an organization whose procedures for conducting arbitrations meet Acceptable Practices established by the Commodity Futures Trading Commission ("CFTC").

As required by CFTC Rule 166.5, IB will pay any incremental fees which may be assessed by a qualified forum for provision of a mixed arbitration panel, unless the arbitrators hearing the controversy determine that Customer has acted in bad faith in initiating or conducting the arbitration. A "mixed arbitration panel" is an arbitration panel composed of one or more persons, a majority of whom are not members or associated with a member, or an employee of the designated contract market (upon which the transaction giving rise to the dispute was executed or could have been executed) and who are not otherwise associated with the designated contract market.

In connection with this Arbitration Agreement, IB is required to furnish to Customer the following statement, pursuant to Rule 166.5 of the CFTC (for the purposes of the following, "you" or "your" means IB's Customer):

THREE FORUMS EXIST FOR THE RESOLUTION OF COMMODITY DISPUTES: CIVIL COURT LITIGATION, REPARATIONS AT THE COMMODITY FUTURES TRADING COMMISSION ("CFTC"), AND ARBITRATION CONDUCTED BY A SELF-REGULATORY OR OTHER PRIVATE ORGANIZATION.

THE CFTC RECOGNIZES THAT THE OPPORTUNITY TO SETTLE DISPUTES BY ARBITRATION MAY IN SOME CASES PROVIDE MANY BENEFITS TO CUSTOMERS, INCLUDING THE ABILITY TO OBTAIN AN EXPEDITIOUS AND FINAL RESOLUTION OF DISPUTES WITHOUT INCURRING SUBSTANTIAL COSTS. THE CFTC REQUIRES, HOWEVER, THAT EACH CUSTOMER INDIVIDUALLY EXAMINE THE RELATIVE MERITS OF ARBITRATION AND THAT YOUR CONSENT TO THIS ARBITRATION AGREEMENT BE VOLUNTARY.

BY SIGNING THIS AGREEMENT, YOU: (1) MAY BE WAIVING YOUR RIGHT TO SUE IN A COURT OF LAW; AND (2) ARE AGREEING TO BE BOUND BY ARBITRATION OF ANY CLAIMS OR COUNTERCLAIMS WHICH YOU OR IB MAY SUBMIT TO ARBITRATION UNDER THIS AGREEMENT. YOU ARE NOT, HOWEVER, WAIVING YOUR RIGHT TO ELECT INSTEAD TO PETITION THE CFTC TO INSTITUTE REPARATIONS PROCEEDINGS UNDER SECTION 14 OF THE COMMODITY EXCHANGE ACT WITH RESPECT TO ANY DISPUTE WHICH MAY BE ARBITRATED PURSUANT TO THIS AGREEMENT. IN THE EVENT A DISPUTE ARISES, YOU WILL BE NOTIFIED IF IB INTENDS TO SUBMIT THE DISPUTE TO ARBITRATION. IF YOU BELIEVE A VIOLATION OF THE COMMODITY EXCHANGE ACT IS INVOLVED AND IF YOU PREFER TO REQUEST A SECTION 14 "REPARATIONS" PROCEEDING BEFORE THE CFTC, YOU WILL HAVE 45 DAYS FROM THE DATE OF SUCH NOTICE IN WHICH TO MAKE THAT ELECTION.

YOU NEED NOT SIGN THIS AGREEMENT TO MAINTAIN AN ACCOUNT WITH IB. HOWEVER, DECLINING THIS AGREEMENT MAY RESULT IN REDUCED TRADING LIMITS.

CHARACTERISTICS AND RISKS OF STANDARDIZED OPTIONS

February 1994

1997 through 2012
Supplements included

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CHARACTERISTICS AND RISKS OF STANDARDIZED OPTIONS

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CHAPTER I

INTRODUCTION

This booklet relates solely to options issued by The Options Clearing Corporation ("OCC"), and all references to "options" in this booklet are applicable only to such options. As of the date of this booklet, options are traded on the United States markets listed on the inside front cover page and on the European Options Exchange in Amsterdam, The Netherlands. In the future, options may be traded on other markets within or outside the United States. The markets on which options are traded at any given time are referred to in this booklet as the "options markets."

OCC is a registered clearing agency, and each U.S. options market is a national securities exchange, that is subject to regulation by the Securities and Exchange Commission ("SEC") under the Securities Exchange Act of 1934. Foreign options markets, and their members, are not generally subject to regulation by the SEC or to the requirements of the securities or other laws of the U.S. and may not be subject to the jurisdiction of U.S. courts.

What is an option? An option is the right either to buy or to sell a specified amount or value of a particular underlying interest at a fixed exercise price by exercising the option before its specified expiration date. An option which gives a right to buy is a call option, and an option which gives a right to sell is a put option. Calls and puts are distinct types of options, and the buying or selling of one type does not involve the other.

EXAMPLE: An option to buy 100 shares of common stock of the XYZ Corporation at a specified exercise price would be an XYZ call option. An option to sell 100 shares of common stock of the XYZ Corporation at a specified exercise price would be an XYZ put option.

There are two different kinds of options—physical delivery options and cash-settled options. A physical delivery option gives its owner the right to receive physical delivery (if it is a call), or to make physical delivery (if it is a put), of the underlying interest when the option is exercised. A cash-settled option gives its owner the right to receive a cash payment based on the difference between a determined value of the underlying interest at the time the option is exercised and the fixed exercise price of the option. A cash-settled call conveys the right to receive a cash payment if the determined value of the underlying interest at exercise—this value is known as the exercise settlement value—exceeds the exercise price of the option, and a cash-settled put conveys the right to receive a cash payment if the exercise settlement value is less than the exercise price of the option.

Each options market selects the underlying interests on which options are traded on that market. Options are currently available covering four types of underlying interests: equity securities, stock indexes, government debt securities, and foreign currencies. Options on other types of underlying interests may become available in the future.

Most options have standardized terms—such as the nature and amount of the underlying interest, the expiration date, the exercise price, whether the option is a call or a put, whether the option is a physical delivery option or a cash-settled option, the manner in which the cash payment and the exercise settlement value of a cash-settled option are determined, the multiplier of a cash-settled option, the style of the option, whether the option has automatic exercise provisions, and adjustment provisions. These standardized terms are generally described in Chapter II. Each U.S. options market publishes specification sheets setting forth the particular standardized terms of the options traded on that options market. (The options markets may also provide for trading in options whose terms are not all fixed in advance. Rather, subject to certain limitations, the parties to transactions in these options may designate certain of the terms. These flexibly structured options are discussed in Chapter VII of this booklet.)

Options having the same standardized terms are identical and comprise an options series. The standardization of terms makes it more likely that there will be a secondary market in which holders and writers of options can close out their positions by offsetting sales and purchases. By selling an option of the same series as the one he bought, or buying an option of the same series as the one he wrote, an investor can close out his position in that option at any time there is a functioning secondary options market in options of that series.

In some instances, options of the same series may be traded on more than one options market at the

same time. Options that are so traded are called multiply-traded options. Options traded on a U.S. options market may also be traded on a foreign options market. These options are referred to as internationally-traded options. Multiply-traded and internationally-traded options can ordinarily be purchased and written, and positions in these options can ordinarily be liquidated in offsetting closing transactions, in any of the options markets in which the options are traded. However, because premiums are affected by market forces, the premiums for identical multiply-traded or internationally-traded options may not be the same in all markets at any given time.

If an options market learns that a particular underlying interest no longer meets its requirements for options trading or is not eligible for trading in all U.S. jurisdictions, or if an options market decides to discontinue trading in a particular options series for another reason, the options market may stop introducing new options on that underlying interest and may in certain circumstances impose restrictions on transactions that open new positions in options series that have been previously introduced, although trading in the options series will ordinarily continue on at least one options market until its expiration.

Options generally are traded on U.S. options markets during normal day-time business hours of U.S. securities exchanges and for a short period afterward. However, trading in options may not be confined to those hours. Trading in evening and night trading sessions occurs in options on foreign currencies and may in the future occur in other types of options. Moreover, when there are unusual market conditions, an options market may authorize trading to continue for a substantially longer period than under normal conditions. Trading in an expiring option may close at an earlier time than trading in other options. Trading hours for options are also subject to change from time to time. Readers should ascertain the trading hours of the particular options they are interested in trading from the options markets where those options are traded. Readers should also be aware that trading in underlying interests is not confined to normal exchange trading hours. For example, underlying foreign currencies and debt securities are traded in international markets on virtually an around-the-clock basis, and underlying equity securities may be traded in foreign markets when U.S. markets are closed and in some U.S. markets after the close of their normal trading hours.

Readers should be aware that this booklet has been written to meet the requirements of an SEC rule that requires the U.S. options markets to prepare, and brokerage firms to distribute, a booklet that briefly and generally describes the characteristics of options and the risks to investors of maintaining positions in options. Options are versatile instruments that can be used in a wide variety of investment strategies. They give the investor the ability to create positions that reflect the investor's opinion of an underlying interest and to select investment strategies that reflect the investor's tolerance for risk. This booklet is not designed to describe the various potential benefits of options or how investors may use options to enhance their investment strategies or to reduce risk. Numerous other publications, including some prepared by the U.S. options markets that are available upon request, contain discussions of the uses and potential benefits of options and of the various trading and investment strategies that can be employed with options. Readers who wish to balance the general discussion of risks that is contained in this booklet with a discussion of options uses, benefits and strategies should consult one or more of these other publications.

Readers should read and understand this booklet in its entirety, since a number of the separate chapters will be relevant to every reader interested in buying or writing options. For example, a reader who is interested in options on equity securities should fully read not only Chapter III, but also should read Chapters II, VIII and IX, as well as the discussion of risks in Chapter X. Readers should also be aware that, although this booklet seeks to describe the various characteristics of options and the risks that are unique to being an investor in options, there are many matters which are beyond the scope of this booklet that are not discussed. Chapter XI contains a discussion of the scope and limitations of this booklet.

CHAPTER II

OPTIONS NOMENCLATURE

This chapter contains a description of the standardized terms, and of some of the special vocabulary, applicable to options. Most of the nomenclature is the same for options on the various types of underlying interests. Differences that are applicable to options on a particular underlying interest will be described in the chapter devoted to that underlying interest.

Certain terms—options, options markets, call options, put options, physical delivery options, cash-settled options, options series, multiply-traded options and internationally-traded options—have been defined in Chapter I. Readers interested in those definitions should consult that chapter.

OPTION HOLDER; OPTION WRITER—The option holder is the person who buys the right conveyed by the option.

EXAMPLE: The holder of a physical delivery XYZ call option has the right to purchase shares of XYZ Corporation stock at the specified exercise price upon exercise prior to the expiration of the option. The holder of a physical delivery XYZ put option has the right to sell shares of XYZ Corporation at the specified exercise price upon exercise prior to the expiration of the option. The holder of a cash-settled option has the right to receive an amount of cash equal to the cash settlement amount (described below) upon exercise prior to the expiration of the option.

The option writer is obligated— if and when assigned an exercise—to perform according to the terms of the option. The option writer is sometimes referred to as the option seller. An option writer who has been assigned an exercise is known as an assigned writer.

EXAMPLE: If a physical delivery XYZ call option is exercised by the holder of the option, the assigned writer must deliver the required number of shares of XYZ common stock. He will be paid for the shares at the specified exercise price regardless of their current market price.

If a physical delivery put option is exercised, the assigned writer must purchase the required number of shares at the specified exercise price regardless of their current market price. If a cash-settled option is exercised, the assigned writer must pay the cash settlement amount.

No certificates are issued to evidence options. Investors look to the confirmations and statements that they receive from their brokerage firms to confirm their positions as option holders or writers. An option holder looks to the system created by OCC's rules, rather than to any particular option writer, for performance of the option he owns. Similarly, option writers must perform their obligations under the OCC system and are not obligated to any particular option holder. Since every options transaction involves both a holder and a writer, it follows that the aggregate rights of option holders under the system are matched by the aggregate obligations of option writers.

The OCC system is designed so that the performance of all options is between OCC and a group of firms called Clearing Members that carry the positions of all option holders and option writers in their accounts at OCC. To qualify as a Clearing Member, a firm must meet OCC's financial requirements. In addition, Clearing Members must provide OCC with collateral for the positions of option writers that they carry and must contribute to Clearing Funds that protect OCC against a Clearing Member's failure. The Clearing Members' guarantees of the performance of options writers' obligations, the financial strength of the Clearing Members, the collateral that they deposit, the obligations of correspondent clearing corporations, and the Clearing Funds together make up the OCC system backing the performance of options. This system is discussed in more detail in the OCC prospectus referred to in paragraph 1 of Chapter XI.

EXERCISE PRICE—In the case of a physical delivery option, the exercise price (which is sometimes called the "strike price") is the price at which the option holder has the right either to purchase or to sell the underlying interest.

EXAMPLE: A physical delivery XYZ 40 call option gives the option holder the right to purchase 100 shares of XYZ stock at an exercise price of $40 a share. A physical delivery XYZ 40 put option gives the option holder the right to sell 100 shares of XYZ common stock at an exercise price of $40 a share.

The exercise price of a cash-settled option is the base for the determination of the amount of cash, if any, that the option holder is entitled to receive upon exercise (see the discussion of "Cash Settlement Amount and Exercise Settlement Value" below).

Exercise prices for each options series are established by the options market on which that series is traded at the time trading in the series is introduced, and are generally set at levels above and below the then market value of the underlying interest. The options markets generally have authority to introduce additional series of options with different exercise prices based on changes in the value of the underlying interest, or in response to investor interest, or in unusual market conditions, or in other circumstances.

EXPIRATION DATE—This is the date on which the option expires. If an option has not been exercised prior to its expiration, it ceases to exist—that is, the option holder no longer has any rights, and the option no longer has any value. The expiration dates for the various options series are fixed by the options market on which the series trades. Readers should learn the expiration date of each option they wish to buy or write.

STYLE OF OPTION—The style of an option refers to when that option is exercisable. At the date of this booklet there are three different styles of options—American-style, European-style and capped. Subject to certain limitations prescribed in the rules of OCC or the options markets and subject to applicable law, these three styles are exercisable at the following times:

An American-style option may be exercised at any time prior to its expiration.

A European-style option may be exercised only during a specified period before the option expires. Every European-style option being traded at the date of this booklet is exercisable only on its expiration date.

A capped option will be automatically exercised prior to expiration if the options market on which the option is trading determines that the value of the underlying interest at a specified time on a trading day "hits the cap price" for the option. Capped options may also be exercised, like European-style options, during a specified period before expiration.

This period is the expiration date for all capped options traded at the date of this booklet. The special terminology applicable to capped options is discussed at the end of this chapter.

European-style or capped options having an expiration period that is longer or shorter than their expiration date may be introduced for trading in the future.

UNIT OF TRADING; CONTRACT SIZE—The unit of trading (which is sometimes referred to as the contract size) of a physical delivery option is the amount of the underlying interest that is subject to being purchased or sold upon the exercise of a single option contract. For example, the unit of trading for most options on equity securities is 100 shares. Thus, a physical delivery XYZ 50 call will give its holder the right upon exercise to purchase 100 shares of XYZ at $50 per share. If the option is trading at a premium of, say, $4 per share, then the aggregate premium for a single option contract would be $400.

The contract size of a cash-settled option is determined by the multiplier that is fixed by the options market on which the options series is traded. The multiplier determines the aggregate value of each point of the difference between the exercise price of the option and the exercise settlement value of the underlying interest. For example, a multiplier of 100 means that for each point by which a cash-settled option is in the money upon exercise, there is a $100 increase in the cash settlement amount. Similarly, if an option with a multiplier of 100 is trading at a premium of, say, $4, then the aggregate premium for a single option contract would be $400.

EXERCISE—If the holder of a physical delivery option wishes to buy (in the case of a call) or sell (in the case of a put) the underlying interest at the exercise price—or, in the case of a cash-settled option, to receive the cash settlement amount—his option must be exercised. In order to exercise most options, option holders must give exercise instructions to their brokerage firm in accordance with the firm's procedures prior to the firm's exercise cut-off time. The exercise process is discussed in Chapter VIII. Every option holder should understand this process and should learn his brokerage firm's procedures concerning exercise, and its exercise cut-off time, for each option he may buy.

Although an option holder must assure that action is taken to exercise most options, capped options and

certain cash-settled options provide for automatic exercise in specified circumstances. Other options having automatic exercise provisions may be introduced for trading in the future.

The rules of the options markets generally limit the total number of puts or calls on the same underlying interest that a single investor or group of investors acting in concert may exercise during a specified time period. Information concerning the exercise limits for particular options is available from the options market on which those options are traded or from brokerage firms.

The right to exercise an option may be restricted in certain circumstances. This is discussed under "Risks of Option Holders" in Chapter X.

When an option has been exercised, OCC will assign the exercise in accordance with its rules to a Clearing Member whose account with OCC reflects the writing of an option of the same series. The Clearing Member may, in turn, assign this exercise to one of its customers who is a writer in accordance with the Clearing Member's procedures, and the assigned writer will then be obligated to perform the obligations of the option--that is, to sell (in the case of a physical delivery call) or buy (in the case of a physical delivery put) the underlying interest at the exercise price, or, in the case of a cash-settled option, to pay the cash settlement amount. The assignment process is discussed further in Chapter VIII.

CASH SETTLEMENT AMOUNT, SETTLEMENT CURRENCY and EXERCISE SETTLEMENT VALUE—The cash settlement amount is the amount of cash that the holder of a cash-settled option is entitled to receive upon exercise. It is the amount by which the exercise settlement value of the underlying interest of a cash-settled call exceeds the exercise price, or the amount by which the exercise price of a cash-settled put exceeds the exercise settlement value of the underlying interest, multiplied by the multiplier for the option.

EXAMPLE: Assume that a holder of a cash-settled call on the XYZ index that has an exercise price of 80 exercises it when the exercise settlement value of the index is 85. If the multiplier for XYZ index options is 100, the assigned writer would be obligated to pay, and the exercising holder would be entitled to receive, a cash settlement amount of $500 ($85 minus $80 multiplied by 100 = $500).

The currency in which the cash settlement amount is payable is called the settlement currency. The settlement currency for all cash-settled options with standardized terms that are trading at the date of this booklet is U.S. dollars. It is possible that another currency will be the settlement currency for some options introduced in the future.

The manner of determining the exercise settlement value for a particular option series is fixed by the options market on which the series is traded. The exercise settlement values for options on a particular underlying interest traded in one options market will not necessarily be determined in the same manner as the exercise settlement values for options or futures on the same underlying interest that may be traded in other markets.

Options markets may change the method of determining exercise settlement values for particular options series on specified days or on all days. These changes may be made applicable to series outstanding at the time the changes become effective. Alternatively, an options market might phase in a change in the method of determining exercise settlement values by opening new series of options identical to outstanding series in all respects other than the method for calculating exercise settlement values. Such new series would trade alongside the old series until both series expire, but the two series would not be interchangeable. In the future, options markets may, subject to regulatory approval, introduce options whose exercise settlement values may not exceed a specified maximum amount.

ADJUSTMENT and ADJUSTMENT PANEL—Adjustments may be made to some of the standardized terms of outstanding options upon the occurrence of certain events. Adjustments that may be made to a particular type of options are discussed in the chapter relating to that type.

The determination of whether to adjust outstanding options in response to a particular event, and, if so, what the adjustment should be, is made by a majority vote of an adjustment panel. An adjustment panel for an options series consists of two representatives of each U.S. options market on which the series is traded

and one representative of OCC, who votes only to break a tie. Every determination by an adjustment panel is within its sole discretion and is binding on all investors.

PREMIUM—The premium is the price that the holder of an option pays and the writer of an option receives for the rights conveyed by the option. It is the price set by the holder and writer, or their brokers, in a transaction in an options market where the option is traded. It is not a standardized term of the option. The premium does not constitute a "down-payment." It is simply and entirely a nonrefundable payment in full—from the option holder to the option writer—for the rights conveyed by the option.

The premium is not fixed by the options markets or by OCC. Premiums are subject to continuous change in response to market and economic forces, including changes in the trading conditions on the markets where the particular options are traded. The factors which may generally affect the pricing of an option include such variables as the current value of the underlying interest and the relationship between that value and the exercise price, the current values of related interests (*e.g.*, futures on the underlying interest or other interests related to the underlying interest), the style of the option, the individual estimates of market participants of the future volatility of the underlying interest, the historical volatility of the underlying interest, the amount of time remaining until expiration, cash dividends payable on the underlying stock (in the case of stock and stock index options), current interest rates, current currency exchange rates (in the cases of foreign currency options and options whose premiums or cash settlement amounts are payable in a foreign currency), the depth of the market for the option, the effect of supply and demand in the options market as well as in the markets for the underlying interest and for related interests, the information then available about current prices and operations in the markets for the underlying interest and related interests, the individual estimates of market participants of future developments that might affect any of the foregoing, and other factors generally affecting the prices or volatility of options, underlying interests, related interests or securities generally. Also see the discussion below of "Intrinsic Value and Time Value." Readers should not assume that options premiums will necessarily conform or correlate with any theoretical options pricing

formula, chart, last sale, or the prices of the underlying interest, related interests or other options at any particular time.

The currency in which the premium is payable is called the premium currency. The premium currency for most options is U.S. dollars. However, the premium currency for cross-rate foreign currency options, which are discussed in Chapter VI, is a foreign currency, and other options with premiums payable in a foreign currency may be introduced after the date of this booklet.

OPENING TRANSACTION—This is a purchase or sale transaction by which a person establishes or increases a position as either the holder or the writer of an option.

CLOSING TRANSACTION—This is a transaction in which, at some point prior to expiration, the option holder makes an offsetting sale of an identical option, or the option writer makes an offsetting purchase of an identical option. A closing transaction in an option reduces or cancels out an investor's previous position as the holder or the writer of that option.

EXAMPLE: In June an investor buys a December XYZ 50 call at an aggregate premium of $500. By September the market price of the option has increased to $700. To seek to realize his $200 profit, the investor can direct his broker to sell an offsetting December XYZ 50 call in a closing transaction. On the other hand, if by September the market price of the option has decreased to $300, the investor might still decide to sell the option in a closing transaction, thereby limiting his loss to $200.

Although holders of American-style options have the right to exercise at any time before expiration, holders frequently elect to realize their profits or losses by making closing transactions because the transaction costs of the closing transactions may be lower than the transaction costs associated with exercises, and because closing transactions may provide an opportunity for an option holder to realize the remaining time value (described below) of the option that would be lost in an exercise. The limited period of exercisability of a European-style or capped option means that (except for the possibility of automatic exercise of a capped option) the holder's only means of realizing profit or loss on the option when the option is not exercisable is by selling the option in a closing transaction.

POSITION LIMITS—The rules of the options markets generally limit the maximum number of options on the same side of the market (*i.e.*, calls held plus puts written, or puts held plus calls written) with respect to a single underlying interest that may be carried in the accounts of a single investor or group of investors acting in concert. These limits—which are called position limits—differ for options on different underlying interests. Information concerning the position limits for particular options is available from the options market on which those options are traded or from brokerage firms.

COMBINATIONS; SPREADS and STRADDLES—Combination positions are positions in more than one option at the same time. Spreads and straddles are two types of combination positions. A spread involves being both the buyer and writer of the same type of option (puts or calls) on the same underlying interest, with the options having different exercise prices and/or expiration dates. A straddle consists of purchasing or writing both a put and a call on the same underlying interest, with the options having the same exercise price and expiration date.

LONG and SHORT—The word long refers to a person's position as the holder of an option, and the word short refers to a person's position as the writer of an option.

COVERED CALL WRITER—If the writer of a physical delivery call option owns or acquires the amount of the underlying interest that is deliverable upon exercise of the call, he is said to be a covered call writer.

EXAMPLE: An individual owns 100 shares of XYZ common stock. If he writes one physical delivery XYZ call option—giving the call holder the right to purchase 100 shares of the stock at a specified exercise price—this would be a covered call. If he writes two such XYZ calls, one would be covered and one would be uncovered.

The distinction between covered and uncovered call writing positions is important since uncovered call writing can involve substantially greater exposure to risk than covered call writing. A call option writer who is not a covered writer may hold another option in a spread position and thereby offset some or all of the risk of the option he has written. However, the spread may not offset all of the risk of the uncovered writing position. For example, if the long portion of the spread has a higher exercise price than the exercise price of the short, or if the long has an earlier expiration date than the expiration date of the short, then the writer may still be exposed to significant risks from his uncovered writing position.

AT THE MONEY—This term means that the current market value of the underlying interest is the same as the exercise price of the option.

IN THE MONEY—A call option is said to be in the money if the current market value of the underlying interest is above the exercise price of the option. A put option is said to be in the money if the current market value of the underlying interest is below the exercise price of the option.

EXAMPLE: If the current market price of XYZ stock is $43, an XYZ 40 call would be in the money by $3.

OUT OF THE MONEY—If the exercise price of a call is above the current market value of the underlying interest, or if the exercise price of a put is below the current market value of the underlying interest, the option is said to be out of the money by that amount.

EXAMPLE: With the current market price of XYZ stock at $40, a call with an exercise price of $45 would be out of the money by $5—as would a put with an exercise price of $35.

INTRINSIC VALUE and TIME VALUE—It is sometimes useful to consider the premium of an option as consisting of two components: intrinsic value and time value. Intrinsic value reflects the amount, if any, by which an option is in the money. Time value is whatever the premium of the option is in addition to its intrinsic value. An American-style option may ordinarily be expected to trade for no less than its intrinsic value prior to its expiration, although occasionally an American-style option will trade at less than its intrinsic value. Because European-style and capped options are not exercisable at all times, they are more likely than American-style options to trade at less than their intrinsic value when they are not exercisable.

EXAMPLE OF A CALL WITH INTRINSIC VALUE: At a time when the current market price of XYZ stock is $46 a share, an XYZ 40 call would have an intrinsic value of $6 a share. If the market price of the stock were to decline to $44, the intrinsic value of the

call would be only $4. Should the price of the stock drop to $40 or below, the call would no longer have any intrinsic value.

EXAMPLE OF A PUT WITH INTRINSIC VALUE: At a time when the current market price of XYZ stock is $46 a share, an XYZ 50 put would have an intrinsic value of $4 a share. Were the market price of XYZ stock to increase to $50 or above, the put would no longer have any intrinsic value.

EXAMPLE OF TIME VALUE: At a time when the market price of XYZ stock is $40 a share, an XYZ 40 call may have a current market price of, say, $2 a share. This is entirely time value.

An option with intrinsic value may often have some time value as well—that is, the market price of the option may be greater than its intrinsic value. This could occur with an option of any style.

EXAMPLE: With the market price of XYZ stock at $45 a share, an XYZ 40 call may have a current market price of $6 a share, reflecting an intrinsic value of $5 a share and a time value of $1 a share.

An option's time value is influenced by several factors (as discussed above under "Premium"), including the length of time remaining until expiration. An option is a "wasting" asset; if it is not sold or exercised prior to its expiration, it will become worthless. As a consequence, all else remaining the same, the time value of an option usually decreases as the option approaches expiration, and this decrease accelerates as the time to expiration shortens. However, there may be occasions when the market price of an option may be lower than the market price of another option that has less time remaining to expiration but that is similar in all other respects.

An American-style option's time value is also influenced by the amount the option is in the money or out of the money. An option normally has very little time value if it is substantially in the money. Although an option that is substantially out of the money has only time value, the amount of that time value is normally less than the time value of an option having the same underlying interest and expiration that is at the money.

Another factor influencing the time value of an option is the volatility of the underlying interest. All else being

the same, options on more volatile interests command higher premiums than options on less volatile interests.

Time value is also influenced by the current cost of money. Increases in prevailing interest rates tend to cause higher premiums for calls and lower premiums for puts, and decreases in prevailing interest rates tend to cause lower premiums for calls and higher premiums for puts.

The following is a description of the terminology applicable to capped options:

CAP INTERVAL—The cap interval is a constant established by the options market on which a series of capped options is traded. The exercise price for a capped-style option plus the cap interval (in the case of a call), or minus the cap interval (in the case of a put), equals the cap price for the option. For example, if a capped call option with an exercise price of 360 has a cap interval of 30, then the cap price at which the option will be automatically exercised would be 390.

CAP PRICE—The cap price is the level that the automatic exercise value of a capped option must reach in order for the option to be automatically exercised. The cap price of a call option is above, and of a put option below, the exercise price of the option.

EXAMPLE: A 360 ABC capped call index option has an exercise price of 360 and a cap interval of 30. The call option has a cap price of 390.

EXAMPLE: A 310 XYZ capped put index option has an exercise price of 310 and a cap interval of 20. The put option has a cap price of 290.

AUTOMATIC EXERCISE VALUE—The automatic exercise value of a capped option is the price or level of the underlying interest determined in a manner fixed by the options market on which the option is traded for each trading day as of a specified time of that day.

EXAMPLE: A 310 XYZ capped put index option has a cap interval of 20, and therefore has a cap price of 290. Assume that the options market on which the option is traded has specified the close of trading on each trading day as the time for determining the automatic exercise value on the XYZ index, and that the index level reaches a low of 289 during a particular trading day, but is at 291 at the close. The automatic

exercise value has not reached the cap price, and the automatic exercise feature of the option is not triggered, because the index level was not at or below the cap price at the time of day specified by the options market for determining the automatic exercise value.

CASH SETTLEMENT AMOUNT—This is the cash amount that the holder of a cash-settled capped option is entitled to receive upon the exercise of the option. In the case of a capped option that has been automatically exercised, the cash settlement amount is equal to the cap interval times the multiplier for the option, even if the automatic exercise value on the day that the automatic exercise feature is triggered exceeds (in the case of a call) or is less than (in the case of a put) the cap price. If the capped option is voluntarily exercised at expiration, the cash settlement amount is determined in the same manner as for other styles of cash-settled options.

EXAMPLE: A 360 ABC capped call index option has a cap interval of 30 and a multiplier of 100. The automatic exercise value of the ABC index is 396 on a particular trading day. The call option is automatically exercised, and the cash settlement amount is $3000 (equal to the cap interval of 30 times the multiplier of 100).

EXAMPLE: A 360 ABC capped call index option has a cap interval of 30 and a multiplier of 100. The automatic exercise value of the ABC index never equals or exceeds the cap price of 390 during the life of the option, and the exercise settlement value of the option is 367 on the final trading day. Upon exercise of the option, the holder is entitled to receive a cash settlement amount of $700 (equal to the multiplier of 100 times the difference between the exercise settlement value of 367 and the exercise price of 360).

CHAPTER III

OPTIONS ON EQUITY SECURITIES

The term "stock options" is used broadly in this booklet to include not only options on common stocks but also options on all other types of equity securities, such as limited partnership interests, "American Depository Receipts" and "American Depository Shares" representing interests in foreign entities, and preferred stocks. Options are available on exchange-traded equity securities, on unlisted equity securities traded in the NASDAQ stock market and designated as national market system securities, and on equity securities traded both in the NASDAQ stock market and on exchanges. The NASDAQ stock market is primarily an inter-dealer trading system as contrasted with exchange auction markets.

Issuers of underlying equity securities do not participate in the selection of their securities for options trading (although some options markets may determine not to select an underlying security without the consent of the issuer of that security). Issuers of underlying equity securities have no responsibility regarding the issuance, the terms, or the performance of options, and option holders have no rights as security holders of such issuers.

The principal risks of holders and writers of stock options are discussed in Chapter X. Readers interested in buying or writing stock options should carefully read that chapter.

FEATURES OF STOCK OPTIONS

Each stock option generally covers 100 shares of the underlying security, although, as described below, the number of underlying shares may be adjusted as a result of certain events.

The exercise prices of the stock options that are traded at the date of this booklet are stated in U.S. dollars per share. The exercise price of an option must each be multiplied by the number of shares underlying the option in order to determine the aggregate exercise price and aggregate premium of that option.

EXAMPLE: An XYZ 40 call gives the buyer the right to purchase 100 shares of XYZ stock at a price of $40 per share, or a total price of $4,000.

In the future, stock options may, with regulatory approval, be introduced that have exercise prices in a foreign currency.

Adjustments may be made to certain of the standardized terms of outstanding stock options when certain events occur, such as a stock dividend, stock distribution, stock split, reverse stock split, rights offering, distribution, reorganization, recapitalization, reclassification in respect of an underlying security, or a merger, consolidation, dissolution or liquidation of the issuer of the underlying security. In the following discussion, there is a brief description of a number of general adjustment rules applicable to stock options that are in effect at the date of this booklet. Such rules may be changed from time to time with regulatory approval. An adjustment panel has the authority to make such exceptions as it determines to be appropriate to any of the general adjustment rules.

As a general rule, no adjustment is made for ordinary cash dividends or distributions. A cash dividend or distribution by most issuers will generally be considered "ordinary" unless it exceeds 10% of the aggregate market value of the underlying security outstanding. The options markets are considering an amendment to the general rules which, if adopted and approved by the regulators, would provide that a cash dividend or distribution by an issuer that is a closed-end investment company may not be considered to be "ordinary" if it exceeds 5% of such aggregate market value. Determinations whether to adjust for cash dividends or distributions in excess of those amounts are made on a case-by-case basis.

Because stock options are not generally adjusted for ordinary cash dividends and distributions, covered writers of calls are entitled to retain dividends and distributions earned on the underlying securities during the time prior to exercise. However, a call holder becomes entitled to the dividend if he exercises the option prior to the ex-dividend date even though the assigned writer may not be notified that he was assigned an exercise until after the ex-date. Because call holders may seek to "capture" an impending dividend by exercising, a call writer's chances of being assigned an exercise may increase as the ex-date for a dividend on the underlying security approaches.

As a general rule, stock dividends, stock distributions and stock splits can result in an adjustment in the number of underlying shares or the exercise price, or both.

EXAMPLE: An investor bought an XYZ 60 option—either a call or a put—and XYZ Corporation subsequently effected a 3 for 2 stock distribution. Instead of covering 100 shares of stock at an exercise price of $60 a share, each outstanding option could be adjusted to cover 150 shares at an exercise price of $40 per share.

However, when a stock distribution results in the issuance of one or more whole shares of stock for each outstanding share—such as a 2 for 1 stock split—as a general rule the number of underlying shares is not adjusted. Instead, the number of outstanding options is proportionately increased and the exercise price is proportionately decreased.

EXAMPLE: Before a 2 for 1 stock split, an investor holds an option on 100 shares of XYZ stock with an exercise price of $60. After adjustment for the split, he will hold two XYZ options, each on 100 shares and with an exercise price of $30.

An adjustment panel may make an exception to the general rule to adjust for stock dividends. For example, in cases where the issuer of the underlying security announces or exhibits a policy of declaring regular stock dividends that do not individually exceed 10% of the amount of the underlying security outstanding, an adjustment panel may determine to treat the stock dividends as though they were ordinary cash dividends and to make no adjustment for them.

As a general rule, adjustments in exercise prices are rounded to the nearest 1/8 of a dollar, and adjustments in the number of underlying shares are rounded down to eliminate fractional shares. In the latter case, the exercise price may be further adjusted to compensate for the elimination of the fractional shares.

Distributions of property other than the underlying security may require different adjustments. For example, outstanding options might be adjusted to include the distributed property.

EXAMPLE: If XYZ "spins off" its subsidiary ABC by distributing to its stockholders 2.5 shares of ABC

stock for each share of XYZ stock, outstanding XYZ options might be adjusted to require delivery of 100 shares of XYZ stock plus 250 shares of ABC stock.

Alternatively, the exercise prices of outstanding options might be reduced by the value, on a per-share basis, of the distributed property, as determined by the adjustment panel.

Events other than distributions may also result in adjustments. If all of the outstanding shares of an underlying security are acquired in a merger or consolidation, outstanding options will as a general rule be adjusted to require delivery of the cash, securities, or other property payable to holders of the underlying security as a result of the acquisition.

EXAMPLE: If XYZ is acquired by PQR in a merger where each holder of XYZ stock receives $50 plus 1/2 share of PQR stock for each share of XYZ stock held, XYZ options might be adjusted to call for the delivery of $5,000 in cash and 50 shares of PQR stock instead of 100 shares of XYZ stock.

When an underlying security is wholly or partially converted into a debt security or a preferred stock, options that have been adjusted to call for delivery of the debt security or preferred stock may, as a general rule, be further adjusted to call for any securities distributed as interest or dividends on such debt security or preferred stock.

When an underlying security is converted into a right to receive a fixed amount of cash, options on that security will generally be adjusted to require the delivery upon exercise of a fixed amount of cash, and trading in the options will ordinarily cease when the merger becomes effective. As a result, after such an adjustment is made all options on that security that are not in the money will become worthless and all that are in the money will have no time value.

As a general rule, adjustments are not made for tender offers or exchange offers, whether by the issuer or a third party, and whether for cash, securities (including issuer securities), or other property. This presents a risk for writers of put options, because a successful tender offer or exchange offer (whether by the issuer or by a third party) may have a significant effect on the market value of the security that the put writers would be obligated to purchase if the put options are exercised after the expiration of the offer.

As a general rule, adjustments will not be made to reflect changes in the capital structure of the issuer where all of the underlying securities outstanding in the hands of the public (other than dissenters' shares) are not changed into another security, cash or other property.

As a general rule, an adjustment that is made in an option will become effective on the ex-date established by the primary market for trading in the underlying security.

CHAPTER IV

INDEX OPTIONS

ABOUT INDEXES

As referred to in this booklet, an index is a measure of the prices of a group of securities* or other interests. Although indexes have been developed to cover a variety of interests, such as stocks and other equity securities, debt securities and foreign currencies, and even to measure the cost of living, indexes on equity securities (which are called stock indexes) are among the most familiar, and they are the only indexes that underlie options trading at the date of this booklet. The following discussion refers only to stock indexes and stock index options.

Stock indexes are compiled and published by various sources, including securities markets. An index may be designed to be representative of the stock market of a particular nation as a whole, of securities traded in a particular market, of a broad market sector (*e.g.*, industrials), or of a particular industry (*e.g.*, electronics). An index may be based on the prices of all, or only a sample, of the securities whose prices it is intended to represent. Indexes may be based on securities traded primarily in U.S. markets, securities traded primarily in a foreign market, or a combination of securities whose primary markets are in various countries.

A stock index, like a cost of living index, is ordinarily expressed in relation to a "base" established when the index was originated.

EXAMPLE: On the starting or "base" date for a new value-weighted index, the total market values of the component securities (market price times number of shares outstanding) is $50 billion. The publisher of the index will assign an arbitrary index level—say 100—to that base value. If the total market value of the component stocks increases by 2% the next day (*i.e.*, to $51 billion), the index level would rise to 102 (102% of the base level of 100).

*Some indexes reflect values of companies, rather than securities, by taking into account both the prices of constituent securities and the number of those securities outstanding.

The base may be adjusted from time to time to reflect such events as capitalization changes affecting the constituent securities of the index (*e.g.*, issuance of new shares) or to maintain continuity when securities are added to or dropped from the index. These adjustments are generally designed so that the index level will change only as a result of price changes of constituent securities during trading.

Securities may be dropped from an index because of events such as mergers and liquidations or because a particular security is no longer thought to be representative of the types of stocks constituting the index. Securities may also be added to an index from time to time. Adjustments in the base level of an index, additions and deletions of constituent securities, and similar changes are within the discretion of the publisher of the index and will not ordinarily cause any adjustment in the terms of outstanding index options. However, an adjustment panel has authority to make adjustments if the publisher of the underlying index makes a change in the index's composition or method of calculation that in the panel's determination, may cause significant discontinuity in the index level.

Different stock indexes are calculated in different ways. Accordingly, even where indexes are based on identical securities, they may measure the relevant market differently because of differences in methods of calculation. Often the market prices of the securities in the index group are "capitalization weighted." That is, in calculating the index value, the market price of each constituent security is multiplied by the number of shares outstanding. Because of this method of calculation, changes in the prices of the securities of larger corporations will generally have a greater influence on the level of a capitalization weighted index than price changes affecting smaller corporations.

Other methods may be used to calculate stock indexes. For example, in one method known as "equal-dollar weighting," the index is established by establishing an aggregate market value for every constituent security of the index and then determining the number of shares of each security by dividing such aggregate market value by the then current market price of the security. The base level of the index is established by dividing the total market value of all constituent securities by a fixed index divisor. Thereafter, the number of shares of the constituent securities and the index divisor are adjusted at periodic intervals in order to have

each constituent security continue to represent an approximately equal dollar value in the index without distorting the level of the index.

Another method of calculation is simply to add up the prices of the securities in the index and divide by the number of securities in the index, disregarding numbers of shares outstanding. Another method measures daily percentage movements of prices by averaging the percentage price changes of all securities included in the index.

Investors should keep in mind that an index can respond only to reported price movements in its constituent securities. An index will therefore reflect the stock market as a whole, or particular market segments, only to the extent that the securities in the index are being traded, the prices of those trades are being promptly reported, and the market prices of those securities, as measured by the index, reflect price movements in the relevant markets. The index level will be affected by all of the factors that may at the time affect prices in the relevant markets for the constituent securities of the index, including, among other things, applicable laws, regulations and trading rules, the market-making and order processing systems of those markets, the liquidity and efficiency of those markets, and the prices and price behavior of futures contracts on that index or a related index.

Certain trading strategies involving purchases and sales of index options, index futures, options on index futures or portfolios of certain of the securities in an index can affect the value of the index, the prices of the index futures, and, therefore, the prices of index options. These transactions and the resulting impact may occur at any time—and may accompany significant changes in the prices or volatilities of the stock and derivative markets—including at or shortly before an expiration. For example, traders holding positions in expiring index options or futures contracts hedged by positions in securities included in the index may attempt to liquidate their securities positions at or near the time for determining the final exercise settlement value of the options or futures contracts. The resulting orders to liquidate these securities might result in significant changes in the level of the index. Index options investors should be aware of the potential impact that these trading strategies can have on index levels at or near expiration, and the possibility that the values of index option positions will be affected accordingly.

Readers who intend to trade index options should familiarize themselves with the basic features of the underlying indexes, including the general methods of calculation. Readers who are attempting to follow a precise and sophisticated strategy involving index options may wish to inform themselves about the exact method for calculating each index involved. Information regarding the method of calculation of any index on which options are traded, including information concerning the standards used in adjusting the index, adding or deleting securities, and making similar changes, is generally available from the options market where the options are traded.

The value level of every index underlying an option—including the exercise settlement value—is the value of the index as reported by the reporting authority designated by the options market where the option is traded as the official source for determining that index's value. Unless OCC directs otherwise, every value as initially reported by the reporting authority is conclusively presumed to be accurate and deemed to be final for the purpose of calculating the cash settlement amount, even if the value is subsequently revised or determined to have been inaccurate.

Most indexes on which options are traded are updated during the trading day, and updated index levels are disseminated at frequent intervals. Investors may determine current index levels from their brokerage firms; in addition, the closing levels of many underlying stock indexes are published in daily newspapers such as "The Wall Street Journal." However, an index option may be traded in the options markets at a time when some, or even a substantial portion, of the constituent securities of the underlying index are not trading or when there is a lag in the reporting of prices in some or all of the constituent securities. In those circumstances, the current reported index level will be based on non-current information, since its calculation will be based on the last reported prices for all constituent securities even though trading or price reporting in some of those securities is not current.

FEATURES OF INDEX OPTIONS

All index options that are traded at the date of this booklet are cash-settled. Cash-settled index options do not relate to a particular number of shares. Rather, the "size" of a cash-settled index option contract is determined by the multiplier of the option. If the option

market on which an option series is traded should decrease the multiplier for the series, an adjustment panel may adjust outstanding options of that series.

The exercise prices and premiums of the index options that are traded at the date of this booklet are expressed in U.S. dollars. Subject to regulatory approval, trading in index options whose exercise prices or premiums are expressed in a foreign currency may be introduced in the future. The total exercise price for a single option is the stated exercise price multiplied by the multiplier.

Premiums for index options are expressed in points and fractions of points. Each point of premium of the options trading at the date of this booklet represents an amount equal to one U.S. dollar. In order to determine the aggregate premium for a single index option, the quoted premium must be multiplied by the multiplier.

EXAMPLE: An investor purchases a December 110 index call at 2⅛. The multiplier for that option is 100. The aggregate dollar amount of the premium is \$212.50 (\$2⅛ times 100 = \$212.50). Had the options market used a multiplier of 200, a premium of 2⅛ would have meant an aggregate premium of \$425.00.

The exercise settlement values of stock index options are determined by their reporting authorities in a variety of ways. The exercise settlement values of some index options are based on the reported level of the index derived from the last reported prices of the constituent securities of the index at the closing on the day of exercise. The exercise settlement values of other options are based on the reported level of the index derived from the opening prices of the constituent securities on the day of exercise. If an option is exercised on a day that is not scheduled as a trading day for the constituent securities of the index, the exercise settlement value is based on the reported level of the index derived from the opening or closing prices (depending on the options series) of the constituent securities on the last prior day that is scheduled as a trading day. If a particular constituent security does not open for trading on the day the exercise settlement value is determined, the last reported price of that security is used. Other means for determining the exercise settlement values of some index options series have been, and may continue to be, established. For example, the exercise settlement values for options on an index of foreign securities may be fixed in relation to a value fixed by a foreign exchange.

Investors should be aware that the exercise settlement value of an index option that is derived from the opening prices of the constituent securities may not be reported for several hours following the opening of trading in those securities. A number of updated index levels may be reported at and after the opening before the exercise settlement value is reported, and there could be a substantial divergence between those reported index levels and the reported exercise settlement value.

Investors should also be aware that there is no single opening or closing price for securities primarily traded in the NASDAQ stock market. A price of a NASDAQ security that is used in determining the level on a particular day of an index that includes the security will not necessarily be the price at which a majority of opening or closing trades in that security were effected on that day.

The principal risks of holders and writers of index options are discussed in Chapter X. Readers interested in buying or writing index options should carefully read that chapter, particularly the discussions under the headings "Risks of Option Holders," "Risks of Option Writers," "Other Risks," and "Special Risks of Index Options."

CHAPTER V

DEBT OPTIONS

Two kinds of debt options have been approved for trading at the date of this booklet. One kind, called price-based options, are options which give their holders the right either to purchase or sell a specified underlying debt security or to receive a cash settlement payment based on the value of an underlying debt security (depending on whether the options are physical delivery or cash-settled options). The other kind, called yield-based options, are options that are cash-settled based on the difference between the exercise price and the value of an underlying yield. The distinctions between price-based and yield-based options are fundamental and should be understood by readers interested in investing in debt options.

At the date of this booklet, only yield-based options are being traded. Although price-based options have traded in the past and may be traded in the future, no price-based option is traded at the date of this booklet.

The principal risks of holders and writers of debt options are discussed in Chapter X. Readers interested in buying or writing debt options should not only read this chapter but should also carefully read Chapter X, particularly the discussions under the headings "Risks of Option Holders," "Risks of Option Buyers," "Other Risks," and "Special Risks of Debt Options."

RATES, YIELDS AND PRICES OF DEBT SECURITIES

To understand debt options, an investor should understand the relationship between the rates or yields, which are different ways of expressing return on debt securities, and prices of debt securities. (Coupon interest rates of a debt security express return as a percentage of the principal amount (par value) of the security. Yields express return (or projected return) as a percentage of the amount invested.) This relationship, simply stated, is that prices of debt securities move inversely to changes in rates. Declining rates, whether on long-term bonds or money market instruments, will generally cause prices of outstanding debt securities to increase. Conversely, rising rates across a particular maturity spectrum will generally cause the prices of outstanding debt securities of that maturity to decline.

EXAMPLE: A 30-year Treasury bond pays interest at a 12% coupon rate. The only time prior to maturity that investors will pay a price of 100 (that is, 100% of par value) for the bond is when the prevailing yield on such long-term Treasury bonds is exactly 12%. Should rates move higher to, say, 14% for such Treasury bonds, the price of an outstanding 12% bond would have to decline to about 86 in order for the bond to yield 14%. If rates on such bonds subsequently decline to 10%, the price of the 12% bond could be expected to rise substantially above par, since it would yield 10% at a price of 120.

Price-based call options become more valuable as the prices of the underlying debt securities increase, and price-based puts become more valuable as the prices of the underlying debt securities decline. The relationship between interest rate changes, prices, and the value of price-based debt options can be expressed as follows:

$$\text{Interest Rates (Yields)} \downarrow \;=\; \text{Prices} \uparrow \;=\; \begin{matrix}\text{Call} \uparrow \\ \text{Put} \downarrow\end{matrix}$$

$$\text{Interest Rates (Yields)} \uparrow \;=\; \text{Prices} \downarrow \;=\; \begin{matrix}\text{Call} \downarrow \\ \text{Put} \uparrow\end{matrix}$$

In contrast, the exercise settlement value of a yield-based option is based on the difference between the value of an underlying yield and the exercise price of the option. Since the underlying yields of yield-based options will increase as interest rates increase, and vice-versa, it follows that yield-based calls become more valuable as yields rise (*i.e.*, as the prices of the debt securities from which the underlying yield is derived decline), and puts become more valuable as yields decline (and prices of such securities increase). These relationships can be expressed as follows:

$$\text{Interest Rates (Yields)} \downarrow \;=\; \text{Prices} \uparrow \;=\; \begin{matrix}\text{Call} \downarrow \\ \text{Put} \uparrow\end{matrix}$$

$$\text{Interest Rates (Yields)} \uparrow \;=\; \text{Prices} \downarrow \;=\; \begin{matrix}\text{Call} \uparrow \\ \text{Put} \downarrow\end{matrix}$$

TREASURY SECURITIES

The underlying debt securities of price-based options and the debt securities from which the underlying yields of yield-based options are derived are all Treasury securities—*e.g.*, 30-year Treasury bonds, 10-year Treasury notes, 5-year Treasury notes and Treasury bills.

Treasury bonds and notes are direct obligations of the United States that pay a fixed rate of interest semi-annually. Bonds are issued for maturities of more than ten years (although many issues are callable prior to maturity). Notes are issued for maturities of one to ten years, and are non-callable. New issues of bonds and notes are sold periodically by the Treasury, usually on an auction basis. The auction price is established by bidding and may be above or below par value. Occasionally the Treasury will "reopen" an outstanding issue by auctioning additional principal amounts. Government securities dealers make secondary markets in virtually all outstanding issues, but market activity and liquidity tend to center on the most recently auctioned issues.

Unlike Treasury bonds and notes, Treasury bills do not pay interest. Instead, the Treasury sells bills at a discount from their principal amount (par value). The investment return consists of the difference between the discounted purchase price and the principal amount payable at maturity. Treasury bills are issued in maturities of 13, 26 or 52 weeks.

Return on Treasury bills is commonly expressed in terms of a discount rate which represents an annualization (based on a 360-day year) of the percentage discount at which the bills are sold.

EXAMPLE: If a 13-week (91-day) Treasury bill with a principal amount of $1,000,000 is sold for $970,000, the actual discount would be $30,000 or 3% and the discount rate would be approximately 11.9% (360/91 times 3%).

Bills are auctioned by the Treasury on a regular basis, typically at weekly intervals for 13-week and 26-week bills and every four weeks for 52-week bills. While dealers maintain secondary markets in all outstanding Treasury bills, activity tends to center in the

most recently auctioned issues. These are commonly referred to as the "current" 13-week, 26-week, and "year" bills, respectively.

YIELD-BASED OPTIONS

All yield-based options being traded at the date of this booklet are cash-settled European-style options. The underlying yield of these options is the annualized yield to maturity of the most recently issued Treasury security of a designated maturity—*e.g.*, 30-year, 10-year, 5-year—based upon quotations or prices determined in accordance with a method specified by the options market on which the option is traded. If such security is a Treasury bill, the underlying yield is the annualized discount of the Treasury bill. (A discount represents a percentage of principal amount, rather than a return on investment, and is therefore not a true yield.) Underlying yield is stated in terms of a yield indicator, which is the percentage yield multiplied by ten. For example, if the yield is based on a Treasury bill having an annualized discount of 8.715%, the yield indicator would be 87.15.

The designated maturity of the Treasury security from which the underlying yield is determined is a standardized term of every yield-based option that is traded at the date of this booklet. The specific Treasury security having that maturity is not fixed; rather, the underlying yield is derived from the outstanding security of the designated maturity that has the longest remaining life. Newly-auctioned securities having the longest remaining life will replace old issues on the first trading day following their auction. Thus, the specific Treasury security from which the underlying yield is derived may change during the life of the option. Because yield-based options are European-style options, investors ordinarily will know prior to the time an option is exercisable the specific Treasury security from which its exercise settlement value will be determined. However, an option may often be traded for weeks or months before that specific security is auctioned by the Treasury. During that time, trading in the option will be based upon the yield for the Treasury security of the designated maturity that then has the longest remaining life.

EXAMPLE: Yield-based options whose yield is based on 5-year Treasury notes expiring in December

are opened for trading on the business day following the September auction of 5-year notes. Trading in the options will be based upon current yields for the September issue until the October auction of 5-year notes. Beginning on the trading day following the October auction, trading will be based upon current yields for the new 5-year notes. The same process will occur in November. If the options expire on or after the auction date for 5-year notes in December, their exercise settlement value will be based upon the then current yield for the December issue.

Current bid and asked quotations for recently issued Treasury securities of particular maturities are available from normal market sources. Current yield indicator values based upon a sampling of bid and asked quotations from primary dealers are disseminated at frequent intervals during the trading day by an options reporting source. Exercise settlement values for yield-based options whose underlying yields are derived from Treasury securities are based upon the spot yield for the security at a designated time on the last trading day of the option, as announced by the Federal Reserve Bank of New York.

The aggregate cash settlement amount that the assigned writer of a yield-based option is obligated to pay the exercising option holder is the difference between the exercise price of the option and the exercise settlement value of the underlying yield on the last trading day before expiration, as reported by a designated reporting authority, multiplied by the multiplier for the option. Different yield-based options may have different multipliers.

The exercise prices of yield-based options are expressed in terms of the yield indicator. For example, an exercise price of 82.50 would represent a yield of 8.25%.

Each point of premium will correspond to .1% in yield. The dollar value of the premium for a single yield-based option will equal the quoted premium multiplied by the dollar value of the option multiplier. Thus, a premium of 2½ would equal a premium of $250 for an option having a multiplier of 100, or $5000 for an option having a multiplier of 2000.

The premiums of yield-based options are affected by the factors discussed under "Premium" in Chapter II.

Because yield-based options are European-style options and the underlying yield is determined from the most recently auctioned Treasury security with the longest remaining life, a major factor affecting the pricing of such options is likely to be the estimates of market participants of the anticipated yield at expiration, and current yield may be a less significant pricing factor.

Settlement of exercises of yield-based options takes place on the business day immediately following the day of exercise. Investors may determine from their brokerage firms when and how settlement amounts will be credited or debited to their brokerage accounts.

If the U.S. Department of the Treasury ceases to issue, or changes the terms or the schedule of issuance of, Treasury securities of a designated maturity, an adjustment panel has discretion to adjust the terms of the series by substituting other Treasury securities or to make such other adjustment as the adjustment panel may determine. If the options market on which a particular yield-based option is traded should decrease the multiplier for the option, the adjustment panel has discretion to adjust outstanding options affected by the change by proportionately subdividing them or by taking other action.

Rules of the options market on which yield-based options are traded may permit or require suspension of trading in the options if current quotations for the last-auctioned Treasury securities of the designated maturity become unavailable or unreliable. For a discussion of the risks involved in trading halts, see the discussion in Chapter X under "Other Risks."

CHAPTER VI

FOREIGN CURRENCY OPTIONS

Foreign currency options—sometimes referred to simply as currency options—are options to purchase or sell one currency at a price denominated in another currency. The price of one currency in terms of another currency is known as an exchange rate. The exercise price of a currency option thus represents an exchange rate. The currency in which the premium and exercise price are denominated is referred to as the trading currency. The currency to be purchased or sold at the exercise price is the underlying currency.

Certain of the foreign currency options discussed in this chapter, which are referred to as dollar-denominated foreign currency options, are options to purchase or sell underlying foreign currencies for U.S. dollars, and their exercise prices represent the exchange rates of the underlying foreign currencies with respect to the U.S. dollar. Other options (which are referred to as cross-rate foreign currency options or cross-rate options) that are discussed below under "Cross-Rate Foreign Currency Options" are options to purchase or sell an underlying foreign currency at an exercise price that is denominated in another foreign currency. The exercise price of a cross-rate option therefore represents an exchange rate between two foreign currencies.

While most of the foreign currency options that are traded at the date of this booklet are physical delivery options, trading has been introduced in cash-settled foreign currency options. These options are discussed below under "Cash-Settled Foreign Currency Options."

The term "foreign currency" includes not only the currencies of individual nations, but also the European Currency Unit ("ECU"). The ECU, which is composed of specified amounts of various European currencies, is the official medium of exchange of the European Economic Community's European Monetary System and is primarily intended for use in international commerce. As used in this booklet, the term "sovereign government" includes the European Economic Community.

The principal risks of holders and writers of foreign currency options are discussed in Chapter X. Readers interested in buying or writing foreign currency options should not only read this chapter but should also carefully read Chapter X, particularly the discussions under the headings "Risks of Option Holders," "Risks of Option Buyers," "Other Risks," and "Special Risks of Foreign Currency Options."

MARKET FOR FOREIGN CURRENCIES

Understanding the risks inherent in foreign currency options requires familiarity with the characteristics of the markets for the underlying currencies. Readers will find extensive literature on the subject, and this chapter can do no more than briefly summarize the most fundamental characteristics of those markets as they pertain to foreign currency options.

Foreign exchange rates can be free floating or may be subject to a variety of formal or informal governmental exchange rate control mechanisms. Exchange rates of most Western nations are permitted to fluctuate in value relative to the U.S. dollar and to each other. It must be kept in mind, however, that sovereign governments rarely voluntarily allow their currencies to float freely in response to economic forces. To the contrary, sovereign governments use a variety of techniques, such as intervention by a country's central bank or imposition of regulatory controls, to affect the exchange rates of their currencies. Thus, a special risk in trading options on foreign currencies is that governmental actions might be instituted which could interfere with freely determined currency valuation or even with movement of currencies across borders. These risks are specifically addressed under "Special Risks of Foreign Currency Options" in Chapter X.

The market in foreign currencies exists in every large financial center in the world, and primarily consists of trading by the world's international banks. In contrast to the stock market, the market for foreign currencies is decentralized, essentially free from government regulation designed to protect investors (although, as noted above, governments may take various actions that affect their own currencies and the markets on which they are traded), and extremely large. Trading is generally conducted in units equivalent to $1 million to $5 million, and the market is not structured for trading or delivery of small amounts of currency. While a "retail market" for foreign currencies is available for tourists and others engaged in smaller transactions, the

prices available in that market are only generally related to prices in the "wholesale" interbank market, and it is unlikely that the prices in the retail market will be as favorable as the prices for transactions in large amounts of foreign currency.

SPECIAL CHARACTERISTICS OF FOREIGN CURRENCY OPTIONS

Foreign currency options, like other options, provide opportunities for investment and pose risks to investors as a result of fluctuations in the value of the underlying interest. Just as certain options on equity securities are priced in relation to the price of the underlying security, dollar-denominated foreign currency option prices will generally depend in significant part on the U.S. dollar value of the underlying foreign currency. Similarly, the prices of cross-rate options will tend to depend on the relative values of the underlying currency and the trading currency.

The relationship between the value of an underlying foreign currency relative to the trading currency and the prices of options on that underlying foreign currency can be summarized as follows:

1. If the value of an underlying foreign currency rises in relation to the trading currency, call premiums will normally increase and put premiums decrease.

2. If the value of an underlying foreign currency decreases in relation to the trading currency, call premiums will normally decrease and put premiums increase.

EXAMPLE: Assume a dollar-denominated call option gives its holder the right to purchase British pounds at $1.35 each. At expiration, that option will have intrinsic value if the price of the British pound is above $1.35. At the same time, it will have no intrinsic value if the price of the pound is equal to or below $1.35. The change in the price of British pounds may result from a change in the value of the U.S. dollar relative to all other currencies ("strong" dollar, "weak" dollar), from a change peculiar to the British pound ("strong" pound, "weak" pound), or from a combination of the two. In any case, the final measure of the intrinsic value of the option will be the value of the British pound relative to the U.S. dollar.

EXAMPLE: Assume a cross-rate call option gives its holder the right to purchase British pounds at 2.50 German marks ("DM") each. At expiration, that option will have intrinsic value if the price of the British pound in German marks is above DM2.50. It will have no intrinsic value if the price is equal to or below DM2.50 at that time. Changes in the exchange rate between German marks and British pounds may result from changes in the value of German marks relative to other currencies generally, from changes in the value of the British pound, or from a combination of the two. In any case, the intrinsic value of the option will be determined by the value of the British pound relative to the German mark, and not to the U.S. dollar or any other currency. However, as is noted in the following section, fluctuations in the value of the trading currency relative to other currencies may significantly affect investors who intend to convert their gains or losses into one of those other currencies.

Readers should note that the various expiration dates for foreign currency options are different from the expiration dates for options on other underlying interests. Readers should determine the expiration date of each foreign currency option they wish to buy or write.

SPECIAL FEATURES OF DOLLAR-DENOMINATED FOREIGN CURRENCY OPTIONS

The amount of the foreign currency underlying each foreign currency option (*i.e.*, the unit of trading) is specified by the options market on which the option is traded.

Exercise prices for currently available dollar-denominated options on foreign currencies other than the Japanese yen are stated in U.S. cents per unit of foreign currency. Exercise prices for dollar-denominated Japanese yen options are expressed in hundredths of U.S. cents per unit. In order to determine the total exercise price per contract, it is necessary to multiply the stated exercise price by the unit of trading of the particular option.

EXAMPLE: A dollar-denominated put covering 31,250 British pounds with an exercise price of 130 would entitle the holder to sell the underlying pounds for an aggregate exercise price of $40,625 ($1.30 multiplied by 31,250).

EXAMPLE: A dollar-denominated call covering 6,250,000 Japanese yen with an exercise price of 94 would entitle the holder to buy the underlying yen for an aggregate exercise price of $58,750 ($.0094 multiplied by 6,250,000).

Because the issuer of a particular foreign currency may unilaterally issue a new currency to replace its existing currency or alter the exchange rate or exchange characteristics of its existing currency with respect to other currencies, an adjustment panel has the discretion to adjust the terms of the options on such foreign currency. (At the date of this booklet, the representative of OCC on an adjustment panel has the power to vote on adjustments to all foreign currency options whether or not the votes of the other panel members result in a tie.) Ordinarily, the terms of foreign currency options will not be adjusted to reflect a devaluation or revaluation of a currency. The monetary authorities of the European Economic Community may change the weighting and identity of the currencies comprising the ECU from time to time. Except in extraordinary circumstances, the terms of ECU options will not be adjusted to reflect such changes.

Premiums for currently available dollar-denominated options on foreign currencies other than the French franc and the Japanese yen are expressed in U.S. cents per unit of foreign currency.

EXAMPLE: If a dollar-denominated option covering 62,500 Swiss francs is purchased at a premium of .81, the cost of the option will be $506.25 (.81 cents, or $.0081, times the unit of trading of 62,500).

Premiums for currently available dollar-denominated French franc options are expressed in tenths of U.S. cents.

EXAMPLE: If a dollar-denominated option covering 250,000 French francs is purchased at a premium of .65, the cost of the option will be $162.50 (.065 cents, or $.00065, times the unit of trading of 250,000).

Premiums for currently available dollar-denominated Japanese yen options are expressed in hundredths of U.S. cents.

EXAMPLE: If a dollar-denominated option covering 6,250,000 Japanese yen is purchased at a premium of .42, the cost of the option will be $262.50 (.0042 cents, or $.000042, times the unit of trading of 6,250,000).

Settlement of exercises of physical delivery dollar-denominated and cross-rate options is significantly different from settlement of exercises of other types of options. The following is a description of the settlement procedures pertaining to such options.

Exercises are settled through the facilities of OCC. For this purpose, OCC has established banking arrangements permitting it to receive and deliver each underlying foreign currency in the country of origin in satisfaction of option exercises. (Exercises and assignments of ECU options settle within a country or countries designated by OCC.) Clearing Members ordinarily deliver or receive foreign currency on the fourth business day after exercise that is also a banking day for OCC's correspondent bank in the country of origin. In the case of dollar-denominated options, cash settlement between OCC and Clearing Members (*i.e.*, payment or receipt of the net exercise price for each day's exercises) takes place in the United States or other locations approved by OCC. In some cases, a wholly-owned subsidiary of OCC—The Intermarket Clearing Corporation—which has the same settlement procedures as OCC, may act as OCC's agent in making foreign currency settlements with Clearing Members.

For purposes of settlement between an investor and his brokerage firm, applicable rules require a holder exercising a physical delivery put option and an assigned writer of a physical delivery call option to arrange for the deposit of the requisite units of the underlying foreign currency into a designated bank account in the country issuing that currency no later than the time by which OCC requires delivery to it of foreign currency by its Clearing Members. Through this procedure, investors ordinarily rely upon their brokerage firms to make settlement with them. However, OCC has established procedures whereby Clearing Members may permit customers to make settlement directly with an OCC correspondent bank. (At the date of this booklet, such procedures are not yet available in the case of cross-rate options.) Investors should consult their brokerage firms with respect to these procedures.

At the date of this booklet, OCC expects, subject to regulatory approval, to adopt exercise settlement procedures whereby OCC's obligation to deliver or pay for underlying foreign currencies in satisfaction of option exercises may be discharged by transferring the foreign currency to be delivered, or the net exercise price for foreign currency to be received, to an OCC correspondent bank that is obligated to complete the settlement. Brokerage firms and their customers would then be relying on the correspondent bank to deliver or pay for the underlying foreign currency.

If OCC should determine that foreign governmental restrictions or taxes would prevent the orderly settlement of delivery foreign currency option exercises or would result in undue burdens on OCC or its Clearing Members, OCC has the authority to impose special exercise settlement procedures. These could range from technical changes in delivery procedures to the fixing of U.S. dollar settlement prices. OCC's authority to fix cash settlement prices for foreign currency options applies to both calls and puts. Thus, OCC could authorize exercising foreign currency put holders, as well as assigned call writers, to pay a U.S. dollar settlement price in lieu of delivering the underlying foreign currency. However, OCC also has the authority to prohibit exercises of foreign currency puts by holders who would be unable to deliver the underlying foreign currency. The potential effects of such a prohibition are discussed in paragraph 5 under "Risks of Option Holders" in Chapter X. If special exercise settlement procedures are imposed, investors may determine the nature of such procedures from their brokers.

CROSS-RATE FOREIGN CURRENCY OPTIONS

As noted at the beginning of this chapter, a cross-rate foreign currency option is an option to purchase or sell a foreign currency at an exercise price that is denominated in another foreign currency. An example of a cross-rate option is an option to purchase British pounds at an exercise price denominated in Japanese yen—that is, the trading currency would be the Japanese yen and the underlying currency would be the British pound. The exercise price would be expressed as a certain number of yen per pound. Premiums for cross-rate options are denominated in the trading currency. Thus, in the above example, premiums would be in yen.

The cross-rate options that have been approved for trading as of the date of this booklet are physical delivery European-style options. It is possible that other kinds of cross-rate options will be traded in the future.

Investors in cross-rate options should bear in mind that the magnitude and direction of any change in the value of the underlying currency in relation to the trading currency may be quite different from the magnitude and direction of any contemporaneous change in the value of either of those currencies in relation to a third currency, such as the U.S. dollar. Thus, for example, the British pound may appreciate in relation to the

Japanese yen at the same time that the pound depreciates in relation to the U.S. dollar. As discussed in Chapter X under "Special Risks of Cross-Rate Options," this is of particular significance to investors who intend to convert their profits or losses on cross-rate options into U.S. dollars.

All of the previous discussion in this chapter relating to foreign currency options in general applies equally to cross-rate options except to the extent that it is specifically limited to dollar-denominated options. Certain special features of cross-rate options are discussed below.

SPECIAL FEATURES OF CROSS-RATE OPTIONS

The amount of the foreign currency underlying each cross-rate option (*i.e.*, the unit of trading) is specified by the options market on which the option is traded.

The exercise price of a physical delivery cross-rate option is the price (denominated in the trading currency) at which the underlying currency may be purchased or sold upon exercise of the option. Exercise prices for cross-rate options are generally expressed in terms of units (or fractions of units) of the trading currency per unit of the underlying currency. Therefore, in order to determine the total exercise price per contract, it is necessary to multiply the stated exercise price by the unit of trading of the particular option.

EXAMPLE: The exercise prices of yen-denominated options covering underlying German marks are expressed in yen per mark. Therefore, a put covering 1,000,000 German marks with an exercise price of 93 Japanese yen ("JY") would entitle the holder to sell the underlying marks for an aggregate exercise price of JY93,000,000 (JY93 multiplied by 1,000,000).

The discussion in this chapter of adjustments under the caption "Special Features of Foreign Currency Options" is applicable also to cross-rate options, except that adjustments in the terms of cross-rate options might be made to reflect events affecting the trading currency as well as events affecting the underlying currency.

Premiums for currently available cross-rate options are expressed in units and decimals of the trading currency per unit of the underlying currency.

EXAMPLE: If a yen-denominated option covering 500,000 British pounds is purchased at a premium of 2.63, the cost of the option will be JY1,315,000 (JY2.63 times the unit of trading of 500,000).

Premium settlements of cross-rate options are effected in a trading currency other than U.S. dollars. Similarly, in the event of exercise, the exercise price is paid in the trading currency. OCC has established banking arrangements permitting it to receive and pay foreign currencies in the country of origin for purposes of both premium and exercise settlement of cross-rate options between OCC and its Clearing Members. Customers ordinarily settle with their brokerage firms, although OCC may establish procedures whereby Clearing Members may permit customers to make exercise settlement directly with an OCC correspondent bank. Each customer should consult his brokerage firm to determine the procedures and time requirements for payment of foreign currencies on settlement of transactions in, and exercises of, cross-rate options.

If OCC should determine that foreign governmental restrictions or taxes or other events beyond the control of OCC would prevent the orderly settlement of exercises of, or premium payments with respect to transactions in, cross-rate options or would result in undue burdens on OCC or its Clearing Members, OCC has the authority to impose special settlement procedures. These could range from technical changes in payment procedures for the trading currency or underlying foreign currency to the fixing of U.S. dollar settlement prices payable in lieu of either currency. OCC also has the authority to prohibit exercises of cross-rate options by holders who would be unable to meet the settlement obligations resulting from the exercise. The potential effects of such a prohibition are discussed in paragraph 5 under "Risks of Option Holders" in Chapter X. If special exercise settlement procedures are imposed, investors may determine the nature of such procedures from their brokerage firms.

CASH-SETTLED FOREIGN CURRENCY OPTIONS

At the date of this booklet, cash-settled foreign currency options are also traded. These options are dollar-denominated, European-style options. Each cash-settled foreign currency option has an expiration date not more than approximately two weeks following the initiation of trading in the option. Cash-settled foreign currency options having longer expirations may be traded in the future.

The discussion above in this chapter relating to dollar-denominated foreign currency options generally applies to cash-settled foreign currency options except to the extent that such discussion specifically applies to physical delivery options.

The contract size of a cash-settled foreign currency option, like the size of other foreign currency options, is expressed in terms of the amount of the underlying currency covered by the option.

EXAMPLE: If the exercise price of a cash-settled call option on German marks is 60 (expressed as U.S. cents per mark), the exercise settlement value of the underlying currency is reported as 65, and the unit of trading is 62,500 marks, then the cash settlement amount of the option will be ($.65 minus $.60) multiplied by 62,500 = $3,125.

A cash-settled foreign currency option that, based on its exercise settlement value, is in the money on the expiration date will be automatically exercised on the expiration date. In the future, cash-settled foreign currency options may provide that they will be automatically exercised only if they are in the money by a specified amount on the expiration date.

At the date of this booklet, the exercise settlement value for cash-settled foreign currency options is based upon bid and offer quotations from a sampling of participants in the interbank spot market for the underlying foreign currency at a specified time on the expiration date. The time as of which the exercise settlement value is calculated and the method of calculation is determined by the options market on which the options are traded and may be changed by it at any time. Any such change may be made applicable to options outstanding at the time of the change.

Another special feature of cash-settled foreign currency options having an expiration date of not more than two weeks following the initiation of trading is that option writers must deposit required margin with their brokerage firms within two business days of the trade date. It should be noted that this is a shorter period than the normal period required for other options transactions.

CHAPTER VII

FLEXIBLY STRUCTURED OPTIONS

Flexibly structured options, like the other options discussed in this booklet, are traded on the U.S. options markets and are issued by OCC. However, unlike other options, the terms of flexibly structured options are not all standardized. When a flexibly structured option is purchased and sold in an opening transaction, the parties to the transaction have the flexibility, within limitations set forth in the rules of the options market on which the transaction occurs, to fix certain of the option's terms. The terms of a flexibly structured option which may be fixed by the parties are called variable terms. The flexibility to fix these variable terms is what makes flexibly structured options different from other options.

The principal risks of holders and writers of flexibly structured options are discussed in Chapter X. Readers who are interested in buying or writing flexibly structured options should read not only this chapter but also all of Chapter X.

Because many of the terms of flexibly structured options are not standardized, it is less likely that there will be an active secondary market in which holders and writers of such options will be able to close out their positions by offsetting sales and purchases. See paragraph 1 under "Special Risks of Flexibly Structured Options" in Chapter X.

The trading procedures established by the options markets for transactions in flexibly structured options differ from the procedures for transactions in other options. Readers desiring information about the trading procedures of an options market for flexibly structured options may obtain that information from that market.

The options markets may fix minimum size or minimum monetary values for transactions in flexibly structured options. Flexibly structured options may be useful to sophisticated investors seeking to manage particular portfolio and trading risks. However, as a result of these minimums, as well as the special trading procedures and reduced likelihood of there being a secondary market, flexibly structured options transactions are not suitable for investors who are not financially able to bear the risks of maintaining such minimum positions in flexibly structured options.

SPECIAL FEATURES OF FLEXIBLY STRUCTURED OPTIONS

DESIGNATION OF TERMS—The parties to an opening transaction in flexibly structured options may designate the option's variable terms in accordance with the rules of the options market where the transaction occurs. Included among the terms that an options market may identify as variable terms are the specification and amount of the underlying interest, whether the transaction involves a put, call or spread, the style of the option, the exercise price, the cap interval of a capped option, the expiration date, the method for determining the exercise settlement value of a cash-settled option that is exercised on the expiration date, the settlement currency of a cash-settled option, the premium currency, and the trading currency of a foreign currency option.

Only those terms identified as variable terms by the options market where the opening transaction occurs may be designated by the parties. All other terms are standardized in accordance with the rules of OCC and the options market. The rules of an options market may impose limitations on the variable terms which the parties may designate. For example, an options market may require that the expiration date of a flexibly structured option not fall within a specified period of time or that the life of the option not exceed a maximum permissible term. As another example, if the exercise settlement value of an index option is based on a specified average, an options market may require that the average conform with the averaging parameters established by the market. In addition, the underlying interest, the settlement currency, the premium currency and the trading currency, may be designated only from those available for flexibly structured options on the options market, and an options market may require that the premium currency be the same as the settlement currency.

MINIMUM SIZE REQUIREMENTS—Every transaction in flexibly structured options must satisfy the minimum size or monetary value requirements of the options market where the transaction occurs. The minimum requirements may be larger for an opening

transaction in a series in which there is no open interest than for other transactions (whether opening or closing) in that series. An options market may also impose minimum size or monetary value requirements on exercises of flexibly structured options. Information as to such minimums may be obtained from the options market where the options are traded.

POSITION and EXERCISE LIMITS—The options markets may establish special position and exercise limits for flexibly structured options. Such limits may differ from the limits applicable to other options, although an options market may require that positions in certain flexibly structured options be aggregated with positions in certain other options. Information concerning position and exercise limits of particular flexibly structured options may be obtained from the options market where the options are traded or from brokerage firms.

TRADING PROCEDURES—The trading hours and trading procedures for flexibly structured options may differ from the trading hours and procedures for other options. These special procedures may mean that the market-making systems that are applicable to other options may not be applicable to flexibly structured options, that there may not be continuous quotations for flexibly structured options, and that quotations may be provided only in response to a specific request as the basis for trading with the party making the request.

EXERCISES and SETTLEMENTS—In general, the exercise, assignment and settlement of flexibly structured options occurs in the same manner as, and are subject to the same time frames and procedures that are applicable to, other options of the same style and having the same underlying interest. See Chapter VIII. However, unlike most other options, flexibly structured options (other than foreign currency options) that are in the money on the expiration date may be exercised automatically. In the future it may be provided that flexibly structured options will be exercised automatically only if they are in the money by a specified amount.

EXERCISE SETTLEMENT VALUE—The method of determining the exercise settlement value on the expiration date of a flexibly structured index option is a variable term that is fixed by the parties in their opening transaction. For example, the parties may specify that such exercise settlement value will be determined with reference to opening prices of the constituent securities of the index, their closing prices, an average of

their high and low prices, an average of opening and closing prices, an average over a stated period of time, or another average that conforms with the parameters established by the options market. However, under the OCC rules in effect at the date of this booklet, the method of determining the exercise settlement value for an exercise that occurs on a day other than the expiration date is not a variable term. The exercise settlement value for such exercises of flexibly structured index options will be the value derived from the closing prices of the constituent securities on the day of exercise (as reported by the reporting authority), and the exercise settlement value of other flexibly structured options will be determined in the same manner as it is determined for other options on the same underlying interest that are traded on the options market where the opening transaction in the flexibly structured option occurred.

SETTLEMENT CURRENCY—The settlement currency may be a variable term to be fixed by the parties out of those currencies specified by the options market on which the transaction occurs as being available for flexibly structured options. The settlement currency may be the currency in which the premium is payable. In addition, brokerage firms may require their customers to make margin payments in the settlement currency.

If the settlement currency and premium currency are not U.S. dollars, settlement of premiums and exercises is generally made through the procedures and arrangements established by OCC for cross-rate foreign currency options. See "Special Features of Cross-Rate Options" in Chapter VI. If ECUs are the settlement currency, settlements can occur in the country or countries designated by OCC.

CHAPTER VIII

EXERCISE AND SETTLEMENT

Although most option holders and writers close out their options positions by an offsetting closing transaction, investors should nonetheless be familiar with the rules and procedures applicable to exercise. Such an understanding can help an option holder determine whether exercise might be more advantageous than an offsetting sale of the option. An option writer needs to understand exercise procedures because of the possibility of being assigned an exercise. Once an exercise of an option has been assigned to an option writer—even though he may not yet have been notified of the assignment—the writer can no longer effect a closing transaction in that option but must instead purchase or sell the underlying interest for the exercise price (or, in the case of a cash-settled option, pay the cash settlement amount).

HOW TO EXERCISE

The period during which an option is exercisable depends on the style of the option. This is discussed under "Style of Option" in Chapter II.

In order to exercise most options traded at the date of this booklet, action must be taken by the option holder prior to the expiration of the option. However, some options may be subject to automatic exercise. For example, capped options are subject to automatic exercise if the automatic exercise value of the underlying interest hits the cap price for the option, and certain other options are subject to automatic exercise at expiration if they are then in the money (or, in the case of some options, in the money by a specified amount).

To exercise an option that is not subject to automatic exercise, the holder must direct his brokerage firm to give exercise instructions to OCC. In order to ensure that an option is exercised on a particular day, the holder must direct his brokerage firm to exercise before the firm's cut-off time for accepting exercise instructions for that day. Different firms may have different cut-off times for accepting exercise instructions from customers, and those cut-off times may be different for different options.

A brokerage firm's cut-off time for accepting exercise instructions becomes critical on the last trading day before an option expires. An option that expires unexercised becomes worthless. An option holder who intends to exercise an option before expiration must give exercise instructions to his brokerage firm before the firm's cut-off time for accepting exercise instructions on the last trading day before expiration. Many brokerage firms accept standing instructions to exercise, or have procedures for the exercise of, every option which is in the money by a specified amount at expiration. These procedures often incorporate by reference OCC's administrative procedures that provide for the exercise of every option that is in the money by a specified amount at expiration unless the Clearing Firm carrying the option in its accounts instructs OCC not to exercise the option. Investors should determine from their brokerage firm the applicable cut-off times, the firm's procedures for submitting exercise instructions, and whether any of their options are subject to automatic exercise. Investors should also determine whether the exercise of their options is subject to standing instructions of their brokerage firm, and, if so, they should discuss with the firm the potential consequences of such instructions.

In highly unusual circumstances (*e.g.*, where a brokerage firm is unable to receive instructions from its customers), a firm may be authorized under applicable rules to make an exception to its regular cut-off time. However, in order for an option to be exercised, the brokerage firm must in any event pass on its customer's exercise instructions to OCC before expiration. OCC may allow exercises for a limited time after expiration in the unlikely event that OCC is unable to follow its normal procedures for receiving exercise instructions from Clearing Members on the expiration date. Subject to that very limited exception, OCC has no authority to extend the expiration of any option.

Once an exercise instruction is given by a Clearing Member to OCC, it cannot ordinarily be revoked except to correct a bona fide error that is specified in a request filed by the Clearing Member prior to a deadline specified in OCC's rules.

ASSIGNMENT

OCC assigns exercises in standardized lots to Clearing Member accounts that reflect the writing of options identical to the exercised options. A description of OCC's assignment procedures is available from OCC on request at the address set forth in paragraph 1 of Chapter XI of this booklet. Assignments are ordinarily made prior to the commencement of trading on the business day following receipt by OCC of the exercise instruction. In the case of options traded in evening sessions, exercise instructions received by OCC on a business day are ordinarily assigned prior to the opening of trading in that day's evening session.

If exercises are assigned by OCC to a Clearing Member's customers' account, the Clearing Member must then assign them to customers maintaining positions as writers of the exercised options series. The rules of the options markets require their member firms to allocate assignments to customers either on a random selection basis or on a "first-in, first-out" basis and to inform their customers which method is used and how it works. Regardless of the method used, option writers are subject to the risk each day their options are exercisable that some or all of them may be assigned. (See the discussion in Chapter X under "Risks of Option Writers.")

It is possible that an option writer will not receive notification from its brokerage firm that an exercise has been assigned to him until one or more days following the date of the initial assignment to the Clearing Member by OCC. This creates a special risk for uncovered writers of physical delivery call stock options. This is discussed in paragraph 8 under "Risks of Options Writers" in Chapter X and under "Settlement" in this chapter.

SETTLEMENT

Settlements between brokerage firms or their agents on virtually all exercised physical delivery stock options are routinely handled through stock clearing corporations in much the same way as ordinary purchases and sales of the underlying equity security. Promptly after the exercise and assignment of a physical delivery stock option, OCC reports it to the designated stock clearing corporations of the Clearing Members representing the exercising holder and the assigned writer. If neither stock clearing corporation rejects the transaction by a time specified in their

agreements with OCC, settlement is effected pursuant to the rules of those clearing corporations, and OCC has no further responsibility to either the exercising holder or the assigned writer.

In a few cases—which usually occur because an underlying equity security is no longer eligible for clearance through a stock clearing corporation—settlements calling for the delivery of that security are made directly between Clearing Members. OCC's rules provide protect procedures for exercise settlements made directly between Clearing Members that involve the delivery of securities which either have been called for redemption, are due to expire or with respect to which a call or expiration date is impending, or are subject to an offer which will expire, if the expiration time (as defined in OCC's rules) is on or after the exercise settlement date for the option. Under these protect procedures, the Clearing Member entitled to receive the securities may give a liability notice to the delivering Clearing Member by a specified cut-off time prior to the expiration time. If a liability notice is so given and the securities are not delivered sufficiently in advance of the expiration time to permit the receiving Clearing Member to obtain their benefit, the delivering Clearing Member will be liable for any resulting damages. If the failure to deliver was the fault of the Clearing Member's customer, the Clearing Member may (depending on its own procedures) pass that liability on to the customer. Investors should be aware that correspondent clearing corporations may have protect procedures in respect of the settlements made through them.

At the date of this booklet, the regular exercise settlement date for physical delivery stock options is the fifth business day after exercise, but the SEC has adopted a rule that requires the regular settlement date to be the third business day after an exercise that takes place on or after June 1, 1995. The regular exercise settlement dates for all other types of physical delivery options traded at the date of this booklet are described in the separate chapters of the booklet discussing those options.

At the date of this booklet, settlements of exercises of cash-settled options and foreign currency options are effected by Clearing Members through OCC. Settlement of exercises of cash-settled options—through the payment in cash of the cash settlement amount—ordinarily takes place on the business day immediately following the day of exercise. However, cash-settled

capped options that have been automatically exercised on any trading day other than the one immediately prior to expiration are settled on the second business day after the automatic exercise is triggered. The settlement of exercises of cash-settled options that have a settlement currency that is not U.S. dollars is discussed under "Settlement Currency" in Chapter VII.

OCC has authority to postpone settlement of any option on any type of underlying interest when OCC considers such action to be necessary in the public interest or to meet unusual conditions.

Each brokerage firm involved in an exercise or assignment settles with its own customer. Neither OCC nor any options market has any responsibility to customers with respect to funds or securities that have been received by brokerage firms for their customers. Investors may determine from their brokerage firms when and how settlement amounts will be credited or debited to their brokerage accounts.

In certain unusual circumstances, it might not be possible for uncovered call writers of physical delivery stock and stock index options to obtain the underlying equity securities in order to meet their settlement obligations following exercise. This could happen, for example, in the event of a successful tender offer for all or substantially all of the outstanding shares of an underlying security or if trading in an underlying security were enjoined or suspended. In situations of that type, OCC may impose special exercise settlement procedures. These special procedures, applicable only to calls and only when an assigned writer is unable to obtain the underlying security, may involve the suspension of the settlement obligations of the holder and writer and/or the fixing of cash settlement prices in lieu of delivery of the underlying security. In such circumstances, OCC might also prohibit the exercise of puts by holders who would be unable to deliver the underlying security on the exercise settlement date. When special exercise settlement procedures are imposed, OCC will announce to its Clearing Members how settlements are to be handled. Investors may obtain that information from their brokerage firms.

CHAPTER IX

TAX CONSIDERATIONS, TRANSACTION COSTS AND MARGIN REQUIREMENTS

Options investing, like other forms of investing, involves tax considerations, transaction costs and margin requirements that can significantly affect the profit or loss results of buying and writing options. These are only briefly mentioned in this chapter, but should be understood and taken into account by everyone considering transactions in options.

Notwithstanding the importance of tax considerations, transaction costs and margin requirements, for the sake of simplicity, the examples in this booklet do not take these matters into account. Nevertheless, it should be remembered that their impact may significantly reduce the opportunity for profit and the rate of return obtainable from particular options trading strategies; indeed, their effect may in some instances turn an apparent profit into a loss.

TAX CONSIDERATIONS

The tax consequences of an options transaction depend, in part, on the tax status of the investor and also may differ depending upon the type of underlying interest involved—since the tax rules are not the same for each type of underlying interest—and upon such factors as whether an option is exercised or is the subject of a closing transaction or is allowed to expire or whether an option that is written is covered or uncovered. Some options markets have publications that deal specifically with the tax treatment of various options transactions. These may be obtained from brokerage firms as well as the markets themselves. Readers should also be aware that options transactions effected in foreign markets could subject the parties to tax liability under the laws of the country in which the foreign market is located. <u>Because of the importance of tax considerations to all options transactions, it cannot be emphasized too strongly that the reader considering options should consult with his tax adviser as to how taxes may affect the outcome of contemplated options transactions.</u>

TRANSACTION COSTS

The transaction costs of options investing consist primarily of commissions (which are imposed in opening, closing, exercise and assignment transactions), but may also include margin and interest costs in particular transactions. The impact of transaction costs on profitability is often greater for options transactions than for transactions in the underlying interests because these costs are often greater in relation to options premiums than in relation to the prices of underlying interests. Transaction costs are especially significant in option strategies calling for multiple purchases and sales of options, such as spreads and straddles. Transaction costs may be different for transactions effected in foreign options markets than for transactions effected in U.S. markets. Readers should always discuss transaction costs with their brokerage firms before engaging in options transactions.

MARGIN REQUIREMENTS

Writers of options, other than certain covered call option writers and certain writers of cash secured puts (discussed below), must comply with applicable margin requirements.

In the stock market, <u>margin</u> refers to buying stock or selling stock short on credit. Margin customers are required to keep securities on deposit with their brokerage firms as collateral for their borrowings. But options, unlike stock, cannot be bought on credit under current regulations. In the options market, margin means the cash or securities required to be deposited by an option writer with his brokerage firm as collateral for the writer's obligation to buy or sell the underlying interest, or in the case of cash-settled options to pay the cash settlement amount, if assigned an exercise. Minimum margin requirements are currently imposed by the Board of Governors of the Federal Reserve System, the options markets and other self-regulatory organizations, and higher margin requirements may be imposed—either generally or in individual cases—by the various brokerage firms.

Uncovered writers may have to meet calls for substantial additional margin in the event of adverse market movements. Even if a writer has enough equity in his account to avoid a margin call, increased margin requirements on his option positions will make that equity unavailable for other purposes.

If a holder of a physical delivery call option exercises and wishes to purchase the underlying interest on credit, the holder may be required to deposit margin with the holder's brokerage firm. Holders of physical delivery options on a foreign currency should be aware that, at the date of this booklet, foreign currency has no value for margin purposes except to the extent that credit has been extended on the same foreign currency.

Margin requirements are complex and are not the same for writers of options on different types of underlying interests. Margin requirements are subject to change, and may vary from brokerage firm to brokerage firm. Consequently, the examples in this booklet do not take margin requirements into account. However, margin requirements can have an important effect on an option writer's risks and opportunities.

Persons considering writing options (whether alone or as part of options combinations, such as spreads or straddles) should determine the applicable margin requirements from their brokerage firms and be sure that they have sufficient liquid assets to meet those requirements in the event of adverse market movements.

CHAPTER X

PRINCIPAL RISKS OF OPTIONS POSITIONS

This chapter discusses the principal risks of holders and writers of options. The risks discussed are those that are unique to being an option holder or writer. Risks that relate to such matters as the trading of securities generally; the state of the economy; the supply and demand factors in the options markets and in other related markets; the factors affecting the values of the various underlying interests; the factors affecting the volatility, liquidity and efficiency of the options markets or of other markets or other factors that may affect the pricing of particular options; the quality or operations of the various options markets at any particular time; and the procedures of the various options markets and of brokers in transmitting orders and effecting executions are not within the scope of this booklet and are not discussed. (See the discussion in Chapter XI as to the scope and limitations of this booklet.)

It should also be noted that new types of options and new options strategies are constantly being developed and that some of the risks of new options products and new options strategies do not become apparent until there has been significant experience in trading and using the new options and strategies. Accordingly, readers should be aware that there is a risk in newness, particularly if the new option or strategy is complicated or complex, that cannot always be identified or described.

Readers should also be aware that not all options strategies will necessarily be suitable for them and that certain strategies may expose them to very significant potential losses. For example, the risks associated with the writing of puts or uncovered calls expose investors to such potential losses, and this type of strategy is therefore not suitable for all investors.

Many of the risks are the same for options on all types of underlying interests, although some special risks may apply only to options on particular types of underlying interests. The first three sections of this chapter describe risks that apply generally to options on all types of underlying interests. They are followed by sections discussing the special risks associated with options on the particular types of underlying interests.

RISKS OF OPTION HOLDERS

1. An option holder runs the risk of losing the entire amount paid for the option in a relatively short period of time. This risk reflects the nature of an option as a wasting asset which becomes worthless when it expires. An option holder who neither sells his option in the secondary market nor exercises it prior to its expiration will necessarily lose his entire investment in the option. (As noted in Chapter VIII, many brokerage firms have procedures for the exercise of options at expiration that are then in the money by a specified amount.)

The fact that options become valueless upon expiration means that an option holder must not only be right about the direction of an anticipated price change in the underlying interest, but he must also be right about when the price change will occur. If the price of the underlying interest does not change in the anticipated direction before the option expires to an extent sufficient to cover the cost of the option, the investor may lose all or a significant part of his investment in the option. This contrasts with an investor who purchases the underlying interest directly and may continue to hold his investment, notwithstanding its failure to change in price as anticipated, in the hope of waiting out an adverse price move and eventually realizing a profit.

The significance of this risk to an option holder depends in large part upon the extent to which he utilizes the leverage of options to control a larger quantity of the underlying interest than he could have purchased directly with the same investment amount. This is illustrated in the following example, which compares the consequences of three different approaches to investing the same amount of money in stock or options, with each approach involving a different degree of leverage.

EXAMPLE: Assume that Investors A, B and C each have $5,000 to invest and that each anticipates an increase in the market price of XYZ stock, which is currently $50 a share. Investor A invests his $5,000 in 100 shares of XYZ. Investor B invests $500 in the purchase of an XYZ 50 call (covering 100 shares of

XYZ at a premium of $5 a share) and invests the remaining $4,500 in a relatively risk-free investment such as Treasury bills. (For purposes of this example, it is assumed that all of the calls are purchased when they have six months remaining until expiration, and that the risk-free investment bears interest at an annual rate of, say, 3.25% —which means that a $4,500 investment will earn approximately $73 in interest over six months.) Investor C invests his entire $5,000 in 10 XYZ 50 calls.

If each option is held for six months and, if it is profitable, is either sold or exercised immediately before it expires, the following table illustrates the dollar and percentage profit or loss that each investor would realize on his $5,000 investment, depending upon the price of XYZ stock when the option expires.

Price of XYZ stock at expiration of option	*Investor A*		*Investor B*		*Investor C*	
	Profit or Loss	*% Return*	*Profit or Loss*	*% Return*	*Profit or Loss*	*% Return*
62	+ 1,200	+ 24%	+ 773	+ 15.5%	+ 7,000	+ 140%
58	+ 800	+ 16%	+ 373	+ 7.5%	+ 3,000	+ 60%
54	+ 400	+ 8%	− 27	− 0.5%	− 1,000	− 20%
50	0	0	− 427	− 8.5%	− 5,000	− 100%
46	− 400	− 8%	− 427	− 8.5%	− 5,000	− 100%
42	− 800	− 16%	− 427	− 8.5%	− 5,000	− 100%
38	− 1,200	− 24%	− 427	− 8.5%	− 5,000	− 100%

The table demonstrates how increased leverage results in greater profit potential on the upside and greater risk of loss on the downside. Investor C, as the most leveraged investor, would realize the highest percentage return if the price of XYZ increased to 62, but would incur a 20% loss even if the price of XYZ increased to 54 (assuming he did not sell his options while they had significant remaining time value), and would lose all of his investment if the price of XYZ stayed at or below 50.

2. The more an option is out of the money and the shorter the remaining time to expiration, the greater the risk that an option holder will lose all or part of his investment in the option. The greater the price movement of the underlying interest necessary for the option to become profitable (that is, the more the option is out of the money when purchased and the greater the cost of the option) and the shorter the time within which this price movement must occur, the greater the likelihood that the option holder will realize a loss. This does not necessarily mean that an option must be worthwhile to exercise in order for a holder to realize a profit. Instead, it may be possible for the holder to realize a profit by selling an option prior to its expiration

for more than its original cost even though the option never becomes worthwhile to exercise. (The shorter the time remaining until expiration the less likely it is that this will be possible.)

3. Prior to the period when a European-style option or a capped option is exercisable, the only means through which the holder can realize value from the option (unless the capped option is automatically exercised) is to sell it at its then market price in an available secondary market. If a secondary market for such an option is not available during the time the option is not exercisable, it will not be possible for its holder to realize any value from the option at that time.

4. The exercise provisions of an option may create certain risks for the option holders. If the option does not have an automatic feature, a holder who wishes to exercise must assure that action is taken in a timely manner. See the discussion of "How to Exercise" in Chapter VIII.

On the other hand, if the option has an automatic exercise feature—such as one that will cause the option to be automatically exercised at the expiration if it is in the money by a specified amount—the option may be exercised at a price at which the holder would not voluntarily choose to exercise in view of the transactions costs of exercise or other factors. The transaction costs associated with the exercise could even exceed the cash settlement amount of the option, with the result that the holder would realize a net loss from the exercise. Conversely, an option that has a cash settlement amount that is less than the threshold amount cannot be exercised even though the option holder's transaction costs may be low enough to permit the option to be exercised profitably. In such a case, the option may expire unexercised.

The automatic exercise feature of capped options imposes a maximum value that a holder of these options can receive. Even if the option holder expects the value of the underlying interest to continue to move in a favorable direction prior to its expiration, the automatic exercise feature will prevent the holder from realizing any gain from the option in excess of the cap interval times the multiplier for the option.

5. The courts, the SEC, another regulatory agency, OCC or the options markets may impose exercise restrictions. While an American-style option can normally be exercised at any time prior to its expiration,

OCC and the options markets have authority to restrict the exercise of options at certain times in specified circumstances. The options markets often exercise such authority with respect to an option in which trading has been halted. If a restriction on exercise is imposed at a time when trading in the option has also been halted, holders of that option will be locked into their positions until either the exercise restriction or the trading halt has been lifted.

Exercise restrictions imposed by OCC and the options markets affecting cash-settled options generally cannot be continued in effect beyond the opening of business on the last trading day before their expiration. Such exercise restrictions affecting physical delivery options generally cannot be continued beyond the opening of business on the tenth business day before their expiration, but with one important exception. If OCC determines that the available supply of a security underlying a physical delivery option appears to be insufficient to permit delivery of the security by the writers of all outstanding calls in the event of exercise, or that foreign government restrictions would prevent or unduly burden the orderly settlement of exercises of foreign currency options, OCC may indefinitely prohibit the exercise of puts by holders who would be unable to deliver the underlying security. The holder of such a put could lose his entire investment in the option if the prohibition remained in effect until the put's expiration and the holder was unable either to acquire the underlying interest or to sell his put in the market. The put holder might be unable to do either because the very event that caused OCC to impose the exercise prohibition—*e.g.*, a suspension of trading in an underlying stock—might not only make it difficult or impossible to obtain the underlying interest, but might also impair the market in options on that interest.

It is also possible that a court, the SEC or another regulatory agency having jurisdiction would impose a restriction which would have the effect of restricting the exercise of an option. In such a case the option would not be exercisable until the restriction was terminated. In the remote possibility that the restriction were to remain in effect until the expiration of the option—which has never yet occurred—the option would expire worthless, and the holder would lose the entire amount that he paid for the option.

RISKS OF OPTION WRITERS

1. An option writer may be assigned an exercise at any time during the period the option is exercisable. Starting with the day it is purchased, an American-style option is subject to being exercised by the option holder at any time until the option expires. This means that the option writer is subject to being assigned an exercise at any time after he has written the option until the option expires or until he has closed out his position in a closing transaction. By contrast, the writer of a European-style or capped option is subject to assignment only when the option is exercisable or, in the case of a capped option, when the automatic exercise value of the underlying interest hits the cap price.

An assigned writer may not receive notice of the assignment until one or more days after the assignment has been made by OCC. Once an exercise has been assigned to a writer, the writer may no longer close out the assigned position in a closing purchase transaction, whether or not he has received notice of the assignment. In that circumstance, an attempted closing purchase would be treated as an opening purchase transaction.

If an option that is exercisable is in the money, the option writer can anticipate that the option will be exercised, especially as expiration approaches. Once he is assigned an exercise, the assigned writer must deliver (in the case of a call) or purchase (in the case of a put) the underlying interest (or pay the cash settlement amount in the case of an in the money cash-settled option). The consequences of being assigned an exercise depend upon whether the writer of a call is covered or uncovered, as discussed below.

2. The writer of a covered call forgoes the opportunity to benefit from an increase in the value of the underlying interest above the option price, but continues to bear the risk of a decline in the value of the underlying interest. Unlike a holder of the underlying interest who has not written a call against it, the covered call writer has (in exchange for the premium) given up the opportunity to profit from an increase in the value of the underlying interest above the exercise price. If he is assigned an exercise, the net proceeds that he realizes from the sale of the underlying interest pursuant to the exercise could be substantially below its prevailing market price.

EXAMPLE: When XYZ stock was $50, the investor collected a $4 a share premium by writing an XYZ 50 delivery call. As expiration approaches, the stock has risen to $58 and he is assigned an exercise. His total return, in addition to any dividends received, will be the $50 exercise price he is paid for the stock plus the $4 premium collected when the option was written—$4 a share less than the $58 he could have sold the stock for if he had not written the option.

On the other hand, if the value of the underlying interest declines substantially below the exercise price, the call is not likely to be exercised and, depending upon the price paid for the underlying interest, the covered call writer could have an unrealized loss on the underlying interest. However, that loss will be wholly or partially offset by the premium he received when he wrote the option.

3. The writer of an uncovered call is in an extremely risky position and may incur large losses if the value of the underlying interest increases above the exercise price. The potential loss is unlimited for the writer of an uncovered call. When a physical delivery uncovered call is assigned an exercise, the writer will have to purchase the underlying interest in order to satisfy his obligation on the call, and his loss will be the excess of the purchase price over the exercise price of the call reduced by the premium received for writing the call. (In the case of a cash-settled option, the loss will be the cash settlement amount reduced by the premium.) Anything that may cause the price of the underlying interest to rise dramatically, such as a strong market rally or the announcement of a tender offer for an underlying stock at a price that is substantially above the prevailing market price, can cause large losses for an uncovered call writer.

EXAMPLE: An investor receives a premium of $4 a share for writing an uncovered XYZ 50 call option and the stock price jumps to $69 as the option approaches expiration. If the investor liquidates his option position at, say, $19, in an offsetting closing purchase transaction, he will incur a loss of $1,500 (the $1,900 paid in the offsetting purchase transaction less the $400 option premium received when the option was written).

The writer of an uncovered call is in an extremely risky position and may incur large losses. Moreover, as discussed in Chapter IX, a writer of uncovered calls must meet applicable margin requirements (which can rise substantially if the market moves adversely to the

writer's position). Uncovered call option writing is thus suitable only for the knowledgeable investor who understands the risks, has the financial capacity and willingness to incur potentially substantial losses, and has sufficient liquid assets to meet applicable margin requirements.

4. As with writing uncovered calls, the risk of writing put options is substantial. The writer of a put option bears a risk of loss if the value of the underlying interest declines below the exercise price, and such loss could be substantial if the decline is significant. The writer of a put bears the risk of a decline in the price of the underlying interest—potentially to zero. A put writer of a physical delivery option who is assigned an exercise must purchase the underlying interest at the exercise price—which could be substantially greater than the current market price of the underlying interest—and a put writer of a cash-settled option must pay a cash settlement amount which reflects the decline in the value of the underlying interest below the exercise price. Unless the put is a cash-secured put (discussed below), its writer is required to maintain margin with his brokerage firm. Moreover, the writer's purchase of the underlying interest upon being assigned an exercise of a physical delivery option may result in an additional margin call.

A requisite for writing puts is an understanding of the risks, the financial capacity and willingness to incur potentially substantial losses, and the liquidity to meet margin requirements and to buy the underlying interest, or to pay the cash settlement amount, in the event the option is exercised. A writer of an American-style put can be assigned an exercise at any time during the life of the option until such time as he enters into a closing transaction with respect to the option. Since exercise will ordinarily occur only if the market price of the underlying interest is below the exercise price of the option, the put writer of a physical delivery option can expect to pay more for the underlying interest upon exercise than its then market value.

EXAMPLE: At a time when XYZ stock is $50, an investor receives a $300 premium ($3 a share) by writing an XYZ 50 put. Subsequently the stock price declines to $40 and he is assigned an exercise. The investor must purchase the stock at $50. Even though the $3 a share premium reduces his effective cost to $47, that is still substantially higher than the $40 market price of the stock.

The put writer's exposure to margin requirements can be eliminated if the put writer elects to deposit cash equal to the option exercise price with his brokerage firm. Under this strategy, known as cash-secured put writing, the option writer is not subject to any additional margin requirements regardless of what happens to the market value of the underlying interest. In the meantime, the option writer might earn interest by having the cash invested in a short-term debt instrument—for example, in a Treasury bill. However, a cash-secured put writer is still subject to a risk of loss if the value of the underlying interest declines.

EXAMPLE: An investor receives a $500 premium for writing an XYZ 50 put option with six months remaining until expiration and deposits with his broker $5,000 invested in Treasury bills which, over the six month option life, will earn interest of $250. If he has not been assigned an exercise by expiration, the investor will have a total return of $750 (option premium of $500 and interest of $250). On the other hand, if the price of XYZ stock were to fall below $42-1/2 and the investor is then assigned an exercise, he would have a net loss—that is, the market price of the XYZ stock he would be required to purchase would be below the exercise price by more than the combined premium income and interest earned.

5. The risk of being an option writer may be reduced by the purchase of other options on the same underlying interest—and thereby assuming a spread position—or by acquiring other types of hedging positions in the options markets or other markets. However, even where the writer has assumed a spread or other hedging position, the risks may still be significant. See paragraph 1 under "Other Risks" below.

6. The obligation of a writer of an uncovered call or of a put that is not cash-secured to meet applicable margin requirements creates additional risks. If the value of the underlying interest moves against the writer's position, or if there is a significant change in the volatility or liquidity of the underlying interest, related interests, or the option, or if the writer's brokerage firm otherwise requires, the firm may request significant additional margin payments. If those payments are not made, the firm may have the right to liquidate the options positions and other securities positions in the writer's account with little or no prior notice.

7. Since the leverage inherent in an option can cause the impact of price changes in the underlying

interest to be magnified in the price of the option, a writer of an option that is uncovered and unhedged may have a significantly greater risk than a short seller of the underlying interest. This is illustrated by the table set forth in paragraph 2 under "Risks of Option Holders" above. If an investor had sold short 100 shares of XYZ to Investor A in that table in order to receive $5,000 in proceeds, the investor would have lost $1,200 if the market price of XYZ had increased to 62. On the other hand, if, in order to receive $5,000 in proceeds, the investor had written 10 XYZ 50 uncovered calls, he would have lost $7,000 if the market price of XYZ had increased to 62.

8. The fact that an option writer may not receive immediate notification of an assignment creates a special risk for uncovered writers of physical delivery call stock options that are exercisable when the underlying security is the subject of a tender offer, exchange offer, or similar event. A writer who fails to purchase the underlying security on or before the expiration date for the offer may learn after the expiration date that he has been assigned an exercise filed with OCC on or before that date. At that point, neither the purchase of the underlying security for regular settlement nor the exercise of another option (*e.g.*, the long leg of a spread) will enable the assigned writer to deliver the security on the settlement date for the option exercise (see "Settlement" in Chapter VIII). If the assigned writer fails to make timely settlement, he may be liable for, among other things, the value of the offer (because his non-delivery may have prevented the exercising holder from making timely delivery of the security to the offeror). This risk can be avoided only by purchasing the underlying security on or before the expiration date for the offer. Occasionally, an offer will require that tendered securities be delivered in less than the normal settlement time for exchange transactions after the offer's expiration date. In those cases, call writers will need to purchase the underlying equity security at an earlier point—*i.e.*, at least the number of days equal to the normal settlement time before the offeror's delivery deadline—in order to protect themselves.

9. Although the rules of the options markets establish exercise cut-off times by which exercise instructions of expiring options must be received by brokerage firms from their customers, OCC must accept all exercises which it receives before expiration—even if those exercises are filed with OCC in violation of an options market's rules. Accordingly, there is a risk

that an option writer will be assigned an exercise that is made based on news that is published after the established exercise cut-off time and that the writer may not have an effective remedy to compensate for the violation of the options market's rules.

10. If a trading market in an option should become unavailable, or if the writers of the option are otherwise unable to engage in closing transactions, the writers of that option would remain obligated until expiration or assignment. See the discussions in paragraphs 2 and 3 under "Other Risks" below.

11. A sudden development may cause a sharp upward or downward spike in the value of the interest underlying a capped option. Such a spike could cause the capped option to be automatically exercised, and writers of the option to become obligated to pay the cash settlement amount, even if the effect of the development on the value of the underlying interest completely disappears on the day after the automatic exercise is triggered.

OTHER RISKS

1. Transactions that involve buying and writing multiple options in combination, or buying or writing options in combination with buying or selling short the underlying interests, present additional risks to investors. Combination transactions, such as option spreads, are more complex than buying or writing a single option. And it should be further noted that, as in any area of investing, a complexity not well understood is, in itself, a risk factor. While this is not to suggest that combination strategies should not be considered, it is advisable, as is the case with all investments in options, to consult with someone who is experienced and knowledgeable with respect to the risks and potential rewards of combination transactions under various market circumstances.

The investor considering strategies involving combination transactions should recognize several other risk-related considerations in addition to those already mentioned: the fact that it may at times be impossible simultaneously to execute transactions in all of the options involved in the combination, the difficulty that may be involved in attempting to execute simultaneously two or more buy or sell orders at the desired prices, the possibility that a loss could be incurred on

both sides of a combination transaction, and the increased risk exposure that would result from the exercise or closing out of one side of the trade while the other side of the trade remains outstanding. Also, the transaction costs of combination transactions can be especially significant, since separate costs are incurred on each component of the combination. This can have the effect of requiring a substantial favorable price movement in the underlying interest before a profit can be realized.

Where a combination transaction involves the writing of an in the money American-style option, an investor must keep in mind the possibility of being assigned an exercise, which would eliminate that component of the transaction and could materially change the investor's risk position.

In the case of straddle writing, where the investor writes both a put and a call on the same underlying interest at the same exercise price in exchange for a combined premium on the two writing transactions, the potential risk is unlimited (except in the case of capped options). To the extent that the price of the underlying interest is either below the exercise price by more than the combined premium, or above the exercise price by more than the combined premium, the writer of a straddle will incur a loss when one of the options is exercised. Indeed, if the writer is assigned an exercise on one option position in the straddle and fails to close out the other position, subsequent fluctuations in the price of the underlying interest could cause the other option to be exercised as well, causing a loss on both writing positions.

Combinations involving different styles of options present added complexities. For example, the assigned writer of an American-style option would be unable to cover by exercising a European-style or capped-style option that he holds unless the assignment happened to occur during the exercise period of that option.

Combination transactions involving all cash-settled options also pose the same risks that are discussed for index options under "Special Risks of Index Options" below.

2. If a trading market in particular options were to become unavailable, investors in those options could no longer engage in closing transactions. Moreover, even if the market were to remain available, there may

be times when options prices will not maintain their customary or anticipated relationships to the prices of the underlying interests and related interests. The options markets attempt to provide secondary markets in which holders and writers of options can close out their positions at any time prior to expiration—by making offsetting sales or purchases—but there is no guarantee that such a market will at all times exist for every option. Lack of investor interest, changes in volatility, or other factors or conditions might adversely affect the liquidity, efficiency, continuity or even the orderliness of the market for particular options. Or an options market might permanently discontinue trading of a particular option or of options generally (although it has ordinarily been the practice, when an options market decides to discontinue trading of options on a particular underlying interest, to do so only after all outstanding series of those options have expired if the options are not traded on another options market). A market could become temporarily unavailable if unusual events—such as volume in excess of trading or clearing capability, computer malfunction, fire or natural disaster—were to interrupt normal market operations. As discussed in paragraph 3 below, an options market may also become unavailable in the event trading in the underlying interest is formally suspended or halted. It is also possible that an options market will not open, or will delay opening, trading in certain options even though trading is taking place in the underlying security (or in the constituent securities of an underlying index).

In addition, an options market may at times determine to impose restrictions on particular types of options transactions, such as opening transactions or uncovered writing transactions. For example, if an underlying interest ceases to meet qualifications imposed by the options market or OCC, new series of options on that interest may no longer be opened to replace expiring series, and opening transactions in existing series may be prohibited.

The accounts of options market makers and specialists are carried and guaranteed by a relatively few firms. If one of these firms were to fail, be suspended by OCC, be restricted in its operations, determine or be required to discontinue or reduce its operations, or have a significant reduction in its capital, the markets for particular options, or even for all options, could be disrupted or possibly forced to discontinue trading.

Similarly, in the event an options specialist or a significant group of options market makers should fail or have a significant reduction in capital, the markets in the particular options in which the specialist or market makers traded could be adversely affected. The suspension by OCC of any Clearing Member that maintains significant positions in a particular options series in its accounts could also disrupt the market for that options series.

An options market could also become unavailable because of its own financial problems. For example, if an options market were to be declared bankrupt or if creditors were to take possession of its principal trading systems, it might be unable to continue to operate as an options market.

If a secondary market in a particular option were to become unavailable, a holder of that option would be able to realize his profits or limit his losses only by exercising at a time when the option is exercisable, and a writer of that option would remain subject to assignment until expiration. However, as noted above in paragraph 5 under "Risks of Options Holders," an options market may also restrict exercises of that option.

3. Disruptions in the markets for underlying interests could result in losses for options investors. Each of the options markets has discretion to halt trading in an option in certain circumstances—such as when the market determines that the halt would be advisable in maintaining a fair and orderly market in the option. If trading is halted or suspended in one or more of the markets for an underlying interest, the trading of options on that interest may also be halted. Similarly, if dissemination of the current level of an underlying index is interrupted, or if trading is interrupted in stocks accounting for a substantial portion of the value of an index, the trading of options on that index may be halted. In addition, the rules of the options markets may require them to halt trading in particular types of options in certain circumstances. At the date of this booklet, the U.S. options markets are required (1) to halt trading in all stock options and stock index options when trading in all stocks on the New York Stock Exchange ("NYSE") has been halted by the activation of "circuit breakers" by the NYSE, and (2) to halt trading in all stock options and stock index options for a specified period of time if the Dow Jones Industrial Average ("Average") is calculated at a value of 250 or more points below its closing value on the previous trading

day, or for at least two hours if the Average is subsequently calculated on the same day at a value of 400 or more points below such closing value. These requirements may be changed from time to time.

When trading in an option is halted or suspended, holders and writers of that option will be unable to close out their positions until trading resumes, and they may be faced with substantial losses if the value of the underlying interest moves adversely during that time. For example, if a trading halt in an underlying stock is followed by the announcement of a tender offer at a substantial premium, and the stock reopens at a price reflecting the offer, uncovered call writers may sustain large losses.

Even if options trading is halted, holders of American-style options would still be able to exercise unless exercises were restricted. (However, OCC or an options market may restrict the exercise of an option while trading in the option has been halted, and the restriction may remain in effect until shortly before expiration. See paragraph 5 under "Risks of Option Holders" above.) If the option is exercisable while trading has been halted in the underlying interest, option holders may have to decide whether to exercise without knowing the current market value of the underlying interest. This risk can become especially important if an option is close to expiration, and failure to exercise will mean that the option will expire worthless. If exercises do occur when trading of the underlying interest is halted, the party required to deliver the underlying interest may be unable to obtain it, which may necessitate a postponed settlement and/or the fixing of cash settlement prices (see Chapter VIII).

4. All cash-settled options have certain special risks. These risks, as they apply to cash-settled index options, are discussed under "Special Risks of Index Options" below. That discussion is also applicable to other types of cash-settled options.

If a cash-settled option has a settlement currency other than U.S. dollars, holders and writers will be subject to the same kinds of risks with respect to the foreign currency and the settlement of an exercise as are discussed in paragraphs 1 through 9 under "Special Risks of Foreign Currency Options" below.

5. Holders and writers of a capped option bear the risk that an automatic exercise value will be reported

erroneously by the official reporting source. As a consequence of the error, the options market on which the option is traded may not determine on a timely basis that the automatic exercise feature has been triggered. In that event, the option will not be automatically exercised unless the options market determines on a subsequent trading day that the automatic exercise value for the option has hit the cap price. Alternatively, the options market may determine on the basis of an erroneous report that the automatic exercise feature has been triggered. If the options market makes such a determination and does not correct it on a timely basis, the option will be automatically exercised and the short positions of all writers will be assigned based on the erroneous report.

6. The insolvency of a brokerage firm could present risks for that firm's customers, whether they are investors in options or in other securities. If a brokerage firm or the OCC Clearing Member that carries the firm's accounts at OCC were to become insolvent, the firm's customers could have some or all of their options positions closed out without their consent. Customers whose options positions were not closed out under these circumstances might experience delays or other difficulties in attempting to close out or exercise affected options positions. Similarly, the insolvency of an associate clearing house could present risks for the customers of brokerage firms whose accounts are carried through that associate clearing house.

7. Special risks are presented by internationally-traded options. Because of time differences between the United States and various foreign countries, and because different holidays are observed in different countries, foreign options markets may be open for trading during hours or on days when U.S. markets are closed. Investors buying or writing options in foreign markets at such times should understand that options premiums may not reflect current prices of the underlying interests in the United States. For a discussion of risks pertaining to index options traded in foreign markets, see paragraph 13 under "Special Risks of Index Options" below.

8. Although OCC's rules and procedures have been designed for the purpose, among others, of facilitating the prompt settlement of options transactions and exercises, there is a risk that OCC and its backup system will fail. For example, if Clearing Member insolvencies are substantial or widespread, OCC's ability to honor

all exercises could be impaired. As noted in Chapter XI, the prospectus of OCC relating to options is available from OCC or any of the U.S. options markets, and the registration statement of OCC, which includes OCC's financial statements, is available for inspection at OCC's office and may be obtained from the SEC.

SPECIAL RISKS OF INDEX OPTIONS

1. Writers of cash-settled index call options cannot provide in advance for their potential settlement obligations by acquiring and holding the underlying interest. A call writer can offset some of the risk of his writing position by holding a diversified portfolio of securities similar to those on which the underlying index is based. However, except where the underlying index is a specialized one based on relatively few securities, most investors cannot, as a practical matter, acquire and hold a portfolio containing exactly the same securities in the same proportions as the underlying index. Most writers of cash-settled index calls who also hold positions in securities will therefore bear the risk that the market prices of those securities will not increase as much as the index.

2. Even if the writer of a cash-settled index call option could assemble a securities portfolio that exactly reproduced the composition of the underlying index, the writer still would not be fully covered from a risk standpoint because of the "timing risk" inherent in writing cash-settled options. When a cash-settled index option is exercised, the amount of cash that the holder is entitled to receive is determined by the difference between the exercise price and the exercise settlement value, which is based on the prices of the constituent securities at a particular time on or in relation to the date on which the option is exercised. As with most other kinds of options, the writer will not learn that he has been assigned until the next business day, at the earliest. The time lag between exercise and notice of assignment poses no risk for the writer of a covered physical delivery call, because that writer's obligation is to deliver the underlying interest and not to pay its value as of a fixed time in the past. So long as the writer of a physical delivery call already owns the underlying interest, he can satisfy his settlement obligations simply by delivering it, and the risk that its value may decline after the exercise date is borne by the exercising holder. In contrast, even if the writer of a cash-settled index call holds securities that exactly match the composition of the underlying index, he will

not be able to satisfy his assignment obligations by delivering those securities against payment of the exercise price. Instead, he will be required to pay cash in an amount based on the exercise settlement value on the exercise date; and by the time he learns that he has been assigned, the index may have declined, with a corresponding decline in the value of the securities portfolio. This "timing risk" is an inherent limitation on the ability of writers of cash-settled calls to cover their risk exposure by holding positions in the underlying interest. This risk applies only to American-style options. The writer of a European-style capped call that is exercisable only on the expiration date runs the risk of assignment only with respect to exercises filed on that day. If the call is more than marginally in the money on the preceding trading day, the writer can ordinarily assume that it will be exercised and take market action to protect himself against a subsequent decline in the value of his position in the underlying interest.

3. The timing risk discussed in the preceding paragraph makes spread positions and certain other multiple option strategies involving cash-settled American-style index options substantially riskier than similar strategies involving physical delivery options. With physical delivery options, a person in a spread position can ordinarily satisfy his settlement obligations on the short leg of the spread merely by exercising the long leg if it is in the money. That is, the cash or underlying interest that he obtains by exercising the long leg will ordinarily be sufficient to enable him to meet his settlement obligations on the short leg. With cash-settled index options, however, an investor in a spread position runs the risk that by the time he receives notice of an exercise assignment on the option he has written, the index value will have changed such that exercising the long leg of the spread will not yield sufficient cash to satisfy his obligation on the exercise assignment. Thus, an investor who holds a spread position in cash-settled index options and is assigned an exercise is at risk for any adverse movement in the prices of the constituent securities of the index after the time the exercise settlement value of the assigned short is determined unless the investor is able to exercise the long leg of the spread in time to receive that same exercise settlement value. Other multiple options strategies involving cash-settled options can present similar risks.

4. Readers intending to use index options to hedge against the market risk entailed in investing in individual securities should recognize the complexities of utilizing index options in this manner. Market risk is the risk that factors affecting the stock market as a whole may have a similar effect on the price of a particular equity security. Historically, some securities have tended to be highly sensitive to factors influencing the market generally; others less so. As a result, different securities may be viewed as involving different levels of market risk. In addition, a security's sensitivity to broad market influences may change over time, so that the same security may involve different levels of market risk at different times.

Investors using index options in this manner should also understand that they remain subject to company risk—that is, the risk that factors affecting a particular company, such as its market position or the quality of its management, may cause its securities to perform differently than the market as a whole.

In addition, readers intending to utilize index options to hedge a diversified securities portfolio against market risk should understand that unless the securities in the portfolio exactly mirror the securities in an underlying index, the portfolio and the index may respond differently to a given market influence. For this reason, the use of index options for hedging purposes involves special risks that are not present with "true" hedges—*i.e.*, hedges composed of options on the specific securities in the hedged position. These risks are greatest when options on broad-based indexes are used to hedge a nondiversified securities position. Except where the composition of the position to be hedged is very similar to that of an underlying index, index options may best be understood as a means of reducing some but not all of the risks of a securities portfolio position.

Readers should also be aware that it may not be possible to purchase or liquidate a portfolio of securities at prices that exactly converge with the prices used in determining the exercise settlement values of some index options. For example, if the underlying index is comprised in whole or part of securities whose primary market is the NASDAQ stock market, an investor cannot be certain that he will be able to effect transactions in those securities at the opening or closing prices (as the case may be) used in determining the exercise settlement value.

5. Just as holders and writers of stock options bear the risk that transactions in the underlying security may be erroneously reported, holders and writers of index options bear the risk that the reported current index level may be in error. A person who buys or sells an index option at a premium based on an erroneously reported index level is bound by the trade and has no remedy under the rules of the options markets. Similarly, persons who exercise cash-settled index options or are assigned exercises based on erroneously reported index levels will ordinarily be required to make settlement based on the exercise settlement value as initially reported by the official source of the index, even if a corrected value is subsequently announced. References herein to index values "as initially reported" refer to the values initially reported by the source of the index as definitive, and not to any tentative or preliminary values that may be announced at an earlier time subject to adjustment. In extraordinary circumstances (*e.g.*, where an exercise settlement value as initially reported is obviously wrong and inconsistent with values previously reported, and a corrected value is promptly announced), OCC has discretion to direct that exercise settlements be based on a corrected exercise settlement value. Ordinarily, however, the exercise settlement value as initially reported by the official source of the index will be conclusive for exercise settlement purposes.

6. A holder of a cash-settled index option who exercises it before the exercise settlement value of the index for that day is available runs the risk that the level of the underlying index may subsequently change. If such a change causes the exercised option to fall out of the money, the exercising holder will be required to pay the difference between the exercise settlement value and the exercise price of the option (times the applicable multiplier) to the assigned writer.

EXAMPLE: A holder of an index put option that settles based on the closing prices of the constituent securities and that has an exercise price of 30 directs his broker to exercise at 10:00 A.M., when the level of the underlying index is 28. If the underlying index stays at that level until the close of trading that day, the holder will be entitled to receive $200 in settlement (assuming a multiplier of 100). If, however, the index level rises to 32 based on the closing prices of the constituent securities, the holder will be required to pay $200 to the assigned writer, thereby sustaining a $200 loss on the exercise.

A holder who plans to exercise a cash-settled index option that settles based on closing prices can minimize this risk by withholding exercise instructions until just before the daily exercise cut-off time fixed by his brokerage firm. However, he may not be able to eliminate it entirely. Daily exercise cut-off times for index options may be earlier than those fixed for other types of options and may occur before definitive exercise settlement values have been determined. In the case of the exercise of a cash-settled index option that settles based on opening prices of the constituent securities, this risk applies if the holder submits exercise instructions before the definitive exercise settlement index value has been announced, which may be different from index levels that are initially disseminated at the time of the opening and which may not be available in some cases until several hours after the opening.

7. Cash-settled index options whose exercise settlement values are based on the opening prices of the constituent securities are not traded on the last scheduled trading day for those securities prior to the option expiration date. An option holder will be able to realize value from his option on that day only if the option is in the money and he exercises it. A writer of this type of option who has not previously closed out his position will be unable to do so on that last trading day for the constituent securities and will be at risk of being assigned an exercise.

8. Current index levels will ordinarily continue to be reported even when trading is delayed or interrupted in some or all of the constituent securities of the index or when the reporting of transactions in those securities has been delayed. In that event, the reported index levels will be based on the most recent reported prices of the constituent securities—whether or not those securities are being currently traded. As a result, reported index levels may at times be based on non-current price information with respect to some or even all of the constituent securities of an index. If this condition existed at the time of determining the exercise settlement value of an exercised option, that exercise would be settled on the basis of an index level that might not reflect current price information with respect to constituent securities accounting for a significant portion of the value of the index. (Indeed, as noted in Chapter IV, an exercise settlement value that is based on the opening prices of the constituent securities may not coincide with, and may diverge substantially from, the index values that are reported at the time of the

opening.) Moreover, if the index underlay a capped index option, that option would or would not be automatically exercised based on an index level that might not reflect the true state of the market at the time.

9. OCC has no authority, and the options markets on which capped index options are traded do not intend as of the date of this booklet, to restrict the automatic exercise of capped index options. It is therefore possible that automatic exercise of a capped index option could occur on a day when OCC or an options market has imposed restrictions on the exercise of other styles of options on the same underlying index. It is also possible that automatic exercise of a capped index option could occur on a day when the options market has suspended trading in the option. Either of these possibilities could limit the ability of a writer to take action to limit the cost of being assigned an automatic exercise.

10. The purchase and sale of index options in foreign markets at times when U.S. markets are closed may present special risks. Although an underlying index may be based on securities primarily traded in U.S. markets, the index levels reported in foreign options markets at such times may be based on the trading of some or all of the constituent securities in foreign markets, and, in any case, option premiums in the foreign market will not reflect current prices of the constituent securities in U.S. markets. In addition, if a cash-settled index option is exercised through the foreign office of a brokerage firm on a day when U.S. markets are closed, the exercise settlement value of the option will not be known until the time fixed for determining exercise settlement values on the next day on which U.S. markets are open. The corresponding risks would apply to the trading in U.S. markets of options based on indexes of securities primarily traded in foreign markets.

SPECIAL RISKS OF DEBT OPTIONS

1. Many of the special risks associated with debt options result from the character of the markets in which the underlying debt securities are issued and traded and the distinctive characteristics of debt securities. The vast majority of the trading activity in bonds and money market instruments takes place in a dealer market. Dealers typically maintain markets in all outstanding issues of Treasury securities, but most of the

activity tends to center on recently issued securities. Liquidity is generally greater and quotations are generally tighter on recent issues than on older issues.

There are numerous dealers in all of the Treasury securities from which the yield on the options now traded is determined, but at the date of this booklet there is no comprehensive consolidation of bids and offers or public reporting of transaction prices in those securities such as exists in the markets for stocks. While there is some dissemination of representative bids and offers, at the date of this booklet anyone interested in buying or selling a Treasury security usually must have his brokerage firm or bank contact one or more dealers individually to learn their current quotations.

The absence of last sale information and the limited availability of quotations for debt instruments can make it difficult for many investors to obtain timely, accurate data about the state of the market for the underlying debt securities. At the same time, dealers in the underlying securities have access to private quotation networks that give actual current bids and offers of other dealers. This information is not available to most investors. As a result, these dealers may have a significant advantage over other participants in the debt options markets.

2. Another important difference between the stock market and the market for Treasury securities is that stock quotations are generally keyed to a 100-share round lot while the basic unit of trading in the debt securities market typically involves much larger dollar amounts. A round lot for most dealers in Treasury securities is, at a minimum, $1,000,000 of principal amount; and on Treasury bills it can be larger. Most dealers are oriented toward doing business with large institutional customers or other dealers. As a result, investors buying or selling debt securities in amounts smaller than round lots can expect to pay more and receive less than dealer quotations for round lot transactions.

The unit of trading for price-based debt options is likely to involve larger dollar amounts of the underlying debt security than is the case with stock options. In general, this means that: (a) premiums for such an option will tend to be higher than for a stock option, and (b) the increase or decrease in the price of an

option that is associated with any given change in the price of the underlying security will tend to be larger for many such debt options.

If the unit of trading for a physical delivery price-based debt option is smaller than $1,000,000, investors who buy or write options covering principal amounts other than a multiple of $1,000,000 may be disadvantaged by having to deal in an odd-lot market for the underlying debt security at prices that are less favorable than for round lots.

3. In the event of a shortage of the underlying debt security deliverable on exercise of a physical delivery price-based debt option, OCC has the authority to permit other generally comparable securities to be delivered in fulfillment of the delivery obligation. If OCC exercises its authority to allow such other securities to be delivered, it may also adjust the exercise prices of the affected options by setting different prices at which otherwise non-eligible securities may be delivered. As an alternative to permitting such substitute deliveries, OCC may impose special exercise settlement procedures similar to those applicable to stock options, including the fixing of a cash settlement price payable by writers who would otherwise be unable to meet their delivery obligations (see "Settlement" in Chapter VIII), and/or prohibit the exercise of puts by holders who would be unable to meet the resulting settlement obligations (see paragraph 5 under "Risks of Option Holders" above).

4. The hours of trading for debt options may not conform to the hours during which the debt securities are traded. To the extent that the options markets close before the markets for the underlying or other related instruments, significant price and rate movements can take place in the underlying markets that may not be reflected in the options markets. The possibility of such movements should be taken into account in relating closing prices in the options markets to those in the underlying markets. In addition, there is a risk that debt options may be exercised on the basis of price movements in the underlying security after the close of trading in the options markets when writers are no longer able to close out their short positions.

5. Because exercises of yield-based options are settled in cash, option writers cannot fully provide in advance for their potential settlement obligations by acquiring and holding the Treasury security from which the underlying yield is determined. A writer of a yield-

based option can theoretically offset most of the risk of his writing position by acquiring Treasury securities of the designated maturity period on which the underlying yield is based. Offsetting risk in this way may be difficult to do in practice, however. While it is possible at any given time to calculate the principal amount of Treasury securities needed to assure that the risk of the option position is offset, such calculations are based upon complex mathematical relationships. Moreover, the principal amount of Treasury securities needed to assure that the risk of an options position is fully offset will generally not remain constant throughout the life of the option, but instead will fluctuate as a result of changes in yields and remaining time to maturity. For a given percentage change in yield, this fluctuation will be greater for securities of longer maturity periods than for securities of shorter maturity periods. Furthermore, there can be no assurance that an option writer will be able to sell the Treasury securities that he holds at the option's expiration at the same average yield that is used in calculating the exercise settlement value of the option. Prices, and therefore yields, could differ from dealer to dealer. Moreover, when dealer quotations are averaged in obtaining a yield, they may result in a value which varies from the value that would be obtained by averaging yields representing actual transactions for the same securities during the same time period.

6. Investors in yield-based debt options run the risk that reported yields may be in error. The values disseminated by the designated reporting authority of the options markets during trading and for exercise settlement purposes will ordinarily be averages or medians of dealer quotations or prices, and it is possible that errors could be made in the gathering or averaging of these values. A person who buys or sells an option at a premium based on an erroneous reported yield value is bound by the trade and has no remedy under the rules of the options markets. Similarly, persons who exercise options or are assigned exercises based on erroneous reported yields will ordinarily be required to make settlement based on the value as initially reported by the reporting authority, even if a corrected value is subsequently announced. In extraordinary circumstances (*e.g.*, where a value as initially reported is obviously wrong and inconsistent with values previously reported, and a corrected value is promptly announced), OCC may direct that exercise settlements

be based on a corrected value. Ordinarily, however, the value as initially reported by the official source will be conclusive for exercise settlement purposes.

7. A holder of a yield-based option who exercises it before the exercise settlement value of the underlying yield is available runs the risk that the level of the underlying yield may subsequently change. If such a change causes the exercised option to fall out of the money, the exercising holder will be required to pay the difference between the exercise settlement value and the exercise price of the option (times the applicable multiplier) to the assigned writer. A holder who plans to exercise an option may be able to minimize this risk by withholding exercise instructions until just before the exercise cut-off time fixed by his brokerage firm. However, he may not be able to eliminate the risk entirely. Exercise cut-off times for yield-based options may occur before definitive exercise settlement values are announced. Because exercise cut-off times may vary from brokerage firm to brokerage firm, and there may be different exercise cut-off times for different yield-based options, option holders who anticipate exercising should determine the applicable cut-off times from their brokers.

8. If for any reason there are no quotations available for the Treasury security from which underlying yields of a yield-based option are determined, trading in the option may be halted. If trading is not halted, reported yields may be based on non-current price information for the Treasury security.

9. If OCC determines that the exercise settlement value of the underlying yield for any series of yield-based options is unreported or otherwise unavailable for purposes of calculating the cash-settlement amount of such series, OCC has the authority to suspend the settlement obligations of the exercising and assigned Clearing Members of options of such series or to fix the cash settlement amount for exercised options of such series based on the best information available to OCC, or to do both. Accordingly, there is a risk to both holders and writers of such options that the settlement of exercised options may be postponed and may be based on a determination by OCC rather than by the pricing actions of the market for the Treasury security from which the underlying yield is determined.

SPECIAL RISKS OF FOREIGN CURRENCY OPTIONS

1. The value of any currency, including U.S. dollars as well as foreign currencies, may be affected by complex political and economic factors applicable to the country issuing that currency. The price of a foreign currency option is dependent upon the value of the underlying foreign currency relative to the trading currency as well as the value of both currencies relative to other currencies generally. Fluctuations in the value of the trading currency—whether it is the U.S. dollar (in the case of a dollar-denominated option) or a foreign currency (in the case of a cross-rate option)—will affect exchange rates and the prices of foreign currency options, even in the case of an otherwise stable underlying foreign currency. Conversely, fluctuations in the value of an underlying foreign currency will affect exchange rates and the prices of foreign currency options even if the value of the trading currency remains relatively constant. Investors should consider factors affecting the economies and currency values of both the country of origin for the trading currency and the country of origin for the underlying currency. Although these same considerations apply to dollar-denominated options and cross-rate options, cross-rate options involve factors affecting the economies of at least two foreign countries and may involve consideration by U.S. investors of factors affecting the U.S. economy as well. Accordingly, a U.S. investor in cross-rate options may need to consider a broader range of economic developments than a U.S. investor in dollar-denominated foreign currency options.

2. Even though the intrinsic value of an option is determined by the value of the underlying currency relative to the trading currency, investors who intend to convert gains or losses into U.S. dollars or other currencies may be particularly affected by changes in the exchange rates between their "home" currency and either the trading or the underlying currency.

EXAMPLE: Assume that an investor purchases a yen-denominated, at-the-money call option on British pounds by converting U.S. dollars to Japanese yen. The British pound then appreciates relative to the yen, and at expiration the exercise price is more favorable than the then current exchange rate between yen and pounds. The investor could realize a gain in yen by converting dollars to yen in order to purchase pounds at the exercise price and then reselling the pounds for

yen at the current exchange rate. If the amount of that gain exceeds the premium that the investor paid for the option, the investor will realize a gain in yen on his investment in the option. However, if the yen has depreciated relative to the dollar since the investor purchased the option, the gain may be reduced or even converted to a loss when the yen are converted back to dollars. This is so because, although the yen received upon the sale of the pounds may exceed the exercise price plus the premium paid in yen, there is no guarantee that, when the yen are converted back to dollars at the current rate, the dollars received will exceed the exercise price plus the premium paid in dollars. If the investor converts the pounds directly into dollars rather than to yen and then to dollars, the result would be the same since the amount of the dollars received would be expected to be approximately the same, ignoring any difference in transaction costs and any timing differences in the two-step process.

Similar considerations will apply if the investor liquidates his investment in a cross-rate option by selling it rather than by exercising it.

EXAMPLE: Assume in the previous example that the premium value of the call option has increased permitting the investor to liquidate his investment in the option by selling it for more yen than he paid for it. If the exchange rate between the U.S. dollar and the Japanese yen has not changed, the investor should be able to convert the yen received on the sale of the option to a U.S. dollar amount greater than his original investment. If, on the other hand, the yen has declined in value relative to the U.S. dollar, the investor's gain in yen may be reduced or converted to a loss when the premium received on the sale of the option is converted to dollars.

3. The exchange rates of foreign currencies (and therefore the prices of foreign currency options) could be significantly affected, fixed or supported directly or indirectly by government actions. Government actions could increase risks to investors in both dollar-denominated and cross-rate options if exchange rates were not free to fluctuate in response to other market forces. Investors in options involving currencies of countries that participate in the European Monetary System ("EMS") should note that, as of the date of this booklet, exchange rates among EMS currencies are subject to exchange rate agreements and intervention mechanisms of the EMS. The monetary authorities of other countries may also intervene, either independently or

in concert with others, to attempt to affect the exchange rates between their currencies and other currencies.

4. Because foreign currency transactions occurring in the interbank market involve substantially larger amounts than those likely to be involved in the exercise of individual foreign currency option contracts, investors who buy or write foreign currency options may be disadvantaged by having to deal in an odd lot market for the underlying foreign currencies at prices that are less favorable than for round lots. Because this price differential may be considerable, it should be taken into account when assessing the profitability of a foreign currency option transaction that will involve the exchange of one currency for another.

5. There is no systematic reporting of last sale information for foreign currencies. There is reasonably current, representative bid and offer information available on any market where foreign currency options are traded, in certain brokers' offices, in bank foreign currency trading offices, and to others who wish to subscribe for this information. There is, however, no regulatory requirement that those quotations be firm or be revised on a timely basis. The absence of last sale information and the limited availability of quotations to individual investors may make it difficult for many investors to obtain timely, accurate data about the state of the underlying market. In addition, the quotation information that is available is representative of very large round lot transactions in the interbank market and does not reflect exchange rates for smaller odd lot transactions. Since the relatively small amount of currency underlying a single foreign currency option would be treated as an odd lot in the interbank market, available pricing information from that market may not necessarily reflect prices pertinent to a single foreign currency option contract.

The quotation information available to investors may be from sources that are different from those used to calculate the exercise settlement value of cash-settled foreign currency options. An investor who attempts to realize the intrinsic value of such an option through an exercise rather than by selling the option in a closing transaction runs the risk that the exercise settlement value may be less than appears from the information then available to him.

6. Foreign governmental restrictions or taxes could result in adverse changes in the cost of acquiring or

disposing of foreign currencies. If OCC determines that such restrictions or taxes would prevent the orderly settlement of delivery foreign currency option exercises or would impose undue burdens on parties to exercise settlements, it has authority to impose special exercise settlement procedures, which could adversely affect some investors.

7. The interbank market in foreign currencies is a global, around-the-clock market. Therefore, the hours of trading for foreign currency options do not conform to the hours during which the underlying currencies are traded. To the extent that the options markets are closed while the market for the underlying currencies remains open, significant price and rate movements may take place in the underlying markets that cannot be reflected in the options markets. The possibility of such movements should be taken into account in relating closing prices in the options markets to those in the underlying markets. In addition, this creates a risk that foreign currency options may be exercised on the basis of price movements in the underlying currency after the close of trading in the options markets, when writers are no longer able to close out their short positions.

8. Since exercise settlement of physical delivery foreign currency options—whether they are dollar-denominated or cross-rate options—occurs within the country issuing the underlying foreign currency, investors must accept or make delivery of the trading and underlying foreign currencies through their brokerage firms in conformity with any U.S. or foreign restrictions or regulations regarding the maintenance of foreign banking arrangements by U.S. residents, and may be required to pay any fees, taxes or charges associated with such deliveries.

9. Exercise settlement of physical delivery foreign currency options—whether they are dollar-denominated or cross-rate options—is made through OCC's correspondent banks in the country of origin. Investors may be exposed to losses in the event that a correspondent bank should fail during the settlement process.

10. As in the case of other cash-settled options, writers of cash-settled foreign currency call options cannot fully provide in advance for their potential settlement obligations by acquiring and holding the underlying interest. Although a call writer may hold the quantity of

the currency underlying the option, there is no assurance that if he is assigned an exercise he will be able to sell such currency at the exercise settlement value.

11. If a cash-settled foreign currency option is exercised based upon a reported exercise settlement value that is in error, the holder and the writer will ordinarily be obligated to make settlement based on the exercise settlement value as originally reported, even if the value is subsequently revised or determined to have been inaccurate. In extraordinary circumstances (*e.g.*, where the value as initially reported is obviously wrong and inconsistent with other available price information and a corrected value is promptly announced), OCC has discretion to direct that the exercise settlement be based on the corrected value.

12. If cash-settled foreign currency options expire on a trading day—as is the case with the cash-settled options traded at the date of this booklet—there will ordinarily be an abbreviated trading session in those options on the morning of their expiration date. If the opening of the options market should be delayed for any reason on that day, there may be no trading at all that day in those options. Accordingly, holders and writers who wait until the last trading day to close out their positions in closing transactions in those options run a risk that they may be unable to do so.

13. If OCC determines that the exercise settlement value for any cash-settled foreign currency option is unavailable for purposes of calculating the cash settlement amount, OCC has the authority to suspend the settlement obligations of the exercising holder and assigned writer of such option or to fix the cash settlement amount based on the best information available to OCC, or to do both. Accordingly, there is a risk to both holders and writers that the settlement of exercised cash-settled foreign currency options may be postponed and may be based on a determination by OCC rather than by the procedures specified by the options market on which the options are traded.

SPECIAL RISKS OF FLEXIBLY STRUCTURED OPTIONS

In addition to the risks discussed above, the following special risks are applicable to flexibly structured options.

1. Because flexibly structured options have variable terms that are fixed by the parties, there are no pre-

established series of flexibly structured options. Rather, many different series of flexibly structured options may be created and outstanding at any given time as a result of the various designations of variable terms that are made in different transactions. Secondary trading interest in flexibly structured options may therefore be spread over a larger number of series than the trading interest in other options, the trading interest in any particular series of flexibly structured options may be very limited, the secondary markets in flexibly structured options may be less deep, liquid and continuous than the markets in other options on the same underlying interests, and the premiums for flexibly structured options may not correlate with premiums for such other options.

2. OCC may base its calculations of the margin requirements of OCC's Clearing Members for positions in a series of flexibly structured options on an estimate derived from data and factors OCC deems pertinent in respect of quotations and transactions in that options series and in other options series. Alternatively, OCC may fix such margin requirements at a level it deems necessary to protect the respective interests of OCC, the Clearing Members and the public. As a result, the Clearing Member's margin requirements for positions in flexibly structured options may differ from—and may be significantly greater than—the margin requirements applicable to similar positions in other options on the same underlying interest. Such differences may cause Clearing Members to require customers that maintain positions in flexibly structured options to deposit more margin for flexibly structured options positions than for positions in other options. To the extent OCC's estimate of the current value of a flexibly structured option is used in the determinations of the margin requirements of the Board of Governors of the Federal Reserve System, the options markets and other self-regulatory organizations, it may also cause such margin requirements to be greater than they would be for other options.

CHAPTER XI

SCOPE AND LIMITATIONS OF THIS BOOKLET

Readers should be aware of the scope and limitations of this booklet set forth below:

1. This booklet has been prepared by the U.S. options markets for distribution pursuant to the requirements of SEC Rule 9b-1 under the Securities Exchange Act of 1934 and the rules of the U.S. options markets. This booklet is not intended to meet other requirements which may be in effect in any jurisdiction and should not be relied upon for that purpose.

Under the applicable SEC regulatory scheme for options, this booklet is not a prospectus. Nothing in this booklet should be construed as furnishing investment advice or as being a recommendation, solicitation or offer to buy or sell any option or any other security. A prospectus of OCC relating to options is available without charge upon request addressed to OCC, One Financial Place, 440 S. LaSalle Street, 24th Floor, Chicago, Illinois 60605, or any of the U.S. options markets. The OCC registration statement relating to options, which includes the OCC prospectus and the financial statements of OCC, is available for inspection at the offices of OCC, and copies may be obtained from the SEC, Room 1024, 450 5th Street, N.W., Washington, D.C. 20549, upon payment of the fees prescribed by the SEC. Additional information concerning OCC—but not the options markets—is included in the OCC prospectus and registration statement.

2. Only the U.S. options markets on which an option is authorized to be traded are responsible for the statements in this booklet concerning that option.

3. The options markets do not intend this booklet to be incorporated by reference into the OCC prospectus or into any other publication that may be prepared or distributed by OCC, an options market or any other person (other than a document that has been specifically designated to be a supplement to this booklet and that has been filed with the SEC pursuant to Rule 9b-1). The fact that another document states that this

booklet is available, or states from whom this booklet may be obtained, or recommends that this booklet be read and understood, does not mean that this booklet has been incorporated by reference into that other document.

4. No other publication is incorporated by reference into this booklet. The fact that this booklet refers to information that may be available in other publications does not mean that any of those other publications has been incorporated into this booklet.

5. This booklet does not attempt to present a complete description of all of the provisions governing options. These are set forth in applicable laws, in the rules and regulations of the SEC and other regulatory agencies, and in the rules, interpretations, policies and procedures (collectively called "rules") of OCC, the options markets and the foreign clearing houses that act as "associate clearing houses" of OCC that may be in force from time to time.

This booklet also does not attempt to describe either the rules that govern the structure or conduct of options trading or the forms and procedures for trading in the various options markets. These matters differ from one options market to another, and they may change from time to time. As examples, the various options markets may utilize different market-making systems (with some markets using a specialist system, others a competing market-maker system, and others a combination of the two), order routing systems, and automatic order execution systems. Moreover, as advances are made in computer technology, the trading and market-making systems and the other trading procedures of the options markets are likely to evolve and change—or even be radically different from what they now are.

At particular times—such as when unusual conditions or circumstances exist, which for example may occur on and after days on which there have been substantial or volatile price movements in the securities markets generally or in the markets for underlying or related interests—the options markets may have authority under their rules to modify the application of some or all of their trading rules and procedures or to take such actions as they may deem appropriate in the circumstances. Such actions could include, among other things, changing the manner in which trading in particular options is conducted, extending trading hours for particular options, halting trading in particular

options, restricting the types of orders that may be employed, and modifying or eliminating the bid/asked differential at which market-makers or specialists may quote. The taking of such actions by an options market often is promptly disclosed to the trading crowd in that options market, to representatives of brokerage firms that are members of the options market, and/or to price vendors, but the actions may be taken without public notice, and there can be no assurance that disclosure will be made in a manner that will permit investors to learn of the actions in a timely way.

OCC and the options markets have broad discretion under their rules to take a variety of actions in particular circumstances, and readers should not assume that any organization will exercise its discretion in a particular way in any particular circumstance. A statement in this booklet to the effect that OCC or an options market has authority or discretion to take a particular action does not mean that it will necessarily take that action. To the contrary, it should be understood from such a statement that the organization also has authority not to take that action. Moreover, it should be understood that OCC and the options markets have broad discretion in the manner in which they interpret their own rules.

OCC and the options markets have no duty to enforce, or to oversee the enforcement of, each other's rules. OCC and each U.S. options market has a general statutory obligation to enforce compliance with its own rules by its own members. However, there can be no assurance that all such rules will always be complied with by members, since frequently the only means of enforcing compliance with rules is to impose disciplinary sanctions after the fact on those who have violated them.

Readers desiring information concerning the rules of OCC or any of the options markets as to the terms of options, the manner in which options are traded or in which a market functions, the trading hours of a particular options market, or other related matters, or information concerning any of the other matters referred to herein, may obtain the information from the relevant organization. Information concerning a foreign options market or associate clearing house is generally available from that organization.

6. The U.S. options markets have rules applicable to the handling of customer accounts and the execution

of buy and sell orders that impose special requirements with respect to approval of customer accounts for options trading and recommendations of particular option transactions. This booklet does not attempt to describe those requirements, the laws and rules governing brokerage firms and other securities professionals, or the agreements, procedures and internal rules of brokerage firms that are applicable to the approval and opening of customer accounts, the handling and execution of orders, the transmission to brokerage firms of instructions to exercise or not to exercise options, the manner or time in which writers of options are notified by their brokerage firms that options have been assigned an exercise, the handling of customers' funds, securities and accounts, the safeguarding of customers' positions in options, or other matters relating to the handling of options transactions by brokerage firms. Readers should consult with their own brokerage firms for information concerning such matters.

7. This booklet does not attempt to describe the risks to investors that may be associated with the way trading is conducted in any particular options market or in any market for an underlying or related interest. The reader should not assume that either the options markets or the markets for underlying or related interests will be efficient, liquid, continuous and orderly in all circumstances or that they will be or remain open at all times. Even on relatively normal days, there will be variances in the market-making performance of specialists and market makers in the various markets which derive primarily from differences in individual skills, capital, willingness to accept risk, ability to hedge risk, trading strategies, and market-making obligations, and these variances are likely to be exacerbated during times of greatly increased volume or volatility. Although specialists and market makers in some markets have certain obligations to assist in the maintenance, so far as is practicable, of a fair and orderly market, traditional indicators of orderliness are difficult to apply to the trading of derivative products such as options and there is a risk that the market-making system of a particular market will not operate effectively, efficiently or in an orderly manner at particular times. The nature and scope of that risk are not among the types of risk discussed further in this booklet.

It is also possible that the systems of an options market, or of a market for an underlying or related

interest, may fail or may not work effectively or efficiently at times. During the past few years, for example, the operations of various U.S. markets have been disrupted by earthquake, flood, fire, electricity outages, and computer failure. Moreover, no system can be expected to work perfectly at all times. The options markets may rely on manual methods to record trade information, and errors or omissions can occur in their reports of price, volume and other information, and these can be expected to be exacerbated on days of significant volume or volatility.

It is also beyond the scope of this booklet to discuss the risks that may result to investors from the use by market participants of options pricing theories. There are a number of publications that are commercially available which discuss such theories.

8. This booklet does not attempt to describe risks that may be inherent in an investment in the underlying interest. It is obvious that the investment potential of an option can be dependent on the performance of the underlying interest and that investors in options are therefore subject to the risks that may affect the value of that interest. For example, one of the risks undertaken by a purchaser of a call option (or a writer of a put option) on XYZ stock is that XYZ may decline in price during the life of the option. The risk of this decline is dependent on the risks that may affect the economy or the stock market generally or XYZ specifically. Similarly, the holder of a dollar-denominated option on a foreign currency is subject to the risk factors affecting the relative values of the U.S. dollar and the foreign currency. A discussion of these types of risks is beyond the scope of this booklet.

9. This booklet does not attempt to describe systemic risks that could affect the options markets and the investors in those markets. The options markets, like all securities markets, are interrelated with, and frequently interdependent upon, other aspects of national and international financial and capital systems and upon the national and world economy. Any disturbance or crisis of one part of these interrelated systems could severely disrupt or even threaten the performance of the options markets or of OCC. Bank failures, payments breakdowns, large and sudden economic shocks, the failure of a large securities firm, market or clearing organization, or other such events could cause other failures on a widespread basis and

could affect the liquidity and solvency of the participants in the options markets. The specific causes of systemic failure or disruption are not easy to predict, and a discussion of them is beyond the scope of this booklet.

10. All examples in this booklet are based on hypothetical values that are not necessarily indicative of the prices in an actual transaction. Readers should not assume that options will necessarily be priced in accordance with any example in this booklet or in accordance with any pricing formula or model. As noted in the discussion of "Premium" in Chapter II, option premiums are not fixed by OCC or any of the options markets.

11. The examples in this booklet do not include tax consequences, commissions or other transaction costs, nor do they include the impact of applicable margin requirements. As discussed in Chapter IX, these items can be very significant and should be taken into account by all investors.

SUPPLEMENTS

appear on the following pages

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DECEMBER 1997 SUPPLEMENT

To accommodate the introduction of trading in cash-settled options on indexes of mutual funds, the February 1994 edition of the booklet entitled *Characteristics and Risks of Standardized Options* is amended by adding the following disclosure to Chapter IV, Index Options, following the third full paragraph on p. 26:

Index options may be traded on underlying indexes designed to reflect the net asset values of selected mutual funds in specified categories. For example, an underlying index may be designed to reflect the net asset value of a selected group of growth funds, or a selected group of growth and income funds. These indexes are calculated and disseminated based on the reported net asset values of the mutual funds included in the index. Mutual funds typically report their net asset values only once per day following the close of trading in the primary markets for the securities held in the funds' investment portfolios. Mutual fund indexes are based on these closing values and are not updated during the trading day. Mutual fund indexes as reported during the trading day will thus be based on non-current information, not only because the funds' portfolios may have changed since the previous day's close, but also because the values of the funds' portfolio securities during the trading day may vary from their values at the previous day's close. Therefore, reported fund index values should not be relied upon as indicative of the current values of the mutual funds included in the indexes. In this respect, mutual fund indexes are comparable to other indexes that are not updated during the trading day, including certain foreign stock indexes. These other indexes are not updated because their component stocks may not be traded in their primary home country markets during all or part of the options trading day.

MARCH 2000 SUPPLEMENT

The February 1994 edition of the booklet entitled *Characteristics and Risks of Standardized Options* (the "options booklet") is amended as follows:

1. The second full paragraph after the example on page 21 of the options booklet is amended to read:

When an underlying security is converted into a right to receive a fixed amount of cash, options on that security will generally be adjusted to require the delivery upon exercise of a fixed amount of cash, and trading in the options will ordinarily cease when the conversion becomes effective. As a result, after such an adjustment is made all options on that security that are not in the money will become worthless and all that are in the money will have no time value. If the option is European-style (as may be the case for a flexibly structured stock option designated as a European-style option), the expiration date of the option will ordinarily be accelerated to fall on or shortly after the date on which the conversion of the underlying security to a right to receive cash occurs. Holders of an in the money option whose expiration date is accelerated must be prepared to exercise that option prior to the accelerated exercise cut off time in order to prevent the option from expiring unexercised. Writers of European-style options whose expiration date is subject to being accelerated bear the risk that, in the event of such an acceleration, they may be assigned an exercise notice and be required to perform their obligations as writers prior to the original expiration date. When the expiration date of a European-style option is accelerated, no adjustment will be made to reflect the accelerated expiration date. There is no assurance that the exercise settlement date for an accelerated option will coincide with the date that the cash payment to the

holders of the underlying security becomes available from the issuer of the underlying security. Covered writers of an accelerated option may therefore be required to pay the cash amount in respect of the option before they receive the cash payment on the underlying security.

2. The third and fourth sentences of the paragraph under "Exercises and Settlements" on page 47 of the options booklet are amended to read:

However, unlike most other options, flexibly structured index options that are in the money on the expiration date may be exercised automatically. In the future it may be provided that flexibly structured index options will be exercised automatically only if they are in the money by a specified amount.

This supplement supersedes the October 1996 supplement to the options booklet.

JANUARY 2004 SUPPLEMENT

This supplement supersedes and replaces the November 1995 Supplement to, and amends specified portions of, Characteristics and Risks of Standardized Options (the "Booklet").

To permit greater flexibility in the methods used for assigning options exercises, the Booklet is amended by replacing the first two paragraphs following the caption "Assignment" in Chapter VIII of the Booklet with the following:

OCC follows established procedures for assigning exercises to Clearing Member accounts that contain short option positions identical to the exercised options. These procedures may be different for different classes of options. A description of OCC's assignment procedures and the options classes to which they apply is available on request from OCC at One North Wacker Drive, Suite 500, Chicago, Illinois 60606.

Assignments are ordinarily made prior to the commencement of trading on the business day following receipt by OCC of the exercise instruction. In the case of options traded in evening sessions, exercise instructions received by OCC on a business day are ordinarily assigned prior to the opening of trading in that day's evening session.

Exercises may be assigned by OCC to a Clearing Member's customers' account. In that event, the Clearing Member must in turn assign those exercises to its customers maintaining positions as writers of the exercised options series. The rules of the options markets require their member firms to establish fixed procedures for allocating assignments to customers (e.g., random selection or "first-in, first-out") and to inform their customers of the method used and how it works.

Regardless of the method used, an option writer is subject to the risk each day the option is exercisable

that some or all of his short position may be assigned. (See the discussion in Chapter X under "Risks of Option Writers.") However, if less than all of the open interest in an options series is exercised, OCC's procedures for assigning exercises to Clearing Members and brokers' procedures for allocating assignments to customers may affect the likelihood that a customer's position will be assigned and the potential size of the assignment.

To address special considerations with respect to the deadlines for the exercise of certain options that expire on a day on which an options market is open for trading, the fourth paragraph under the caption "How to Exercise" in Chapter VIII of the Booklet is amended to read as follows:

A brokerage firm's cut-off time for accepting exercise instructions becomes critical on the last trading day before an option expires. An option that expires unexercised becomes worthless. An option holder who intends to exercise an option before expiration must give exercise instructions to his brokerage firm before the firm's cut-off time for accepting exercise instructions on the last trading day before expiration. If the expiration date of an option falls on a day on which an options market is open for trading in that option, a brokerage firm's last cut-off time for accepting exercise instructions prior to the option's expiration may be on the expiration date. Investors should be aware of their brokerage firm's policies in this regard. Many brokerage firms accept standing instructions to exercise, or have procedures for the exercise of, every option which is in the money by a specified amount at expiration. These procedures often incorporate by reference OCC's administrative procedures that provide for the exercise of every option that is in the money by a specified amount at expiration unless the Clearing Firm carrying the option in its accounts instructs OCC not to exercise the option. Investors should determine from their brokerage firm the applicable cut-off times, the firm's procedures for submitting exercise instructions, and whether any of their options are subject to automatic exercise. Investors should also determine whether the exercise of their options is subject to standing instructions of their brokerage firm, and, if so, they should discuss with the firm the potential consequences of such instructions.

APRIL 2007 SUPPLEMENT

The February 1994 edition of the booklet entitled *Characteristics and Risks of Standardized Options* (the "booklet") is amended as provided below. The changes pertain to non-rate modified cash-settled foreign currency options and rate-modified cash-settled foreign currency options. This supplement supersedes and replaces the January 2007 supplement.

On page 38, the second paragraph under the heading "Special Features of Dollar-Denominated Foreign Currency Options" is deleted and replaced with the following:

NON-RATE-MODIFIED CASH-SETTLED FOREIGN CURRENCY OPTIONS

Exercise prices for currently available dollar-denominated options on foreign currencies (other than rate-modified currency options, as described below) are stated in units of U.S. currency (*e.g.*, cents or hundredths of a cent) per unit of foreign currency. In order to determine the total exercise price per contract, it is necessary to know the unit of U.S. currency used for options on the particular foreign currency, and to multiply the stated exercise price by the unit of trading for such options. For example, at the date of this booklet, dollar-denominated British pound options are expressed in U.S. cents per unit, and dollar-denominated Japanese yen options are expressed in hundredths of U.S. cents per unit.

On page 38, the following is inserted immediately following the second "EXAMPLE" at the end of the page:

Readers should note, however, that certain exchanges may express exercise prices in other unconventional ways. For example, an exercise price stated as \$100.50 may in reality mean \$1.0050. Readers need to be sure they fully understand the various conventions used by the exchanges on which they trade in quoting exercise prices.

On page 39, the second paragraph is deleted and replaced with the following:

Premiums for currently available dollar-denominated options on foreign currencies (other than rate-modified currency options, as described below) are expressed in units of U.S. currency per unit of foreign currency. In order to calculate the cost of the option, it is necessary to know the unit of U.S. currency used for options on the particular

foreign currency. For example, at the date of this booklet, premiums for currently available dollar-denominated Swiss franc options are expressed in U.S. cents, and premiums for currently available dollar-denominated Japanese yen options are expressed in hundredths of U.S. cents.

On page 39, the following are deleted: (a) the sentence immediately following the first "EXAMPLE," (b) the second "EXAMPLE," and (c) the sentence immediately following the second "EXAMPLE."

On page 39, the following is inserted immediately before the last paragraph:

Readers should note, however, that certain exchanges may express premiums in other unconventional ways. Readers need to be sure they fully understand the various conventions used by the exchanges on which they trade in quoting premiums.

The first paragraph under the heading "Cash-Settled Foreign Currency Options," which is the last paragraph on page 43, is deleted and the following sentence is added at the beginning of the first paragraph on page 44:

At the date of this booklet, dollar-denominated cash-settled foreign currency options have also been approved for trading.

The last four paragraphs on page 44 are deleted and replaced with the following:

EXAMPLE: If the exercise price of a cash-settled, dollar-denominated call option on euros is \$1.2500 per euro, the exercise settlement value of the euro is determined to be \$1.2607 and the option covers 10,000 euros, then the cash settlement amount for the option will be $(\$1.2607 - \$1.2500) \times 10{,}000 = \$107.00$.

Cash-settled foreign currency options may be automatically exercised on the expiration date if in the money or if in the money by a certain amount. See the discussion in Chapter VIII under "How to Exercise."

The exercise settlement value for cash-settled foreign currency options will be based on an exchange rate for the underlying foreign currency from a source selected by the market on which the options trade as set forth in exchange rules. In the case of rate-modified foreign currency options, the options market on which the options are traded would calculate and disseminate the underlying rate. In either case this rate may be based on a rate announced by the Federal Reserve Bank of New York, bid and offer quotations from a sampling of participants in the interbank spot market for the underlying foreign currency, the rate reported by a recognized pricing service, or some other widely-available rate. The time as of which the exercise settlement value is calculated and the method of calculation are determined by the options market on which the options are traded and may be changed by it at any time. Any such change may be made applicable to options outstanding at the time of the change.

If OCC determines that the exercise settlement value of the underlying foreign currency for any series of cash-settled foreign currency options is unreported, inaccurate, unreliable, unavailable, or inappropriate for purposes of calculating the cash settlement amount of such series, OCC has the authority to suspend the settlement obligations of the exercising and assigned Clearing Members of options of such series or to fix the cash settlement amount for exercised options of such series or to do both. In the event of such a suspension, OCC will fix a new settlement date after OCC determines that the exercise settlement value is available or after OCC fixes the cash settlement amount.

If OCC determines to fix the cash settlement amount, it will act through an adjustment panel that will use its judgment as to what is appropriate for the protection of investors and the public interest. For a description of adjustment panels, see "Adjustment and Adjustment Panels" in Chapter II. The panel may fix the cash settlement amount using the reported price or value of the underlying foreign currency at such time, or representing a combination or average of prices or values at such time or times, and reported in such manner, as the panel deems appropriate.

If an adjustment panel delays fixing a cash settlement amount for a series of cash-settled foreign currency options past the last trading day before expiration of that series, normal expiration exercise procedures will not apply to the affected series. Instead, exercise settlement will be postponed until the next business day following the day when the adjustment panel fixes the cash settlement amount, and each long position in the affected series will be treated as having been exercised if the cash settlement amount per contract for that series is $1.00 or more. If the cash settlement amount per contract is less than $1.00, the option will be treated as having expired unexercised. As a result of these procedures, holders of expiring cash-settled foreign currency options may not know whether their options have been exercised, and writers of such options may not know whether they have been assigned an exercise, until after the expiration date. An adjustment panel's determinations shall be conclusive, binding on all investors, and not subject to review.

RATE-MODIFIED CASH-SETTLED FOREIGN CURRENCY OPTIONS

A rate-modified currency option is a type of foreign currency option that may be thought of as an option on an underlying exchange rate between two currencies. The holder of a rate-modified currency option receives in U.S. dollars the difference between the modified rate and the exercise price multiplied by a multiplier (*e.g.*, USD $100). In this respect, rate-modified currency options resemble cash-settled index options where the index is an exchange rate between two currencies. Exchange rates in the spot market are expressed as the number of units of one currency ("currency 1") required to purchase a single unit of a second currency ("currency 2"), and for each pairing of the world's major currencies, there is a convention as to which currency is currency 1 and which is currency 2. You should be aware that the exchange rates underlying rate-modified currency options may or may not be stated in the same way that they are conventionally quoted in the spot market. For example, exchange rates between the U.S. dollar and the euro are generally quoted as the number of dollars required to purchase a single euro; but the rate underlying a rate-modified currency option could be stated as the number of euros required to purchase a single dollar. You should therefore be certain that you understand the meaning of an underlying exchange rate.

In the case of rate-modified currency options, the underlying exchange rate may be multiplied by a "rate-modifier," such as 1, 10 or 100, to create an underlying value that more closely resembles a conventional index value. Exercise prices would, of course, also be expressed in terms of the rate-modified values.

EXAMPLE: A rate-modifier of 100 may be applied to the exchange rate between U.S. dollars ("USD") and Swiss francs ("CHF") in order to obtain the underlying exchange rate for USD/CHF rate-modified currency options. If the current exchange rate in the USD/CHF spot market is 1.24 Swiss francs per dollar, the current rate-modified exchange rate would be stated as $(1.24 \times 100) = 124$. For example, an exercise price of 1.25 Swiss francs per dollar would be expressed as 125.

As in the case of an index option, the premiums and exercise settlement values of rate-modified currency options are determined using a multiplier, *e.g.*, USD $100.

EXAMPLE: A rate-modified USD/CHF call option has an exercise price of 125. The USD/CHF exchange rate in the spot market at the time the exercise settlement value is fixed is 1.27 Swiss francs per dollar, meaning that the

underlying rate-modfied value is $(1.27 \times 100) = 127$. The option is in the money. The exercise settlement value of the option is $(127 - 125) \times \$100 = \$200$.

Do not confuse the rate-modifier with the multiplier. They serve different purposes and may or may not have the same numeric value.

EXAMPLE: Assume that the exchange rate underlying a rate-modified call option on the exchange rate between the U.S. dollar and the Mexican peso is stated as Mexican pesos per U.S. dollar (USD/MXN). The rate-modifier could be 10 and the multiplier could be $100. If the exercise price of the option is 11 Mexican pesos per U.S. dollar, it is stated as $11 \times 10 = 110$. If the underlying exchange rate is 11.2 at the time the option is exercised, the exercise settlement value is $(112 - 110) \times \$100 = \$200$.

Note that, as in the case of index options, the multiplier determines the cash value of an option that is in the money by a specified amount. Like index options, and unlike other cash-settled currency options, a rate-modified currency option has no unit of trading—it does not relate to a specified quantity of an underlying currency.

The multiplier is also used in determining the total premium for a rate-modified currency option. For example, if a premium is quoted as .50 and the multiplier is $100, the total premium for a single option is $50.

The paragraph numbered 12 on page 87 is deleted.

MAY 2007 SUPPLEMENT

The February 1994 edition of the booklet entitled *Characteristics and Risks of Standardized Options* (the "Booklet") is amended as follows to reflect certain changes in OCC's rules as well as the rules of certain options markets.

The changes in Part I reflect modifications made to the definition of "ordinary cash dividend or distribution" (*i.e.*, cash dividends and distributions for which no adjustment is made). The changes in Part II reflect changes made to eliminate the need to round adjusted exercise prices in certain circumstances and to provide more precise compensation for fractional shares eliminated by rounding.

Parts III-V of this Supplement supersede and replace the February 2003 Supplement to the Booklet. Part III pertains to options on interests in investment companies and similar entities. Part IV pertains to special exercise settlement procedures or restrictions that may be imposed upon the occurrence of certain extraordinary events. Part V discloses that a registration statement and prospectus for the options covered by the Booklet are no longer available.

Part VI pertains to an expansion of OCC's authority to adjust the multiplier for yield-based Treasury options and to fix the cash settlement amount for such options in certain circumstances. Part VII reflects the adoption of rules by certain options markets that permit, in very limited circumstances, the cancellation or adjustment of a transaction entered into at a premium based on an erroneously reported value for the underlying interest. Part VIII, which supersedes paragraph 1 of the March 2000 Supplement to the Booklet, pertains to the acceleration of the expiration date of options on equity securities in certain circumstances.

Part I. Definition of Ordinary Cash Dividend or Distribution.

The fourth paragraph on page 19 is amended to read as follows:

As a general rule, no adjustment is made for ordinary cash dividends or cash distributions. A cash dividend or distribution announced *prior to* February 1, 2009, will generally be considered "ordinary" unless it exceeds 10% of the aggregate market value of the underlying security outstanding as of the close of trading on the declaration date. The same rule will continue to apply on and after that date with respect to options series designated by OCC as "grandfathered" for purposes of this rule (*i.e.*, series opened prior to publication of this Supplement that remain outstanding on February 1, 2009). In the case of all other options series, a cash dividend or distribution announced *on or after* February 1, 2009, will generally be considered "ordinary," regardless of size, if OCC believes that it was declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly or other regular basis (and no adjustment will normally be made for any cash dividend or distribution that amounts to less than $12.50 per contract). As an exception to the general rule, options on fund shares will generally be adjusted for capital gains distributions even if made on a regular basis, and adjustments may be made for certain other distributions in respect of fund shares in special circumstances described in OCC's rules, provided in each case that the amount of the adjustment would be $.125 or more per fund share. Determinations whether to adjust for cash dividends or distributions not covered by the preceding rules, or when other special circumstances apply, are made on a case-by-case basis.

Part II. Adjustment of Exercise Prices.

The first seven paragraphs on page 20 of the Booklet are deleted in their entirety, and the following material is inserted in lieu thereof.

Stock dividends, stock distributions and stock splits may result in an adjustment of the number of options held or written or the number of underlying shares, and in some cases may also result in an adjustment of the exercise price.

Stock Options with Exercise Prices Stated in Fractions

As of the date of this Supplement, exercise prices for stock options are stated in points and fractions of a point (*e.g.*, 20⅜ or 30½). The smallest fraction is ⅛. The following adjustment rules apply to any series of stock options whose exercise price is stated in points and fractions of a point:

As a general rule, a 2 for 1 or a 4 for 1 stock split, stock distribution or stock dividend will result in the number of outstanding options being proportionately increased and the exercise price being proportionately decreased.

EXAMPLE: Before a 2 for 1 stock split, an investor holds an option on 100 shares of XYZ stock with an exercise price of $60. After adjustment for the split, he will hold two XYZ options, each on 100 shares and each with an exercise price of $30.

A stock dividend, stock distribution or stock split other than a 2 for 1 or a 4 for 1 distribution or split will normally result in an adjustment in the number of shares deliverable upon exercise, while the aggregate exercise price for the contract remains unchanged.

EXAMPLE: An investor holds a call option covering 100 shares of XYZ stock with an exercise price of $50 resulting in an aggregate exercise price for the contract of $5,000 ($50 × 100). After a 3 for 2 split, the deliverable could be increased to 150 shares while the nominal exercise price remained $50. In that case, upon exercise of the adjusted option, the investor would still pay $5,000 ($50 × 100, not $50 × 150), but would receive 150 shares of XYZ stock instead of 100.

Note in the preceding example that, although the number of shares deliverable was adjusted to be 150, the number by which the unadjusted exercise price of $50 was multiplied to determine the total exercise price continued to be 100 rather than 150. Similarly, premium quotations would continue to be multiplied by 100 to obtain the total premium to be paid for a single option.

Stock Options with Exercise Prices Stated in Decimals

In the future, the exchanges may introduce stock options with exercise prices stated in points and decimals (*e.g.*, 20.15 or 30.80). The following adjustment rules would apply to any series of stock options whose exercise price is stated in points and decimals:

When a stock distribution, stock split or stock dividend results in the issuance of one or more whole shares of stock for each outstanding share—such as a 2 for 1 or a 3 for 1 stock split—as a general rule the number of underlying shares will not be adjusted. Instead, the number of outstanding options will be proportionately increased and the exercise price will be proportionately decreased. (See the example of a 2 for 1 stock split under "Stock Options with Exercise Prices Stated in Fractions" above.) .

Other stock dividends, stock distributions and stock splits may result in an adjustment in the number of underlying shares and the exercise price.

EXAMPLE: An investor bought an XYZ 50 option—either a call or a put—and XYZ Corporation subsequently effected a 3 for 2 stock distribution. Instead of covering 100 shares of stock at an exercise price of $50 a share, each outstanding option could be adjusted to cover 150 shares at an exercise price of $33.33 per share. The aggregate exercise price remains substantially the same before and after the adjustment ($50 × 100 = $5,000 and $33.33 × 150 = $4,999.50).

All Stock Options

As a general rule, adjustments in exercise prices are rounded to the nearest exercise price increment (⅛ or one cent, as the case may be), and adjustments in the number of underlying shares are rounded down to eliminate fractional shares. In the latter case, the property deliverable upon exercise may be adjusted to include the value of the eliminated fractional share, as determined by OCC.

Note that in the preceding example where the exercise price of the adjusted XYZ option was rounded down, the exercising put holder or assigned call writer would lose $.50 as a result of the rounding. Rounding up could result in losses to exercising call holders and assigned put writers.

A reverse stock split, combination of shares, or similar event will generally result in an adjustment in the number of shares deliverable upon exercise, while the aggregate exercise price remains unchanged.

EXAMPLE: An investor holds a call option covering 100 shares of XYZ stock with an exercise price of 50 resulting in an aggregate exercise price for the contract of $5,000 ($50 × 100). After a 1 for 10 reverse split, the deliverable could be reduced to 10 shares while the nominal exercise price remained $50. In that case, upon exercise of the adjusted option, the investor would still pay $5,000 ($50 × 100, not $50 × 10), but would receive 10 shares of XYZ stock instead of 100.

As a general rule, no adjustment is made for ordinary stock dividends or distributions. A stock dividend or distribution will generally be considered "ordinary" if (i) the number of shares distributed does not exceed 10% of the number of shares outstanding on the declaration date and (ii) it is declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis.

Distributions of property other than the underlying security may result in the adjustment of outstanding options to include the distributed property.

Part III. Options on Fund Shares.

To reflect a broadening of the definition of "fund shares," the Booklet is amended as follows:

The first full paragraph on page 2 of the Booklet is amended to read:

Each options market selects the underlying interests on which options are traded on that market. Options are currently available covering four types of underlying interests: equity securities (which term includes "fund shares" described in Chapter III), stock indexes, government debt securities, and foreign currencies. Options on other types of underlying interests may become available in the future.

The first paragraph of Chapter III, appearing on page 18 of the Booklet, is amended to read:

The term "stock options" is used broadly in this Booklet to include not only options on common stocks but also options on all other types of equity securities, such as limited partnership interests, "American Depositary Receipts" and "American Depositary Shares" representing interests in foreign entities, preferred stocks, and fund shares. The term "fund shares" includes interests in exchange-traded funds and other entities holding or trading in one or more types of investments, and as used in this Booklet the term "equity securities" includes fund shares.

The first paragraph under the caption "FEATURES OF STOCK OPTIONS" on page 18 of the Booklet is amended to read:

As a general rule, a single stock option covers 100 shares of the underlying security, although in the case of options covering fund shares, options covering 100 or 1000 shares may be available. Other stock options departing from the general rule may be introduced in the future. The number of underlying shares covered by any stock option may be adjusted after the option is issued if certain events occur, as described below.

The fourth paragraph on page 19 of the Booklet is amended as set forth in Part I of this Supplement.

Part IV. Special Exercise Settlement Procedures/Restrictions.

Three new paragraphs are added on page 78 of the Booklet at the end of the section headed "8." The new paragraphs read:

If OCC determines that the primary market(s) for one or more component securities of an underlying index did not open or remain open for trading, or that the component security or securities did not open or remain open for trading on the primary market(s), on a trading day at or before the time when the exercise settlement value for that trading day would ordinarily be determined, or that a current index value or other price or value needed to calculate the exercise settlement value for an index option is otherwise unreported, inaccurate, unreliable, unavailable or inappropriate for purposes of calculating the cash settlement amount, then OCC may suspend settlement obligations for exercised and assigned contracts of the affected series. In the event of such a suspension, OCC will fix a new settlement date after OCC determines that the exercise settlement value is available or after OCC fixes the exercise settlement value.

If OCC determines to fix the exercise settlement value, it will act through an adjustment panel that will use its judgment as to what is appropriate for the protection of investors and the public interest. For a description of adjustment panels, see "Adjustment and Adjustment Panels" in Chapter II. The panel may fix the exercise settlement value using the reported price or value of the relevant security or securities or index (i) at the close of regular trading hours (as determined by OCC) on the last preceding trading day for which a price or value was reported by the reporting authority, or (ii) at the opening of regular trading hours (as determined by OCC) on the next trading day for which a price or value was reported by the reporting authority. Alternatively, the panel may fix the exercise settlement value using a price or value for the relevant security or securities or index, or using a combination or average of such prices or values, at or during such time or times that the panel sees fit.

If an adjustment panel delays fixing an exercise settlement value for a series of index options past the last trading day before expiration of that series, normal expiration exercise procedures will not apply to the affected series. Instead, exercise settlement will be postponed until the next business day following the day when the adjustment panel fixes the exercise settlement value, and each long position in the affected series will be treated as having been exercised if the exercise settlement amount per contract for that series is $1.00 or more. If the exercise settlement amount per contract is less than $1.00, the option will be treated as having expired unexercised. As a result of these procedures, holders of expiring index options may not know whether their options have been exercised, and writers of such options may not know whether they have been assigned an exercise notice, until after the expiration date. An adjustment panel's determinations shall be conclusive, binding on all investors, and not subject to review.

The first paragraph on page 41 of the Booklet is amended to read:

If OCC should determine that foreign governmental restrictions or taxes would prevent the orderly settlement of delivery foreign currency option exercises or would result in undue burdens on OCC or its Clearing Members, OCC has the authority to impose special exercise settlement procedures. These could range from technical changes in delivery procedures to the fixing of U.S. dollar settlement prices. If special exercise settlement procedures are imposed, investors may determine the nature of such procedures from their brokers.

The last paragraph on page 53 of the Booklet is amended to read:

In certain unusual circumstances, an event may threaten to reduce the available supply of an underlying security to a level insufficient to allow settlement if all of the outstanding option contracts for the affected security were exercised. This could happen, for example, in the event of a successful tender offer for all or substantially all of the outstanding shares of an underlying security or if trading in an underlying security were enjoined or suspended. If OCC in its discretion determines that a situation of that type exists, OCC may impose special exercise settlement procedures. These special procedures, applicable only when an assigned call writer or an exercising put holder is unable to obtain the underlying security, may involve the suspension of the settlement obligations of the holder and writer and/or the fixing of cash settlement prices in lieu of delivery of the underlying security. When special exercise settlement procedures are imposed, OCC will announce to its Clearing Members how settlements are to be handled. Investors may obtain that information from their brokerage firms.

On page 61 of the Booklet, the second paragraph of the section headed "5." is amended to read:

Exercise restrictions imposed by OCC and the options markets affecting cash-settled options generally cannot be continued in effect beyond the opening of business on the last trading day before their expiration. Such exercise restrictions affecting physical delivery options generally cannot be continued beyond the opening of business on the tenth business day before their expiration.

Part V. Exemption of Standardized Options from 1933 Act Registration.

Effective January 2, 2003, the SEC exempted standardized options issued by a registered clearing agency and traded on a registered national securities exchange or association from the Securities Act of 1933, except for the antifraud provisions of Section 17 of that Act. Effective January 10, 2003, the SEC approved an amendment to OCC's most recent registration statement under that Act terminating the registration of all unsold put and call options. As a result of these actions, the standardized options covered by this Booklet are no longer required to be registered under that Act; an OCC registration statement will no longer be available for inspection at OCC's office; and copies of an OCC prospectus for standardized options will no longer be available from OCC or the U.S. options markets.

Part VI. Yield-Based Treasury Options.

The second full paragraph on page 34 is replaced with the following paragraph:

If the U.S. Department of the Treasury ceases to issue, or changes the terms or the schedule of issuance of, Treasury securities on which underlying yields are based, an adjustment panel has discretion to adjust the terms of the series by substituting other Treasury securities or to make such other adjustment as the adjustment panel may determine. If the options market on which a particular yield-based option is traded should increase or decrease the multiplier for the option, the adjustment panel has discretion to adjust outstanding options affected by the change by proportionately consolidating or subdividing them or by taking other action.

The paragraph numbered 9. on page 82 is replaced with the following:

9. If OCC determines that the exercise settlement value of the underlying yield for any series of yield-based options is unreported, inaccurate, unreliable, unavailable, or inappropriate for purposes of calculating the cash settlement amount of such series, OCC has the authority to suspend the settlement obligations of the exercising and assigned Clearing Members of options of such series or to fix the cash settlement amount for exercised options of such series or to do both. In the event of such a suspension, OCC

will fix a new settlement date after OCC determines that the exercise settlement value is available or after OCC fixes the cash settlement amount.

If OCC determines to fix the cash settlement amount, it will act through an adjustment panel that will use its judgment as to what is appropriate for the protection of investors and the public interest. For a description of adjustment panels, see "Adjustment and Adjustment Panels" in Chapter II. The panel may fix the cash settlement amount using the reported value of the underlying yield (i) at the close of regular trading hours (as determined by OCC) on the last preceding trading day for which such a value was reported by the reporting authority or (ii) at the opening of regular trading hours (as determined by OCC) on the next trading day for which such a value was reported by the reporting authority. Alternatively, the panel may fix the cash settlement amount using the value for the underlying yield, or using a combination or average of such values, at or during such time or times that the panel sees fit.

If an adjustment panel delays fixing a cash settlement amount for a series of yield-based options past the last trading day before expiration of that series, normal expiration exercise procedures will not apply to the affected series. Instead, exercise settlement will be postponed until the next business day following the day when the adjustment panel fixes the cash settlement amount, and each long position in the affected series will be treated as having been exercised if the cash settlement amount per contract for that series is $1.00 or more. If the cash settlement amount per contract is less than $1.00, the option will be treated as having expired unexercised. As a result of these procedures, holders of expiring yield-based options may not know whether their options have been exercised, and writers of such options may not know whether they have been assigned an exercise notice, until after the expiration date. An adjustment panel's determinations shall be conclusive, binding on all investors, and not subject to review.

Part VII. Erroneously Reported Index Levels.

The paragraph numbered 5. on page 76 is replaced with the following paragraph, which omits a statement that a person who buys or sells an index option at a premium based on an erroneously reported index level is bound by the trade and has no remedy. The omission reflects the adoption of rules by certain options markets that permit, in very limited circumstances, the cancellation or adjustment of a transaction entered into at a premium based on an erroneously reported value for the underlying interest:

5. Holders and writers of index options generally bear the risk that the reported current index level may be in error. Persons who exercise cash-settled index options or are assigned exercises based on erroneously reported index levels will ordinarily be required to make settlement based on the exercise settlement value as initially

reported by the official source of the index, even if a corrected value is subsequently announced. References herein to index values "as initially reported" refer to the values initially reported by the source of the index as definitive, and not to any tentative or preliminary values that may be announced at an earlier time subject to adjustment. In extraordinary circumstances (*e.g.*, where an exercise settlement value as initially reported is obviously wrong and inconsistent with values previously reported, and a corrected value is promptly announced), OCC has discretion to direct that exercise settlements be based on a corrected exercise settlement value. Ordinarily, however, the exercise settlement value as initially reported by the official source of the index will be conclusive for exercise settlement purposes.

Part VIII. Accelerated Expiration of Certain Equity Options.

The second paragraph after the "EXAMPLE" on page 21 of the Booklet, as amended by paragraph 1 of the March 2000 Supplement to the Booklet, is further amended to read:

When an underlying security is converted into a right to receive a fixed amount of cash, options on that security will generally be adjusted to require the delivery upon exercise of a fixed amount of cash, and trading in the options will ordinarily cease when the conversion becomes effective. As a result, after such an adjustment is made all options on that security that are not in the money will become worthless and all that are in the money will have no time value. If the option is European-style, the expiration date of the option will ordinarily be accelerated to fall on or shortly after the date on which the underlying security is converted into a right to receive cash. After January 1, 2008, the same treatment will be extended to American-style options. Holders of an in-the-money option whose expiration date is accelerated must be prepared to exercise that option prior to the accelerated exercise cut-off time in order to prevent the option from expiring unexercised. See the discussion in Chapter VIII under "How to Exercise." Writers of options whose expiration date is subject to being accelerated bear the risk that, in the event of such an acceleration, they may be assigned an exercise notice and be required to perform their obligations as writers prior to the original expiration date. When the expiration date of an option is accelerated, no adjustment will be made to compensate for the accelerated expiration date. There is no assurance that the exercise settlement date for an accelerated option will coincide with the date on which the cash payment to the holders of the underlying security becomes available from the issuer. Covered writers of an accelerated option may therefore be required to pay the cash amount in respect of the option before they receive the cash payment on the underlying security.

JUNE 2007 SUPPLEMENT

The February 1994 edition of the booklet entitled *Characteristics and Risks of Standardized Options*, as amended (the "booklet"), is further amended as provided below. The changes pertain to the trading of credit default options.

Credit default options, including credit default basket options, have characteristics that are different from those of any other options described in the booklet at the date of this Supplement. Accordingly, some of the statements and terms in Chapters I and II of the booklet are inapplicable to credit default options. For example, as further described in this booklet, the sentence at the bottom of page 1 and the top of page 2 which notes that the owner of a cash-settled option has "the right to receive a cash payment based on the difference between a determined value of the underlying interest at the time the option is exercised and the fixed exercise price of the option" is not applicable to credit default options. The description of credit default options in this Supplement supersedes material in the booklet applicable to other standardized options to the extent such material is inconsistent with statements in this Supplement. Credit default options are described by amendment to Chapter V of the booklet as follows:

The title of Chapter V (on page 29 of the booklet) is changed to "DEBT OPTIONS AND CREDIT DEFAULT OPTIONS".

On page 29, the second and third paragraphs are deleted and replaced with the following paragraphs:

A third kind of options, called credit default options, are cash-settled options that are related to the creditworthiness of issuers or guarantors of debt securities, and are exercised upon confirmation of a credit event affecting an underlying debt security or securities.

The principal risks of holders and writers of debt options and credit default options are discussed in Chapter X. Readers interested in buying or writing debt options or credit default options should not only read this chapter but should also carefully read Chapter X, particularly the discussions under the headings "Risks of Option Holders," "Risks of Option Writers," "Other Risks," "Special Risks of Debt Options" and "Special Risks of Credit Default Options."

On page 34, the following is inserted immediately following the last paragraph:

Credit Default Options and Credit Default Basket Options

Credit default options are based on debt securities of one or more issuers or guarantors other than the U.S. Treasury. A significant difference between such debt securities and Treasury securities is the non-negligible risk that an issuer or guarantor of debt securities other than Treasury securities may default on its obligations. For example, the issuer might not pay the full interest and face amount of the securities when due or might file for bankruptcy, thereby making it nearly certain that it will not make timely payment of the full interest and face amount. Financial market participants call this credit risk. Credit risk is an important component of the value of most debt securities.

Credit default options relate to the credit risk presented by one or more specified debt securities, called reference obligation(s), of one or more specified issuers or guarantors, each of which is called a reference entity. The reference obligation(s) and each reference entity for a class of credit default options are selected by the listing options market. When a credit default option is based on reference obligation(s) of more than one issuer or guarantor, it is referred to as a credit default basket option. There are further variations on credit default basket options as described below.

A credit default option is automatically exercised and pays a fixed cash settlement amount if a credit event is confirmed for one or more reference obligations of a reference entity prior to expiration of the option. The reference obligations of a reference entity may include all of the outstanding debt securities constituting general obligations of the reference entity or direct claims on the reference entities (excluding any non-recourse debt). A credit event includes a failure to make a payment on a reference obligation as well as certain other events that the listing options market may specify at the time a class of credit default options is listed. The specified credit events will be defined in accordance with the terms of the reference obligation(s). However, not every event that might constitute an event of default by the reference entity under the terms of the reference obligations will necessarily be specified by the listing options market as a credit event. Investors should be certain that they understand the various possible events that will or will not constitute credit events. The determination of whether a particular event meets the criteria of a credit event, however defined, for a specific credit default option is within the sole discretion of the listing options market.

In order to result in automatic exercise of the option, a credit event must be confirmed to have occurred during the covered period (*i.e.*, the period between the initial listing of the series of options and the time specified by the options market as the last day of trading of the option series prior to the expiration date). An event that would otherwise be deemed a credit event will not result in an exercise of the option if it occurs either before or after this period. A series of credit default options ordinarily does not expire until a specified number of business days following the end of the covered period in order to provide the listing options market an opportunity to confirm whether or not a credit event

occurred within the covered period. If an event otherwise meeting the definition of a credit event occurs after the end of the covered period but before the option expires, the option will not be exercised and will expire worthless.

If the listing options market determines that a credit event has occurred within the covered period for a class of credit default options, it will provide a credit event confirmation to OCC, and the options will be automatically exercised. Holders of the exercised options will receive, and writers will be obligated to pay, the fixed cash settlement amount. If OCC does not receive a credit event confirmation from the listing options market before expiration of a series of credit default options, the options will expire worthless.

Credit default options are binary options in that they have a specified, all-or-nothing cash settlement amount. Credit default options, however, have additional unique characteristics. For example, credit default options have no exercise price and cannot be in the money and have no intrinsic value. The discussion of these terms in Chapter I and/or Chapter II of the booklet is therefore inapplicable to credit default options. In addition, a credit default option is automatically exercised whenever a credit event occurs within the covered period. Credit default options are thus a unique style of options and are neither American-style nor European-style.

A credit default basket option is similar to an aggregation of individual credit default options, each based on one or more reference obligations of a different reference entity. All of the outstanding debt securities constituting general obligations of each reference entity or direct claims on reference entities (excluding non-recourse debt) in the basket may be included in the reference obligations.

There are two different kinds of credit default basket options. A single payout credit default basket option is automatically exercised and pays a specified cash settlement amount upon the confirmation of the first credit event to occur with respect to a reference obligation of any one of the basket's reference entities. It is exercised only once. Once exercised, the expiration of the option will be accelerated to correspond to the exercise date. A multiple payout credit default basket option automatically pays a specified cash settlement amount each time a credit event is confirmed with respect to a reference obligation of any one of the reference entities during the covered period. In the case of either single payout or multiple payout credit default basket options, the listing options market may specify a different cash settlement amount for different reference entities or may specify the same cash settlement amount for each reference entity in the basket. The percentage of the total cash settlement amount that is attributable to any individual reference entity is referred to as its weight in the basket. Investors should note that the options markets on which credit default basket options trade may determine "weight" according to their own specified rules, and investors should contact the listing options market for information about how it determines weight. In the case of a multiple payout credit default basket option, a cash settlement amount will be paid only once with respect to any particular reference entity, after which time

the affected reference entity will be removed from the credit default basket.

Premiums for both credit default options and credit default basket options are expressed in points and decimals. In order to obtain the aggregate premium for a single option, the quoted premium is multiplied by a premium multiplier specified by the listing options market.

ADJUSTMENT OF CREDIT DEFAULT OPTIONS

Adjustments may be made to the standardized terms of outstanding credit default options when certain events occur, such as a succession event or a redemption event, both of which will be defined by the listing options market in accordance with the terms of the reference obligations. Adjustments of credit default options will be within the sole discretion of the listing options market. Investors should familiarize themselves with the listing options market's rules and procedures governing credit default option adjustments. The listing option market's rules governing adjustments of outstanding options may be changed with regulatory approval, and the listing options market may have authority to make such exceptions as it deems appropriate to its general adjustment rules.

Redemption Event Adjustments. A redemption event occurs when reference obligations of a reference entity are redeemed (or paid in full) by, or on behalf of, the issuer. In the case of all types of credit default options, if only some of the reference obligations are redeemed, the option is ordinarily adjusted such that the remaining reference obligations are the reference obligations for the option and no other adjustment will ordinarily be made. If all of the reference obligations of a reference entity are redeemed and there are other debt obligations of the reference entity that the listing options market deems appropriate to specify as successor reference obligations, then they will be substituted as the reference obligations. If, however, all of the reference obligations of a reference entity are redeemed and there are no other debt obligations of the reference entity that the listing options market deems appropriate to specify as successor reference obligations for the reference entity (a complete redemption), then the adjustment will depend upon whether or not there are other reference entities for the options.

Adjustment of credit default options for a complete redemption. If there is a complete redemption affecting a credit default option, the option will cease trading on the date that the redemption event is confirmed by the listing options market. Expiration of the option will be accelerated to a specified number of days following the confirmation date of the redemption, and the option will expire unexercised if, prior to such expiration, no credit event is confirmed to have occurred prior to the effective date of the redemption event.

EXAMPLE: Company XYZ is the reference entity for a credit default option contract and its 8% May 15, 2022 bond issue is the only reference obligation. During the life of the option, Company XYZ redeems the 8% May 15, 2022 bond issue and there are no other obligations of Company XYZ that the listing options market deems to be suitable for specifying as successor reference obligations. The option will cease trading on the confirmation date, and its expiration date will be accelerated. If no credit event is confirmed to have occurred within the covered period, the option will expire worthless.

Adjustment of credit default basket options for a complete redemption. In the case of a single or multiple payout credit default basket option, if a complete redemption event occurs with respect to one of the reference entities in the basket and no credit event is confirmed, pursuant to the rules of the listing options market, to have occurred prior to the effective date of such redemption event, the options will be adjusted by removing the affected reference entity from the basket of reference entities. <u>When a reference entity is deleted from the basket of reference entities because of a redemption event, the cash settlement amount of the option will be reduced by an amount reflecting the weight of the deleted reference entity in the basket</u>. The *relative* weights of the other components in the basket will remain unchanged, although each will represent a proportionally larger percentage of the adjusted cash settlement amount.

EXAMPLE: Company XYZ is one of ten reference entities for a class of multiple payout credit default option contracts and its 8% May 15, 2022 bond issue is specified as its only reference obligation. Company XYZ was assigned a weight of 15% when the credit default option was opened for trading. During the life of the option, Company XYZ redeems the 8% May 15, 2022 bond issue. No reference obligations remain and the listing options market determines that there are no other outstanding debt obligations of the issuer suitable for specification as reference obligations. The basket component will be removed from the credit default basket, and the cash settlement amount will be reduced by 15%.

<u>Succession Event Adjustments</u>. A <u>succession event</u> occurs when one or more new entities assume one or more reference obligations of a reference entity or become the obligor with respect to any obligation that is substituted for the original reference obligations. This may occur, for example, when a reference entity is merged into a new entity or spins off a part of its business into a new entity. If, as the result of a succession event, more than one entity is the obligor of the original reference obligations, or obligations that were substituted for the original reference obligations, all of those obligors, including, as the case may be, the original reference entity, are referred to as <u>successor reference entities</u>.

Adjustment of credit default options after a succession event. Where a succession event results in assumption of all reference obligations by a single entity, the listing options market will ordinarily adjust the option by substituting the entity that assumes the reference obligation(s) as the new reference entity. Where a succession event results in more than one successor reference entity, the credit default option may be adjusted by dividing it into two or more options.

EXAMPLE: Company XYZ is the reference entity for a credit default option contract, and its 8% May 15, 2022 bond issue is the only reference obligation. During the life of the

option, Company XYZ spins off Company LMN. Company XYZ remains the obligor with respect to 70% of the principal amount of the original reference obligation. Company LMN becomes the obligor of a new reference obligation that is issued to holders of the remaining 30% of the original reference obligation. Company XYZ and LMN are identified by the listing options market as the successor entities. Following the succession event, the credit default option based on Company XYZ is adjusted into two separate credit default option contracts that specify Company XYZ and Company LMN as reference entities. The cash settlement amount of the original credit default option and the premium multiplier are allocated between the new credit default options in accordance with the 70/30 division of the reference obligation as specified by the listing options market.

Adjustment of credit default basket options after a succession event. When a succession event occurs with respect to a reference entity that is included in a single payout or multiple payout credit default basket option, the listing options market will ordinarily adjust the option by replacing the affected reference entity with the successor entity or entities, and, if one or more new obligations are issued to replace some or all of the existing reference obligations, the new obligations will be substituted as the reference obligations. The listing options market will specify the weight of each new reference entity, and the sum of the weights will equal the weight of the original reference entity.

EXAMPLE: Company XYZ is one of ten equally weighted reference entities for a multiple payout default basket option and its 8% May 15, 2022 bond issue and its 8.5% September 1, 2030 bond issue are specified as its only reference obligations. During the life of the option, Company XYZ spins off Company LMN. Company XYZ remains the obligor for the 2022 bond issue and LMN becomes the obligor of a debt security issued to holder of the 2030 bond issue. The listing options market adjusts the option by specifying XYZ and LMN as the successor reference entities. The reference obligations are the original 2022 bond issue and the replacement for the 2030 bond issue. The listing options market determines the appropriate basket weight for the successor reference entities is 7.5% and 2.5%. The sum of the newly specified weights equals the 10% weight of the predecessor basket reference entity (Company XYZ) replaced by the successor reference entities (Company XYZ and Company LMN).

On page 88, the following is inserted immediately following the last paragraph:

SPECIAL RISKS OF CREDIT DEFAULT OPTIONS

1. Pricing of credit default options is complex. As stated elsewhere in this document, complexity not well understood is, in itself, a risk factor. In order to price these options, investors must estimate the probability of default from available security or other prices, primarily bond and credit default swap ("CDS") prices. Models typically used by market professionals to infer the probability of default from prices may be more complex than the average investor is used to.

2. The sources of price information used to price credit default options are subject to a lack of transparency and, at times, illiquid markets. This is attributable to, among other things: (1) the absence of last sale information and the limited availability of quotations for the reference obligation(s), (2) lack of ready availability of information on related products traded primarily in the over-the-counter market, and (3) the fact that related over-the-counter market credit derivative transactions are privately negotiated and may not be made public in a timely fashion or at all.

3. Dealers in the underlying debt securities and in the over-the-counter credit derivatives markets have access to private quotation networks that give actual current bids and offers of other dealers. This information is not available to most investors. As a result, these dealers may have an advantage over participants with regard to credit default options.

4. If the listing options market determines that a credit default option is subject to a redemption event (*i.e.*, the issuer or guarantor pays off the reference obligation), the option will expire worthless unless a credit event has been confirmed to have occurred prior to the effective date of the redemption event. As a result, purchasers of such options will lose their premium since there is no chance of occurrence of a credit event for the reference entity. On the other hand, if a redemption event occurs but a credit event is confirmed to have occurred prior to the effective date of the redemption event, a seller would be obligated to pay the cash settlement amount even though a holder of the reference obligation may not incur a loss.

5. Since succession events are determined by the listing options market, credit default options may be modified to specify a different reference entity or several different reference entities. As a result, there may be new reference obligations that have higher or lower credit quality than the original reference obligation. In addition, other factors may exist that could affect the likelihood of the occurrence of a credit event. As a result, the occurrence of a succession event could affect the price of these options. Moreover, since the listing options market determines whether a succession event occurred and the adjustment resulting from such an event, the adjustment made to these options may be at variance with the treatment given to the same succession event with respect to related credit derivative products.

6. The occurrence of a credit event must be confirmed by the listing options market. This means that there will be a lag time between the actual occurrence of a credit event and the listing options market's confirmation of the credit event. Rules of the options market may provide a specified time period (*e.g.*, four business days) between the end of the <u>covered period</u> and the expiration date for a series of credit default options to allow the options market to confirm whether a credit event occurred during the covered period. There is a risk, however, that the sources used to monitor a credit event may not identify and report a credit event in a timely fashion. For example, it is possible that a credit event could occur on the last day of trading, but the sources which report the occurrence of a credit event do not

make this information publicly available until *after* the expiration date. In this case, the cash settlement value of a credit default option would be zero. There is also a risk that the listing options market may determine that a credit event has occurred based on information available to it when in fact no credit event has occurred. This could happen, for example, if the sources used to confirm the credit event are erroneous. The rules of OCC and/or the listing options market may provide that a confirmation of a credit event or other contract adjustment may be revoked up to a specified time prior to exercise settlement. Settlements based on a listing options market's confirmation of a credit event are irrevocable even if no credit event has occurred.

7. Every determination by the listing options market of a redemption event, succession event or credit event will be within the listing options market's sole discretion and will be conclusive and binding on all holders and sellers and not subject to review. OCC shall have no authority to make such determinations and shall have no responsibility therefor.

8. Prior to the period when a credit default option has been automatically exercised, the only means through which the holder can realize value from the option is to sell it at its then market price in an available secondary market. If a secondary market for such an option is not available, it will not be possible for its holder to realize any value from the option at that time.

9. There is no underlying interest for credit default options that is quoted in the marketplace. Because of this, there are no underlying interest prices to provide a reference to investors for pricing credit default options.

10. As discussed above under the caption "Other Risks," options markets have discretion to halt trading in an option in certain circumstances — such as when the market determines that the halt would be advisable in maintaining a fair and orderly market in the option. In the case of credit default options, options markets may take into consideration, among other factors, that current quotes for debt securities or other securities of the reference entity are unavailable or have become unreliable.

11. The risk that a trading market for particular options may become unavailable and the potential consequences are also discussed above under the caption "Other Risks." The SEC has approved certain credit default options for listing and trading on a national securities exchange as securities. OCC filed its rules for clearing credit default options with the CFTC, and the CFTC issued an exemption permitting OCC to clear such options when traded on a national securities exchange whether or not they are within the CFTC's jurisdiction. By its terms, the exemption is revocable, and its revocation would be one of the events that could lead to the unavailability of a trading market for credit default options.

[redacted]

JUNE 2008 SUPPLEMENT

This supplement supersedes and replaces the April 2008 Supplement to the booklet entitled *Characteristics and Risks of Standardized Options* (the "Booklet"). This supplement adds information regarding the following new options products: delayed start options, binary stock options, binary index options, and range options.

The third paragraph on page 1 of the Booklet is replaced with the following paragraph:

What is an option? An option is the right to buy or sell a specified amount or value of a particular underlying interest at a fixed exercise price by exercising the option before its specified expiration date. An option which gives the right to buy is a call option, and an option which gives a right to sell is a put option. Calls and puts are distinct types of options, and buying or selling of one type does not involve the other. Certain special kinds of options may give a right to receive a cash payment if certain criteria are met.

The last paragraph on page 1 of the Booklet, which continues on the top of page 2, is replaced with the following paragraph:

There are two different kinds of options — physical delivery options and cash settled options. A physical delivery option gives its owner the right to receive physical delivery (if it is a call), or to make physical delivery (if it is a put), of the underlying interest when the option is exercised. A cash-settled option other than a binary option or a range option gives its owner the right to receive a cash payment based on the difference between a determined value of the underlying interest at the time the option is exercised and the fixed exercise price of the option. A cash-settled call conveys the right to receive a cash payment if the determined value of the underlying interest at exercise — this value is known as the exercise settlement value — exceeds the exercise price of the option, and a cash-settled put conveys the right to receive a cash payment if the exercise settlement value is less than the exercise price of the option. Binary options and range options are special kinds of cash-settled options described in Chapter II. The examples in this booklet generally refer to options other than binary options or range options except as otherwise stated.

The second full paragraph on page 2 of the Booklet is replaced with the following paragraph:

Most options have standardized terms — such as the nature and amount of the underlying interest, the expiration date, the exercise price, whether the option is a call or a put, whether the option is a physical delivery option or a cash-settled option, the manner in which the cash payment and the exercise settlement value of a cash-settled option are determined, the multiplier of a cash-settled option, the exercise price setting date and exercise price setting formula of a delayed start option, the style of the option, whether the option has automatic exercise provisions, and adjustment provisions. These standardized terms are generally described in Chapter II. Each U.S. options market publishes specification sheets setting forth the particular standardized terms of the options traded on that options market. (The options markets may also provide for trading in options whose terms are not all fixed in advance. Rather, subject to certain limitations, the parties to transactions in these options may designate certain of the terms. These flexibly structured options are discussed in Chapter VII of this booklet.)

The first two paragraphs on page 7 of the Booklet are replaced with the following paragraphs:

The exercise price of a cash-settled option (other than a binary option or a range option) is the base for the determination of the amount of cash, if any, that the option holder is entitled to receive upon exercise (see the discussion of "Cash Settlement Amount and Exercise Settlement Value" below). The exercise price of a binary option is the value or level of the underlying interest above, below, or, in some cases, at which the option will be in the money at expiration, thereby causing the fixed cash settlement amount to become payable (see the "Binary Option" definition below). In the case of a range option, the exercise price is the option's range length (see the "Range Option" definition below).

Exercise prices for each options series (except for series of delayed start options) are established by the options market on which that series is traded at the time trading in the series is introduced, and are generally set at levels above and below the then market value of the underlying interest. The options markets generally have authority to introduce additional series of options with different exercise prices based on changes in the value of the underlying interest, or in response to investor interest, or in unusual market conditions, or in other circumstances. For series of delayed start options, exercise price setting formulas — rather than exercise prices —

are established by the options market on which each series is traded before the time trading commences in each such series. Those exercise price setting formulas provide that on the exercise price setting date the exercise price for the series will be fixed at the money, in the money by a certain amount, or out of the money by a certain amount.

The first paragraph following the paragraph titled "Style of Option" on page 7 of the Booklet is replaced with the following paragraph:

Each American-style option other than a delayed start option may be exercised at any time prior to its expiration. An American-style delayed start option may be exercised at any time after its exercise price is set and before its expiration date.

The following paragraphs are inserted immediately preceding the paragraph captioned "Unit of Trading; Contract Size" on page 8 of the Booklet:

BINARY OPTION — A binary option is a cash-settled option having only two possible payoff outcomes; either a fixed amount or nothing at all. Some binary options are referred to as "fixed return options." As of the date of this Supplement, the only binary options approved for trading (other than credit default options, as defined below) are binary stock options, which are binary options on individual equity securities, including fund shares; and binary index options, which are binary options on broad-based securities indexes (including volatility indexes). The binary options currently traded are all subject to automatic exercise. The holder of a binary option other than a credit default option has the right to receive (and the writer of a binary option has the obligation to pay) the exercise settlement amount for the option if the value of the underlying interest as of the time specified by the applicable listing options market (*i.e.*, the exercise settlement value) meets the criteria for automatic exercise of the option, as specified in the rules of the listing options market. If those criteria are not met, the option will expire worthless. Credit default options are a specific kind of binary option discussed at the end of Chapter V. Except for credit default options, binary options are European-style options.

RANGE OPTION — A range option is a European-style, cash-settled option that has a payout if the value of the underlying interest falls within a specific range of values (the range length) at expiration. As the underlying interest value increases throughout the range length, the amount of the payout (*i.e.*, the cash settlement amount) of the range option increases linearly to a maximum

value, remains constant at that value through the middle of the range length and then decreases linearly to zero as the value of the underlying continues to increase to the top of the range length. A more detailed description of this feature of range options is set forth below under the caption "Cash Settlement Amount and Exercise Settlement Value." Range options are of a single type rather than consisting of puts and calls.

The second paragraph under the caption "Unit of Trading; Contract Size" on page 8 of the Booklet is replaced with the following paragraph:

The contract size of a cash-settled option other than a binary option or a range option is determined by the multiplier that is fixed by the options market on which the options series is traded. The multiplier determines the aggregate value of each point of the difference between the exercise price of the option and the exercise settlement value of the underlying interest. For example, a multiplier of 100 means that for each point by which a cash-settled option is in the money upon exercise, there is a $100 increase in the cash settlement amount. Similarly, if an option with a multiplier of 100 is trading at a premium of, say, $4, then the aggregate premium for a single option contract would be $400. The contract size of a range option is determined by the option's multiplier and its maximum range exercise value. The contract size of a binary option is its cash settlement amount, which is fixed by the options market for any series of binary options at or before the opening of trading in that series. Some options markets define the cash settlement amount for binary options as being the multiplier times a fixed settlement value. Other options markets define the cash settlement amount for binary options without reference to a multiplier.

The penultimate paragraph on page 9 of the Booklet is replaced with the following paragraph:

CASH SETTLEMENT AMOUNT, SETTLEMENT CURRENCY and EXERCISE SETTLEMENT VALUE — The cash settlement amount is the amount of cash that the holder of a cash-settled option is entitled to receive upon exercise. In the case of a cash-settled option other than a binary option or a range option, it is the amount by which the exercise settlement value of the underlying interest of a cash-settled call exceeds the exercise price, or the amount by which the exercise price of a cash-settled put exceeds the exercise settlement value of the underlying interest, multiplied by the multiplier for the option.

The following paragraphs are inserted following the carry-over paragraph at the top of page 10 of the Booklet:

In the case of a binary option, the cash settlement amount is determined by the relevant listing options market and, whether or not established through use of a multiplier, is fixed and does not vary (except in the case of certain adjustments described below) regardless of the amount by which the exercise settlement value exceeds (in the case of a binary call option) or is less than (in the case of a binary put option) the exercise price.

EXAMPLE: An investor holds a binary call option on XYZ security that has an exercise price of $80 and a fixed cash settlement amount of $100. If the exercise settlement value of XYZ is $81 at expiration, the investor will receive $100. If the exercise settlement value is $90, the investor will still receive $100. If, on the other hand, the exercise settlement value of XYZ at expiration is below $80, the investor will receive nothing, and the option will expire worthless.

It is very important to note that the conditions under which a binary option returns a cash settlement amount may vary depending upon the rules of the listing options market. Specifically, the listing options market may list binary options that return a cash settlement amount if: (1) the exercise settlement value of the underlying is *above* the exercise price (a binary call); or (2) the exercise settlement value of the underlying is *below* the exercise price (a binary put). In addition, certain binary call options return a cash settlement amount if the exercise settlement value of the underlying is *exactly equal to* the exercise price.

EXAMPLE: Assume XYZ stock is the underlying security for a binary stock option with an exercise price of $80, and the exercise settlement value of XYZ at expiration is exactly $80. If the listing options market specified that the option would return a cash settlement amount if the exercise settlement value was **above** the exercise price, the option will expire unexercised. If, however, the listing options market specified that the option would return a cash settlement amount if the exercise settlement value was **at or above** the exercise price, the option would be automatically exercised at expiration.

In the case of a range option, the cash settlement amount varies depending on where the exercise settlement value of the underlying index falls within the range length at expiration. At the time a series of range options is opened for trading, the listing options market will specify the range length as well as the range interval, which is a value equal to a certain number of index points that is

used to divide the range length into three segments: the low range, the middle range and the high range. The low range begins at the low end of the range length and ends one range interval higher. The high range begins one range interval below the high end of the range length and ends at the high end of the range length. The high range and the low range are of equal length. The middle range is the segment of values between the end of the low range and the beginning of the high range. The listing options market will also set a maximum range exercise value and a multiplier, the product of which is the maximum cash settlement amount. This maximum cash settlement amount will be payable if the level of the underlying index falls anywhere in the middle range at expiration. Within the low range, the cash settlement amount *increases* from zero to the maximum cash settlement amount as the level of the underlying index increases. Within the high range, the cash settlement amount *decreases* from the maximum cash settlement amount to zero as the level of the underlying index continues to increase.

EXAMPLE: Assume for a series of range index options that the listing options market has specified a range length from 1000 to 1100, a range interval of 10, a maximum range exercise value of 10 and a multiplier of $100. The series therefore has a maximum cash settlement amount of $1,000 (multiplier times the maximum range exercise value), a low range from 1000 to 1010, a middle range from 1010 to 1090 and a high range from 1090 to 1100. The table below summarizes the variations in cash settlement amount based on the foregoing assumptions:

		Low Range			Middle Range	High Range			
Value of the Underlying Index	Below 1000	1000	1001	1002 ... 1009	1010–1090	1091 ... 1098	1099	1100	Above 1100
Cash Settlement Amount ($)	0	0	100	200 .. 900	1,000	900 ... 200	100	0	0

The last paragraph on page 12 of the Booklet is replaced with the following paragraph:

Although holders of American-style options (other than delayed start options for which the exercise price has not yet been set) have the right to exercise at any time before expiration, holders frequently elect to realize their profits or losses by making closing transactions because the transaction costs of the closing transactions may be lower than the transaction costs associated with exercises, and because closing transactions may provide an opportunity for an option holder to realize the remaining time value (described below) of the option that would be lost in an exercise. The holder's only means of

realizing profit or loss on a delayed start option before its exercise price has been set, or on a European-style or capped option when the option is not exercisable, is by selling the option in a closing transaction.

The first full paragraph through the sixth paragraph on page 14 of the Booklet are replaced with the following:

AT THE MONEY — This term means that the current market value of the underlying interest is the same as the exercise price of the option. A range option, which is of a single type rather than being categorized as a call or a put, is said to be at the money if the current level of the underlying index is at the top or bottom of the range length.

IN THE MONEY — A call option is said to be in the money if the current market value of the underlying interest is above the exercise price of the option. A put option is said to be in the money if the current market value of the underlying interest is below the exercise price of the option. A range option, which is of a single type rather than being categorized as a call or a put, is said to be in the money if the current level of the underlying index falls within its range length.

EXAMPLE: If the current market price of XYZ stock is $43, an XYZ 40 call would be in the money by $3.

EXAMPLE: Assume a series of XYZ range options has a maximum cash settlement amount of $1,000, a low range from 1000 to 1010, a middle range from 1010 to 1090 and a high range from 1090 to 1100. If the current level of XYZ index is 1003, the option would be in the money by $300. If the current level of XYZ index is from 1010 to 1090, the option would be in the money by $1,000, the maximum cash settlement amount. If the current level of XYZ index is 1093, the option would be in the money by $700.

OUT OF THE MONEY — If the exercise price of a call is above the current market value of the underlying interest, or if the exercise price of a put is below the current market value of the underlying interest, the call or put is said to be out of the money. A range option, which is of single type rather than being categorized as a call or a put, is said to be out of the money if the current level of the underlying index falls outside of its range length.

EXAMPLE: With the current market price of XYZ stock at $40, a call with an exercise price of $45 would be out of the money by $5 — as would a put with an exercise price of $35.

EXAMPLE: Assume a series of XYZ range options has a specified range length from 1000 to 1100. If the current level of XYZ index is either below 1000 or above 1100, the series of XYZ range options would be out of the money.

INTRINSIC VALUE and TIME VALUE — It is sometimes useful to consider the premium of an option as consisting of two components: intrinsic value and time value.

In the case of an option other than a binary option, the intrinsic value reflects the amount, if any, by which the option is in the money. An option that is out of the money would have an intrinsic value of zero. Delayed start options, other than series whose exercise prices are to be set in the money, have no intrinsic value before the exercise price is set. Thereafter, as in the case of any other option, whether a delayed start option has intrinsic value depends on the level of the underlying index at the time. A binary option (other than a credit default option) that is in the money has an intrinsic value equal to the fixed cash settlement amount of the option. Where the listing exchange has specified that a binary call will return a cash settlement amount if the exercise settlement value of the underlying is exactly equal to the exercise price, the call will have an intrinsic value equal to the cash settlement amount if it is either in the money or at the money. As is further discussed under the heading "Credit Default Options and Credit Default Basket Options" in Chapter V, credit default options have no intrinsic value.

Time value is whatever the premium of the option is in addition to its intrinsic value. Time value is that part of the premium that reflects the time remaining before expiration. An American-style option may ordinarily be expected to trade for no less than its intrinsic value prior to its expiration, although occasionally an American-style option will trade at less than its intrinsic value. Because European-style options (including binary options and range options) and capped options are not exercisable at all times, they are more likely than American-style options to trade at less than their intrinsic value when they are not exercisable.

The following new paragraphs are added at the end of Chapter II, on page 17 of the Booklet:

A delayed start option is an option that does not have an exercise price when first introduced for trading but instead has an exercise price setting formula pursuant to which the exercise price will be fixed on a specified future date. The following is a description of the terminology applicable to delayed start options:

EXERCISE PRICE SETTING DATE — The exercise price setting date for a series of delayed start options is the date on which the options market on which the series is traded will set the exercise price for the series. The exercise price setting date is specified before the commencement of trading of each series of delayed start options. Specific information regarding exercise price setting dates may be obtained from the listing options market.

EXERCISE PRICE SETTING FORMULA — The exercise price setting formula for a series of delayed start options is the formula used by the options market on which the series is traded to set the exercise price for the series on the exercise price setting date. The exercise price setting formula is specified before the commencement of trading of each series of delayed start option. The formula for a particular series may provide that the exercise price will be at the money, in the money by a specified amount, or out of the money by a specified amount. Exercise prices may be rounded as specified by the listing options market.

EXAMPLE: In January, an American-style delayed start option on the ABC index is opened for trading with an exercise price setting date of the third Friday in September and an exercise price setting formula specifying that the exercise price will be set at the closing value of the ABC index on the exercise price setting date, rounded to the nearest whole number. The option may not be exercised at all until after the third Friday in September because it will not have an exercise price until that time. At the close of trading on the third Friday in September, the options market on which the delayed start option is trading will determine the closing value of the ABC index and set the exercise price based on that value. For example, if the options market determines that the ABC index closed at 908.10 on the exercise price setting date, the options market would round that value to 908, and from that time until its expiration date the delayed start option would trade as a regular American-style option with an exercise price of 908.

The following paragraph is inserted immediately following the caption "Features of Stock Options" on page 18 of the Booklet:

The following discussion relates primarily to stock options other than binary stock options. A separate description of the features of binary stock options may be found at the end of this chapter.

The following language is inserted immediately following the last paragraph on page 22 of the Booklet.

The following is a description of certain special features of binary stock options:

As in the case of other stock options, the exercise price of a binary stock option is ordinarily stated as a price per share of the underlying security. Premium values may be stated in an amount that must be multiplied by a multiplier to obtain the premium price per option contract.

The listing exchange specifies the method for determining the exercise settlement value of the underlying stock for a binary stock option. This method may be based on a volume weighted average price for a specified time period preceding expiration, such as the last trading day before expiration. The exercise settlement value for a stock underlying a binary option is the value of the stock as reported by the reporting authority designated by the listing options market for that purpose. Unless OCC directs otherwise, the value as initially reported by the reporting authority is conclusively presumed to be accurate and deemed to be final for the purpose of determining whether the option is automatically exercised and returns a cash settlement amount. This is true even if the value is subsequently revised or determined to have been inaccurate.

Adjustments in the terms of binary stock options will be made to reflect some, but not all, of the same events that result in adjustments to other stock options, and any adjustment that is made will not necessarily be the same as the adjustment made to other options on the same underlying security. As in the case of other stock options, adjustments will not normally be made to the terms of binary stock options to account for ordinary dividends or distributions. The guidelines stated in Part I of the May 2007 Supplement to this booklet for determining when a distribution is considered "ordinary" will generally be applied to distributions with respect to securities underlying binary stock options.

Adjustments in the terms of binary stock options will ordinarily be made for stock dividends, stock distributions and stock splits, subject to the exception stated above where an adjustment panel determines to treat a stock distribution as ordinary.

If an adjustment panel determines to make an adjustment to binary stock options to reflect a stock dividend, stock distribution, or stock split, the exercise price of the option will ordinarily be proportionately reduced — regardless of whether a whole number of shares, or other

than a whole number of shares, of the underlying security is issued. The adjustment panel has discretion to make exceptions to the general rules described above.

EXAMPLE: Before a 2 for 1 stock split, an investor holds one ABC binary stock option with an exercise price of $50 that pays a cash settlement amount of $100 if the exercise settlement value of ABC at expiration is above the exercise price. After adjustment for the split, the investor will still hold one ABC binary stock option that pays a cash settlement amount if the exercise settlement value of ABC at expiration is above the exercise price, but the exercise price will be $25 (*i.e.*, $50 divided by two). Thus, if the exercise settlement value of ABC stock at expiration, on a post-split basis, is above $25, the investor will receive $100.

An investor holds an XYZ binary stock option with an exercise price of $50 that pays a cash settlement amount of $100 if the exercise settlement value of XYZ stock is below the exercise price. XYZ announces a 2.5 for 1 stock split. The exercise price will be adjusted to equal $20 ($50 divided by 2.5). If the exercise settlement value of XYZ stock at expiration is below $20, the investor will receive $100. Exercise prices of binary stock options will generally be rounded to the nearest adjustment increment (or up in the event the adjusted price is equidistant between two adjustment increments).

Conversely, in the event of a reverse stock split or combination of shares, the exercise price will be proportionately increased.

Distributions of property other than the underlying security may result in adjustments to the terms of binary stock options. For example, the exercise settlement value might be adjusted to include the value of the distributed property.

EXAMPLE: XYZ "spins off" its subsidiary ABC by distributing to its stockholders two shares in ABC for each share of XYZ. The exercise settlement value of XYZ binary stock options may be adjusted to include the value of two shares of ABC as well as one share of XYZ.

Alternatively, the option might be adjusted by reducing its exercise price by an amount equal to the value of the property distributed with respect to a single share of the underlying security (in the example above, the two shares of ABC).

As in the case of other stock options, adjustments to the terms of binary stock options may result from events other than dividends, distributions, and splits. If all outstanding shares of an underlying security are acquired in

a merger or consolidation, binary stock options may be adjusted so that the cash, securities or other property received by stockholders with respect to a single share of that underlying security becomes the underlying interest. Alternatively, an adjustment panel may determine to fix a value for some or all of the non-cash property received. Where holders of an underlying security receive only cash or an adjustment panel determines to fix a cash value for all non-cash property received, the aggregate per share value received, as determined by the adjustment panel, will become the exercise settlement value, trading in the options will ordinarily cease, options that are out of the money will become worthless, the expiration date will ordinarily be accelerated, and options that are in the money will be automatically exercised. No adjustment in the fixed settlement amount will be made to reflect the accelerated expiration date.

As in the case of other stock options, any adjustment decision with respect to binary stock options will be made by an adjustment panel as described above. The adjustment panel has discretion to make exceptions to the general rules described above.

The first paragraph on page 23 of the Booklet under the caption "About Indexes" is replaced with the following paragraph:

As referred to in this booklet, an index is a measure of the prices or other attributes of a group of securities* or other interests. Although indexes have been developed to cover a variety of interests, such as stocks and other equity securities, debt securities and foreign currencies, and even to measure the cost of living, the following discussion relates only to indexes on equity securities (which are called stock indexes in this booklet) and indexes that are intended to measure the predicted volatility of specified stock indexes (which are called volatility indexes in this booklet) and options on such indexes (including binary index options and range options).

The second full paragraph on page 26 of the Booklet is replaced with the following paragraph:

The value level of every index underlying an option — including the exercise settlement value — is the value of the index as reported by the reporting authority designated by the options market where the option is traded as the official source for determining that index's

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* Some indexes reflect values of companies, rather than securities, by taking into account both the prices of constituent securities and the number of those securities outstanding.

value. Unless OCC directs otherwise, every value as initially reported by the reporting authority is conclusively presumed to be accurate and deemed to be final for the purpose of calculating the cash settlement amount, or, in the case of a binary index option, whether the option is automatically exercised and returns a cash settlement amount. This is true even if the value is subsequently revised or determined to have been inaccurate.

The first two paragraphs immediately following the caption "Features of Index Options" on pages 26-27 of the Booklet are replaced with the following paragraphs and example:

All index options that are traded on the date of this booklet are cash-settled. Cash-settled index options do not relate to a particular number of shares. Rather, the "size" of a cash-settled index option is determined by the multiplier of the option. The "size" of a range option is determined by its multiplier and maximum range exercise value, and is equal to the maximum cash settlement amount (*i.e.*, the maximum range exercise value times the multiplier). In the case of a binary index option, the "size" of the contract is simply its fixed cash settlement amount, which for certain binary index options is defined as the product of a fixed settlement value times a multiplier. If the option market on which an option series is traded should increase or decrease the multiplier for a series of index options, an adjustment panel may adjust outstanding options of that series.

The exercise prices and premiums of the index options that are traded at the date of this booklet are expressed in U.S. dollars. Subject to regulatory approval, trading in index options whose exercise prices or premiums are expressed in a foreign currency may be introduced in the future. The total premium and total exercise price for a single index option (other than a binary index option or a range option) are, respectively, the stated premium and exercise price multiplied by the multiplier.

EXAMPLE: An investor purchases a December 100 index call at $2.15. The multiplier for that option is 100. The aggregate dollar amount of the premium is $215.00 ($2.15 times 100 = $215.00). Had the options market used a multiplier of 200, a premium of $2.15 would have meant an aggregate premium of $430.00.

The second full paragraph on page 27 of the Booklet and the example following that paragraph are deleted.

The second paragraph following the caption "How to Exercise" on page 49 of the Booklet is replaced with the following paragraph:

In order to exercise most options traded at the date of this booklet, action must be taken by the option holder prior to the expiration of the option. However some options may be subject to automatic exercise. For example, capped options are subject to automatic exercise if the automatic exercise value of the underlying interest hits the cap price of the option, and certain other options (including binary options and flexibly structured index options) are subject to automatic exercise as well. Binary options are subject to automatic exercise if the exercise settlement value of the underlying interest at expiration meets the criteria for exercise specified by the listing options market. Credit default options are subject to automatic exercise whenever a credit event occurs in accordance with the description in the applicable supplement to this booklet.

The following paragraph is inserted near the top of page 58 of the Booklet immediately before the caption "Risks of Option Holders":

Risks discussed in this chapter are applicable to binary options and range options as well as other options, except as otherwise noted. Certain risks discussed in the section entitled "Special Risks of Index Options" are applicable to binary index options and range options as well. Special risks applicable to holders and writers of binary options are discussed in this chapter in the sections entitled "Special Risks of Binary Options (Other than Credit Default Options)" and "Special Risks of Credit Default Options." Special risks applicable to holders and writers of range options are discussed in this chapter in the section entitled "Special Risks of Range Options."

The following paragraph is inserted on page 59 of the Booklet immediately before the paragraph numbered 2:

Only the first two paragraphs of this numbered section 1 are applicable to binary options and range options. The amount by which a binary option is in the money does not affect the value of the option (and therefore the option holder's profit or loss) upon exercise. In the case of a range option, the value of the option is based on where the level of the underlying index falls within the range length at expiration, and not on the difference between the level of the underlying index and a discrete exercise price. Furthermore, as discussed below under the caption "Special Risks of Range Options," the value of a range option does not always move in the same direction as the underlying interest.

The paragraph numbered 3 on page 60 of the Booklet is replaced with the following paragraph:

3. Prior to the period when a European-style option (including a European-style delayed start option), a capped option, or an American-style delayed start option is exercisable, the only means through which the holder can realize value from the option (unless the capped option is automatically exercised) is to sell it at its then market price in an available secondary market. If a secondary market for such an option is not available during the time the option is not exercisable, it will not be possible for its holder to realize any value from the option at that time.

The paragraph numbered 5 beginning at the bottom of page 60 of the Booklet is replaced with the following paragraph:

5. The courts, the SEC, another regulatory agency, OCC or the options markets may impose exercise restrictions. OCC and the options markets have authority to restrict the exercise of options at certain times in specified circumstances. The options markets often exercise such authority with respect to an option in which trading has been halted. If a restriction on exercise is imposed at a time when trading in the option has also been halted, holders of that option will be locked into their positions until either the exercise restriction or the trading halt has been lifted.

The following paragraphs are inserted immediately following the caption "Risks of Option Writers" on page 62 of the Booklet:

The risks discussed in paragraphs 3, 4, 5 and 10 below apply to writers of non-binary and binary options, but the risks discussed in paragraphs 1, 2, 6, 7, 8, 9 and 11 are inapplicable to writers of binary options. Special risks of binary options are discussed below under the caption "Special Risks of Binary Options (Other Than Credit Default Options)."

The risks discussed in paragraphs 5, 9 and 10 below apply to writers of range options, but the risks discussed in paragraphs 1, 2, 6, 7, 8 and 11 do not. Although some of the risks discussed in paragraphs 3 and 4 apply to writers of range options, these risks are separately discussed below under the caption "Special Risks of Range Options" because range options are of a single type (rather than consisting of a put class and a call class) and have a unique payout structure.

The paragraph numbered 1 at the top of page 62 of the Booklet is replaced with the following paragraph:

1. An option writer may be assigned an exercise at any time during the period the option is exercisable. Starting with the day it is purchased (provided, in the case of a delayed start option, that its exercise price has been set), an American-style option is subject to being exercised by the option holder at any time until the option expires. This means that the option writer is subject to being assigned an exercise at any time after he has written the option until the option expires or until he has closed out his position in a closing transaction. By contrast, the writer of a European-style option (including a European-style delayed start option), a capped option, or an American-style delayed start option before its exercise price is set is subject to assignment only when the option becomes exercisable or, in the case of a capped option, when the automatic exercise value of the underlying interest hits the cap price.

The paragraph numbered 3 on page 63 of the Booklet is replaced with the following paragraph:

3. The writer of an uncovered call (other than a binary call) is in an extremely risky position and may incur large losses if the value of the underlying interest increases above the exercise price. For the writer of an uncovered call (other than a binary call), the potential loss is unlimited. When a physical delivery call is assigned an exercise, the writer will have to purchase the underlying interest in order to satisfy his obligation on the call, and his loss will be the excess of the purchase price over the exercise price of the call reduced by the premium received for writing the call. In the case of a cash-settled call other than a binary call, the loss will be the cash settlement amount reduced by the premium. Anything that may cause the price of the underlying interest to rise dramatically, such as a strong market rally or the announcement of a tender offer for an underlying stock at a price that is substantially above the prevailing market price, can cause larges losses for an uncovered call writer. For the writer of a binary call, the potential loss will be limited to the fixed cash settlement amount of the option minus the premium received for writing the call. The writer of a binary call will be obligated to pay the entire fixed cash settlement amount if the exercise settlement value is only slightly in the money or, for certain binary calls, even if the exercise settlement value is at the money.

The following example is inserted immediately following the example at the bottom of page 63 of the Booklet:

EXAMPLE: An investor receives a premium of $4 for writing a binary call option on XYZ security that has an exercise price of $80 and a fixed cash settlement amount of $100. If the exercise settlement value of XYZ is $81 at expiration, the investor will incur a loss of $96 (the $100 paid to the holder of the call option less the $4 premium received when the option was written).

The paragraph beginning at the bottom of page 63 of the Booklet is replaced with the following paragraph:

The writer of an uncovered call (other than a binary call) is in an extremely risky position and may incur large losses. Moreover, as discussed in Chapter IX, a writer of uncovered calls must meet applicable margin requirements (which, except in the case of binary calls, can rise substantially if the market moves adversely to the writer's position). Uncovered call writing is thus suitable only for the knowledgeable investor who understands the risks, has sufficient liquid assets to meet applicable margin requirements, and, except in the case of binary options, where the potential loss is limited as described above, has the financial capacity and willingness to incur potentially substantial losses. A binary call writer may be required under exchange rules to deposit the full cash settlement amount at the time the option is written.

The paragraph numbered 4 on page 64 of the Booklet is replaced with the following paragraph:

4. As with writing uncovered calls, the risk of writing put options is substantial. The writer of a put option bears a risk of loss if the value of the underlying interest declines below the exercise price, and such loss could be substantial if the decline is significant. The writer of a put bears the risk of a decline in the price of the underlying interest — potentially to zero in the case of a put other than a binary put. A writer of a physical delivery put who is assigned an exercise must purchase the underlying interest at the exercise price — which could be substantially greater than the current market price of the underlying interest — and a writer of a cash-settled put other than a binary put must pay a cash settlement amount which reflects the decline in the value of the underlying interest below the exercise price. For the writer of a binary put, the potential loss will be the fixed cash settlement amount of the option minus the premium received for writing the put. The writer of a binary put will be obligated to pay the entire fixed cash settlement amount even if the exercise settlement value of the option is only slightly in the money. Unless a put is a cash-secured put

(discussed below), its writer is required to maintain margin with his brokerage firm. Moreover, the writer's purchase of the underlying interest upon being assigned an exercise of a physical delivery put may result in an additional margin call.

The second full paragraph on page 64 of the Booklet is replaced with the following paragraph:

Put writers must have an understanding of the risks, the financial capacity and willingness to incur potentially substantial losses, and the liquidity to meet margin requirements and to buy the underlying interest, or to pay the cash settlement amount, in the event the option is exercised. A writer of an American-style put other than a delayed-start option can be assigned an exercise at any time during the life of the option until such time as he enters into a closing transaction with respect to the option. A writer of an American-style delayed-start option can be assigned an exercise at any time after the option's exercise price is set until such time as he enters into a closing transaction with respect to the option. Since exercise will ordinarily occur only if the market price of the underlying interest is below the exercise price of the option, the writer of a physical delivery put option can expect to pay more for the underlying interest upon exercise than its then market value.

The following example is inserted immediately following the example at the bottom of page 64 of the Booklet:

EXAMPLE: An investor receives a premium of $4 for writing a binary put option on XYZ security that has an exercise price of $80 and a fixed cash settlement amount of $100. If the exercise settlement value of XYZ is $79 at expiration, the investor will incur a loss of $96 (the $100 paid to the holder of the put option less the $4 premium received when the option was written).

The first full paragraph at the top of page 65 of the Booklet is replaced with the following paragraph:

In the case of a put other than a binary put, the put writer's exposure to margin requirements can be eliminated if the put writer deposits cash equal to the option's exercise price with his brokerage firm. Under this strategy, known as cash-secured put writing, the put writer is not subject to any additional margin requirements regardless of what happens to the market value of the underlying interest. In the meantime, the put writer might earn interest by having the cash invested in a short-term debt instrument — for example, in a Treasury bill. However, a cash-secured put writer is still subject to a risk of loss if the value of the underlying interest declines. The

risk of writers of binary puts is limited to the cash settlement amount of the option, and a binary put writer may be required under exchange rules to deposit the full cash settlement amount at the time the option is written.

The paragraph numbered 5 on page 65 of the Booklet is replaced with the following paragraph:

5. The risk of being an option writer may be reduced by the purchase of other options on the same underlying interest — and thereby assuming a spread position — or by acquiring other types of hedging positions in the options markets or other markets. However, even where the writer has assumed a spread or other hedging position, the risks may still be significant. See paragraph 1 under "Other Risks" below. The risk profile of a spread where the long and short legs are options of different types is not the same as where both legs are options of the same type. For example, where the short leg is a conventional option, the risk-reducing characteristics of a long leg consisting of binary or range options are different than where the long leg is a conventional option because of the fixed cash settlement amount of binary options and the unique payout structure of range options.

The second full paragraph on page 68 of the Booklet is replaced with the following paragraph:

In the case of straddle writing, where the investor writes both a put and a call on the same underlying interest at the same exercise price in exchange for a combined premium on the two writing transactions, the potential risk is unlimited (except in the case of capped options or binary options). Except where a straddle consists of binary options, to the extent that the price of the underlying interest is either below the exercise price by more than the combined premium, or above the exercise price by more than the combined premium, the writer of a straddle will incur a loss when one of the options is exercised. Indeed, if the writer is assigned an exercise on one option position in the straddle and fails to close out the other position, subsequent fluctuations in the price of the underlying interest could cause the other option to be exercised as well, causing a loss on both writing positions. An investor who writes a straddle using binary options will incur a loss when the combined premium is less than the fixed cash settlement amount of the option that is exercised.

The second full paragraph on page 71 of the Booklet is replaced with the following paragraph:

Even if options trading is halted, holders of American-style options, other than delayed start options for which an exercise price has not yet been set, would still

be able to exercise unless exercises were restricted. (However, OCC or an options market may restrict the exercise of an option while trading in the option has been halted, and the restriction may remain in effect until shortly before expiration. See paragraph 5 under "Risks of Option Holders" above.) If the option is exercisable while trading has been halted in the underlying interest, option holders may have to decide whether to exercise without knowing the current market value of the underlying interest. This risk can become especially important if an option is close to expiration, and failure to exercise will mean that the option will expire worthless. If exercises do occur when trading of the underlying interest is halted, the party required to deliver the underlying interest may be unable to obtain it, which may necessitate a postponed settlement and/or the fixing of cash settlement prices (see Chapter VIII).

The paragraph numbered 4 on page 71 of the Booklet is replaced with the following paragraph:

4. All cash-settled options have certain special risks. The special risks applicable to cash-settled index options are discussed under "Special Risks of Index Options" below. Special risks applicable to range options are discussed under "Special Risks of Range Options" and the special risks applicable to binary options are discussed under "Special Risks of Binary Options (Other than Credit Default Options)" and "Special Risks of Credit Default Options" below.

The following paragraph is inserted immediately below the caption "Special Risks of Index Options" on page 73 of the Booklet:

The risks discussed in paragraphs 4, 5, 7, 8 and 10 below are generally applicable to writers of non-binary and binary index options, but the risks discussed in paragraphs 1 through 3, 6 and 9 are inapplicable to writers of binary index options. The risks discussed in paragraphs 4, 5, 7, 8 and 10 below apply to writers of range options on securities indexes, but the risks discussed in paragraphs 1 through 3, 6 and 9 do not. Special risks of range options are discussed below under the caption "Special Risks of Range Options."

The paragraph numbered 2 on page 73 of the Booklet is replaced with the following paragraph:

2. Even if the writer of a cash-settled index call option could assemble a securities portfolio that exactly reproduced the composition of the underlying index, the writer still would not be fully covered from a risk standpoint because of the "timing risk" inherent in writing cash-settled options. When a cash-settled index option is exercised, the amount of cash that the holder is entitled

to receive is determined by the difference between the exercise price and the exercise settlement value, which is based on the prices of the constituent securities at a particular time on or in relation to the date on which the option is exercised. As with most other kinds of options, the writer will not learn that he has been assigned until the next business day, at the earliest. The time lag between exercise and notice of assignment poses no risk for the writer of a covered physical delivery call, because that writer's obligation is to deliver the underlying interest and not to pay its value as of a fixed time in the past. So long as the writer of a physical delivery call already owns the underlying interest, he can satisfy his settlement obligations simply by delivering it, and the risk that its value may decline after the exercise date is borne by the exercising holder. In contrast, even if the writer of a cash-settled index call holds securities that exactly match the composition of the underlying index, he will not be able to satisfy his assignment obligations by delivering those securities against payment of the exercise price. Instead, he will be required to pay cash in an amount based on the exercise settlement value on the exercise date, and by the time he learns that he has been assigned, the index may have declined, with a corresponding decline in the value of the securities portfolio. This "timing risk" is an inherent limitation on the ability of writers of cash settled calls to cover their risk exposure by holding positions in the underlying interest. This risk applies only to American-style options. The writer of a European-style or capped call that is exercisable only on the expiration date runs the risk of assignment only with respect to exercises filed on that day. If the call is more than marginally in the money on the preceding trading day, the writer can ordinarily assume that it will be exercised and take market action to protect himself against a subsequent decline in the value of his position in the underlying interest.

The paragraph numbered 5 on page 76 of the Booklet is replaced with the following paragraph:

5. Holders and writers of index options generally bear the risk that the reported current index level may be in error. Persons who exercise cash-settled index options or are assigned exercises based on erroneously reported index levels will ordinarily be required to make settlement based on the exercise settlement value as initially reported by the official source of the index, even if a corrected value is subsequently announced. In the case of binary index options, while the exercise settlement amount is fixed, the exercise settlement value of the underlying index will determine whether the option is automatically exercised and returns a cash settlement

amount or expires worthless. References herein to index values "as initially reported" refer to the values initially reported by the source of the index as definitive, and not to any tentative or preliminary values that may be announced at an earlier time subject to adjustment. In extraordinary circumstances (*e.g.*, where an exercise settlement value as initially reported is obviously wrong and inconsistent with values previously reported, and a corrected value is promptly announced), OCC has discretion to direct that exercise settlements be based on a corrected exercise settlement value. Ordinarily, however, the exercise settlement value as initially reported by the official source of the index will be conclusive for exercise settlement purposes.

The paragraphs numbered 7 and 8 beginning on page 77 of the Booklet are replaced with the following paragraphs:

7. Cash-settled index options whose exercise settlement values are based on the opening prices of the constituent securities are not traded on the last scheduled trading day for those securities prior to the option expiration date. An option holder will be able to realize value from his option on that day only if the option is in the money and is exercised. A writer of this type of option who has not previously closed out his position will be unable to do so on that last trading day for the constituent securities and will be at risk of being assigned an exercise.

8. Current index levels will ordinarily continue to be reported even when trading is delayed or interrupted in some or all of the constituent securities of the index or when the reporting of transactions in those securities has been delayed. In that event, the reported index levels will be based on the most recent reported prices of the constituent securities — whether or not those securities are being currently traded. As a result, reported index levels may at times be based on non-current price information with respect to some or even all of the constituent securities of an index. If this condition existed at the time of determining the exercise settlement value of an exercised option, that exercise would be settled on the basis of an index level that might not reflect current price information with respect to constituent securities accounting for a significant portion of the value of the index. (Indeed, as noted in Chapter IV, an exercise settlement value that is based on the opening prices of the constituent securities may not coincide with, and may diverge substantially from, the index values that are reported at the time of the opening.) Moreover, if the index underlay a capped index option or a binary index option, that option would or would not be automatically exercised based on an index

level that might not reflect the true state of the market at the time.

The paragraph numbered 10 beginning on page 78 of the Booklet is replaced with the following paragraph:

10. The purchase and sale of index options in foreign markets at times when U.S. markets are closed may present special risks. Although an underlying index may be based on securities primarily traded in U.S. markets, the index levels reported in foreign options markets at such times may be based on the trading of some or all of the constituent securities in foreign markets, and, in any case, option premiums in the foreign market will not reflect current prices of the constituent securities in U.S. markets. In addition, if a cash-settled index option (other than a binary index option) is exercised through the foreign office of a brokerage firm on a day when U.S. markets are closed, the exercise settlement value of the option will not be known until the time fixed for determining exercise settlement values on the next day on which U.S. markets are open. The corresponding risks would apply to the trading in U.S. markets of options based on indexes of securities primarily traded in foreign markets.

The following new paragraph is inserted on page 78 of the Booklet immediately before the section in Chapter X titled "Special Risks of Debt Options":

15. Holders and writers of delayed start options bear the risk that the index level used to calculate the exercise price on the exercise price setting date may be unavailable or incorrect or that the options market may incorrectly calculate the exercise price. Paragraph 5 of this section discusses some of the risks of an erroneously reported index level to a person buying, selling, or exercising an option, or who is assigned an option exercise, based on the erroneous index level. Similarly, persons who are holders or writers of delayed start options on the exercise price setting date bear the risk that an erroneously reported index level will be used to set the exercise price. There is the additional risk that a correct index level will be used, but the options market will calculate the exercise price incorrectly. Once a series of delayed start options is opened for trading on the day after the exercise price setting date, even if a corrected index level is later reported, or if it is later discovered that an exercise price was set incorrectly, the exercise price will not be corrected to account for such errors.

The following new sections are inserted at the end of Chapter X of the Booklet following the section captioned "Special Risks of Credit Default Options" (which was added in the June 2007 Supplement):

SPECIAL RISKS OF BINARY OPTIONS (OTHER THAN CREDIT DEFAULT OPTIONS)

1. Risks of holders of binary options are similar to the risks described above applicable to holders of other cash-settled, European-style options, but the holder of a binary option will not receive any gain in excess of the fixed settlement amount of the option. Non-binary options, in contrast, may provide greater return to the holder as the difference between the exercise price and the exercise settlement value of the underlying interest increases. A binary option is like a capped option in the sense that its maximum return is limited. Unlike a capped option, however, the payout on a binary option is all or nothing. Accordingly, with respect to a binary option, the holder may experience a relatively greater gain than the holder of a non-binary option when the option is in the money by a small amount but a relatively smaller gain when the option is in the money by a greater amount.

2. Binary options may be more difficult to hedge, or to use as hedges, than non-binary options. Because of the fixed settlement amount to be realized from a binary option, an investor who wishes to hedge the risk of an increase in the price of a specified quantity of a stock, for example, cannot create a perfect hedge by buying a specified quantity of at-the-money binary options that return a cash settlement amount if the exercise settlement value of the underlying security is above the current price of the stock. If the stock price at expiration of the option has risen only slightly above the exercise price, the option payout may exceed the aggregate increase in the value of the stock. If the stock price has risen substantially over the exercise price, the payout from the option may not be sufficient to cover the excess. Similarly, an investor who writes a binary option on an individual stock and wishes to hedge the obligation through ownership of the shares of the underlying stock would not be able to do so precisely through the ownership of any specific number of shares.

3. Holders and writers of binary options may bear a heightened risk that they will be adversely affected by manipulative behavior in the markets. Because a binary option that is in the money by even the smallest amount (or, in the case of certain binary options, at the money) will pay the full fixed settlement amount, there may be an incentive for holders or writers of options that are at or near the money at expiration to attempt to influence the exercise settlement value in order to cause a series of options to expire either in or out of the money. Although

opportunities for manipulation may be greater when the underlying interest is an individual security than when it is an index, volume weighted average pricing is used to determine the exercise settlement value of binary stock options in order to reduce the likelihood of such manipulation. While market manipulation is unlawful under the federal securities laws and SEC regulations, there can be no assurance that manipulation affecting binary options will not occur. If manipulation does occur, exercise settlement values may be based on the manipulated price and there may be no adequate remedy available to investors.

4. A writer of a binary option has risks similar to those of writers of other cash-settled, European-style options except that the amount that the writer will be required to pay if assigned an exercise notice is limited to the fixed settlement amount. Even though the potential loss is limited, writers of binary options must have sufficient liquid assets to pay the fixed cash settlement amount and the financial capacity to bear that potential loss.

5. A writer of a binary option will be obligated to pay the entire fixed cash settlement amount, even if the exercise settlement value is only slightly in the money or, in the case of certain binary options, at the money. Investors should be aware of the criteria for automatic exercise of the binary options that they purchase or write. Binary stock options may be different in this regard from binary index options, and binary options traded on one options market may have different terms from those traded in other options markets.

6. A binary option that has an exercise price at or near the current price or level of the underlying as the expiration date approaches may be more volatile and therefore involve more risk than a non-binary option.

The following new section is inserted at the end of Chapter X on page 88 of the Booklet:

SPECIAL RISKS OF RANGE OPTIONS

1. Range options have a unique payout structure. Whereas other cash-settled options (other than binary options) provide an increasingly greater return to the option holder as the difference between the exercise price and the level of the underlying interest increases, a range option's potential payout increases through the lower range until it reaches the maximum cash settlement amount, remains at the maximum cash settlement amount through the entire middle range, and then decreases to zero as the level of the underlying interest moves through the high range. Therefore, a range option holder must not only be right about the timing of an anticipated change in the level of the underlying index, but he must also be right about the degree of the change because the option will have a reduced payout or drop out of the money altogether if the underlying index moves too far in either direction. In that case, a range option holder may lose all or a significant part of his investment in the option. On the other hand, the direction in which the underlying index moves will not affect the payout for a range option as long as it stays within the middle range.

2. The writer of a range option, like writers of other cash-settled options, runs the risk that the option will expire in the money and he will be required to pay the cash settlement amount. The writer's potential loss is limited to the maximum cash settlement amount of the option minus the premium received. Actual loss will depend on where the level of the underlying index falls within the range length.

EXAMPLE: An investor receives a premium of $10 for writing a range option on XYZ index that has a maximum cash settlement amount of $100. Assume that the option has a low range from 90 to 100, middle range from 100 to 110, and a high range from 110 to 120. If the level of the XYZ index at expiration is 100 (*i.e.*, falls in the middle range), the investor will incur a loss of $90 (the $100 paid to the holder of the option less the $10 premium received when the option was written). If the level of the XYZ index at expiration is in the low range or the high range, the profit or loss incurred by the investor will depend on where along the low range or high range the index level falls at expiration.

3. Range options may be more difficult to hedge, or to use as a hedge, than other types of options because of range options' unique payout structure. A range option would be a perfect hedge only for a risk exposure to the underlying interest that varies with the level of the underlying interest in the same unique way as the payout structure of the range option. In addition, as in the case of a binary option, it is not possible to precisely offset the risk of writing a range option through ownership of the underlying interest.

DECEMBER 2009 SUPPLEMENT

The February 1994 version of the booklet entitled *Characteristics and Risks of Standardized Options* (the "Booklet") is amended as provided below. Part I of this Supplement contains information regarding options on indexes measuring (i) the historical ("realized") variance or the predicted ("implied") or realized volatility of the daily returns of a stock index; (ii) the return from a trading strategy involving purchases and sales of equity securities and options on those securities; or (iii) the dividends on the component stocks of a dividend index. Part II of this Supplement contains information relating to the adjustment of stock option contracts to reflect cash dividends or distributions on the underlying securities. This Supplement supersedes and replaces the September 2008 Supplement to the Booklet.

Part I. Variability Options.

1. The first full paragraph on page 2, as amended in Part III of the May 2007 Supplement, is further amended to read as follows:

Each options market selects the underlying interests on which options are traded on that market. Options are currently available covering four types of underlying interests: equity securities (which term includes "fund shares" described in Chapter III), indexes (including stock, variability, strategy-based and dividend indexes), government debt securities, and foreign currencies. Options on other types of underlying interests may become available in the future.

2. The second paragraph on page 7, as amended by the June 2008 Supplement, is replaced with the following paragraph:

Exercise prices for each options series (except for series of delayed start options) are established by the options market on which that series is traded at the time trading in the series is introduced, and are generally set at levels above and below the then market value of the underlying interest. However, the options markets may use other methods to set exercise prices. Specific information regarding the setting of exercise prices may be obtained from the listing options market. The options markets generally have the authority to introduce additional series of options with different exercise prices based on changes in the value of the underlying interest, or in response to investor interest, or in unusual market conditions, or in other circumstances. For series of delayed start options, exercise price setting formulas — rather than exercise prices — are established by the options market on which each series is traded before the time trading commences in each such series. Those exercise price setting formulas provide that on the exercise price setting date the exercise price for the series will be fixed at the money, in the money by a certain amount, or out of the money by a certain amount.

3. The first two paragraphs on page 23, under the caption "About Indexes," are replaced with the following three paragraphs and new caption:

As referred to in this booklet, an index is a measure of the prices or other attributes of a group of securities* or other interests. Although indexes have been developed to cover a variety of interests, such as stocks and other equity securities, debt securities and foreign currencies, and even to measure the cost of living, the following discussion relates only to (i) indexes on equity securities (which are called stock indexes in this booklet), (ii) indexes intended to measure the implied volatility, or the realized variance or volatility, of specified stock indexes (which are collectively called variability indexes in this booklet), (iii) strategy-based indexes, such as indexes measuring the return of a particular strategy involving the component securities of a stock index and options on that index, (iv) indexes intended to measure the stock price changes of the component securities of underlying indexes that result solely from the distribution of ordinary cash dividends, as calculated on their respective ex-dividend dates (which are called dividend indexes in this booklet), and (v) options on the above indexes (including binary index options and range options).

Stock indexes are compiled and published by various sources, including securities markets. A stock index may be designed to be representative of the stock market of a particular nation as a whole, of securities traded in a particular market, of a broad market sector (*e.g.*, industrials), or of a particular industry (*e.g.*, electronics). A stock index may be based on securities traded primarily in U.S. markets, securities traded primarily in a foreign market, or a combination of securities whose primary

* Some indexes reflect values of companies, rather than securities, by taking into account both the prices of component securities and the number of those securities outstanding.

markets are in various countries. A stock index may be based on the prices of all, or only a sample, of the securities whose prices it is intended to represent. Like stock indexes, variability indexes, strategy-based indexes, and dividend indexes are securities indexes. However, variability indexes may measure the implied volatility of an index, using the premiums for series of options on that index, or may measure the historical variance or volatility of the returns of an index using daily returns over a certain period assuming a mean daily return of zero. Strategy-based indexes measure the return of a particular strategy involving the component securities of an index and options on that index. Dividend indexes measure the stock price changes of the component securities of underlying indexes that result solely from the distribution of ordinary cash dividends, as calculated on their respective ex-dividend dates. In this booklet options on variability indexes are referred to generically as variability options, options on strategy-based indexes are referred to as strategy-based index options, and options on dividend indexes are referred to as dividend index options.

Information relating specifically to stock indexes, variability indexes, strategy-based indexes and dividend indexes appears below under the captions "Stock Indexes," "Variability Indexes," "Strategy-based Indexes" and "Dividend Indexes," respectively.

STOCK INDEXES

4. The first sentence in the second full paragraph on page 25 is amended as follows:

Investors should keep in mind that a stock index can respond only to reported price movements in its component securities.

5. The paragraph that was inserted following the third full paragraph on page 26 in the December 1997 Supplement to this booklet is relocated so that it follows the second full paragraph on page 25 (since that paragraph relates to stock indexes and not to variability indexes or strategy-based indexes).

6. The following paragraphs and captions are added on page 25 following the relocated paragraph referred to in point 3 immediately above:

DIVIDEND INDEXES

Dividend indexes measure the stock price changes of the component securities of underlying indexes that result solely from the distribution of ordinary cash dividends, as calculated on their respective ex-dividend

dates. As of the date of this Supplement, dividend indexes on which options are approved to be traded are based on the accumulated "ex-dividend amounts" reflecting ordinary cash dividends for the component securities over a specified accrual period. Investors should note that determinations by the reporting authority for a dividend index as to whether a cash dividend is "ordinary" and therefore reflected in the index may be made using rules other than those relating to adjustments of stock options and described in Chapter III under "Features of Stock Options." At the end of each accrual period, the value of a dividend index is reset to zero. The values of dividend indexes are typically published once per trading day, and these values could be affected by an issuer's determination to pay stock dividends in lieu of cash dividends or to forego payment of cash dividends. An "ex-dividend amount" is the amount by which the market price of a stock decreases on the ex-dividend date to reflect the dividend that will be received by holders of the stock immediately prior to the ex-dividend date. The "ex-dividend amount" is calculated by the reporting authority for the index, and information as to the method of calculation is available from the listing options market. Investors must understand the method used to calculate dividend indexes in order to understand the relationship between current dividend index values and the prices of dividend index options.

VARIABILITY INDEXES

Variability indexes, and investment strategies involving the use of variability options, are inherently complex. You should be certain that you understand the method of calculation and significance of any variability index and the uses for which variability options based on that index are suited before buying or selling the options.

Economic, political, social and other events affecting the *level* of the reference index may also affect the *variability* of the reference index. Variability indexes based on equity securities have historically tended to move inversely to their reference indexes, since variability, whether in the form of variance or volatility, tends to be associated with turmoil in the stock markets and turmoil tends to be associated with downward moves in the stock market. But this relationship does not always hold true and, indeed, a variability index may be rising at a time when its reference index is also rising.

As with other index options, a call variability option will be in the money at exercise if the exercise settlement value of the underlying index is above the exercise price of the option, and a put variability option will be in the money at exercise if the exercise settlement value of the

underlying index is below the exercise price of the option. Whether the variability option is in the money is determined in relation only to the value of the underlying variability index, and not in relation to the reference index.

The information set forth on pages 26 through 28 of the Booklet under the caption "Features of Index Options" is generally applicable to variability options. However, the method of determining the exercise settlement value for certain variability options may differ from those for other index options, and you should read the information below relating to the particular types of variability options you wish to trade. Note also that variability options may have expiration dates that are different from those of other index options. You should be sure that you know the expiration date for each variability option you wish to buy or write.

As of the date of this Supplement, options are approved for trading on three different types of variability indexes representing three different ways of measuring variability. A realized variance index represents the variability of returns of a specified reference index over a specified time period relative to an average (mean) daily return of zero. The realized volatility of the same index over the same time period, also referred to as the standard deviation, is equal to the square root of the realized variance. Both of these measures are calculated from actual historical index values over the relevant period of time. An implied volatility index is a measure of the predicted future variability of the reference index over a specified future time period. It measures the predicted standard deviation of the daily returns of the reference index measured over the specified future time period. An implied volatility index reflects *predictions* about the future volatility of the reference index as those predictions are *implied* by reported current premium values for options on the reference index. The realized volatility of the reference index may not conform to those predictions.

There are various methods of estimating implied volatility, and different methods may provide different estimates. Under the method that is used for volatility options that are traded at the date of this Supplement, implied volatility index values are calculated using premium values of out-of-the-money series of options on the reference index in expiration months that are selected and weighted to yield a measure of the volatility of the reference index over a specified future time period. For example, an implied volatility index that is calculated using this method and that is designed to provide a prediction of volatility over 30 calendar days is based on premium values of out-of-the-money options series on

the reference index expiring in the two nearest months with at least 8 calendar days left to expiration. Implied volatility index values will be affected by any factor that affects the component options series of the index, including, among other things, applicable laws, regulations and trading rules, the market-making and order processing systems of the markets on which the options are traded, and the liquidity and efficiency of those markets.

Implied volatility options that are described in this Supplement are European-style and "A.M.-settled," which means that the exercise settlement values are derived from opening values of the component put and call options. An exercise settlement value for implied volatility options is calculated from *actual opening premium prices* of the relevant series of options on the reference index unless there is no trade in a series at the opening, in which case the *mid-point of the bid and offer premium quotations* for that series as determined at the opening of trading is used. All other index values for each of these implied volatility indexes are calculated using the *mid-points of the bid and offer premium quotations* of the options series that comprise the index. (Since these index values are based on quotations they are sometimes referred to as "indicative values.")

Because different values may be used in calculating the indicative values and exercise settlement values for implied volatility options, there is a risk that there may be a divergence between the exercise settlement value for implied volatility options and an indicative value calculated at the opening on the date on which the exercise settlement value is being determined. This risk is described further in Chapter X of this booklet, under the heading "Special Risks of Index Options." Additional information regarding the method used to calculate the values of a particular implied volatility index is available from the market on which options on that index are traded.

Investors should keep in mind that indicative values of an implied volatility index can reflect changes in the implied volatility of the reference index only to the extent that quotations of the component options of the index are current. Indicative values for an implied volatility index may be disseminated, and implied volatility options may be traded, during times when one or more component securities in the reference index are not trading, or when the quotations for one or more of the options series comprising the implied volatility index are not current. Similarly, an exercise settlement value for an implied volatility index may be calculated even if one or more component securities in the reference index are not trading. In any of these cases, an indicative value or exercise settlement value will be based on non-current information. The quality of the information reflected in the values of an implied volatility index should be evaluated in light of the depth and liquidity of the markets for the securities in the reference index and the options that are the components of the index.

The realized variability indexes underlying variability options approved for trading as of the date of this Supplement measure the actual volatility or variance, as the case may be, of the reference index for a fixed period ending on the last trading day before the expiration date for the variability option. As of the date of this Supplement indicative values for a realized variability index are published once per trading day during the fixed period, but values published early in the period, which are based on a small number of observations, may vary substantially from the exercise settlement value. The exercise settlement amount for a realized variability option is equal to the difference between the exercise settlement value and the exercise price of the option, times a multiplier.

Realized variability options that are described in this Supplement are European-style and "A.M.-settled." The initial and final values of a reference index for purposes of calculating the exercise settlement value for realized variability options described in this Supplement are ordinarily calculated from the *actual opening prices* of the component securities of the reference index in their primary market. If a component security does not open for trading, the *last reported price* in the primary market may be used. OCC's rules provide for other methods of determining the exercise settlement value of a reference index in extraordinary circumstances. All other values for realized variability indexes are calculated from the published closing value of the reference index.

STRATEGY-BASED INDEXES

Strategy-based indexes are complex, and their calculations may involve the use of multiple variables, including the values of equity securities and options on those securities. Strategies based on options on these indexes, referred to as "strategy-based index options," are also complex. Investors should be certain that they understand the method of calculation and significance of any strategy-based index and the uses for which strategy-based index options are suited before buying or selling the options.

Strategy-based indexes measure the returns from investment strategies involving the purchase and sale of various securities. All of the securities purchased and

sold pursuant to the strategy are deemed to be the component securities of the strategy-based index. As of the date of this Supplement, the only strategy-based index on which options are approved to be traded is a buy-write index measuring the return on a hypothetical "buy-write" strategy involving the simultaneous writing of call options on a stock index and purchase of the component securities of that index. Under the hypothetical strategy, a succession of at the money index call options with one month to expiration are assumed to be written, and the proceeds (*i.e.*, the premiums received) from writing the options are assumed to be invested in a weighted basket of the component securities that mirrors the index. Dividends received from ownership of the component securities of the index are similarly assumed to be reinvested in the basket of securities. The options are deemed held until expiration, and new call options are assumed to be written on the business day immediately after the settlement value is determined. All options written under the buy-write strategy are deemed to have been assigned an exercise notice on the expiration date if in the money on that date, and to have expired without value if out of the money on the expiration date. The buy-write index measures the cumulative gross rate of return of the strategy since the inception of the index. The index will therefore rise during periods when the strategy is profitable and decline when it is unprofitable. The following example illustrates the calculation of the buy-write index.

EXAMPLE: Assume that the buy-write index has a value of 800 on January 1. The return from the buy-write strategy, taking into account the returns of the component securities of the stock index and of the options assumed to be written on the index, is .5% and 1% on January 2 and 3, respectively. The index value at the end of a given trading day is equal to the previous closing value of the index multiplied by one plus the rate of return for that trading day. In this example, the value of the buy-write index at the close of trading on January 3 would be 812.04 (800 × 1.005 × 1.01). Assume that the return of the buy-write strategy on January 4, again taking into account the returns of the component securities of the stock index and of the options assumed written on that index, is a negative .7%. The value of the buy-write index at the close of trading on January 4 would be 806.36 (812.04 × .993).

The calculation of the buy-write index, as in the case of any strategy-based index, requires the making of assumptions about, for example, the timing of transactions involved with a particular strategy and the prices received or paid for the securities traded (which are

determined using market data for specified time periods). The index is calculated throughout the trading day using reported values for the reference index and reported premium values for the options as well as the value of any ordinary dividends payable on the component securities. The calculation of the index assumes that transactions can be continuously executed, *i.e.*, that there will be no market disruptions, and may use assumed prices equal to volume-weighted average prices, which may not be the same as the prices an investor employing the strategy would pay or receive. Detailed information regarding calculation of the buy-write index is available from the exchange on which the options are traded. A special opening value for the reference index is used in calculating the index on the date that a new option is written to replace an expiring option, which is known as a roll date, and special procedures are used on roll dates to reflect the hypothetical transactions that are assumed to take place on those dates.

STOCK INDEXES, VARIABILITY INDEXES, STRATEGY-BASED INDEXES AND DIVIDEND INDEXES

7. The first sentence of the third full paragraph on page 26 of the Booklet is replaced with the following:

With some exceptions, such as those noted above with regard to mutual fund indexes, certain foreign stock indexes, realized variance and realized volatility indexes, and dividend indexes, the values of indexes are ordinarily updated throughout the trading day.

8. The last sentence of the third full paragraph on page 26 of the Booklet is replaced with the following:

Information regarding the method of calculation of any index on which options are traded, including information concerning the standards used in adjusting the index, adding or deleting securities, and making similar changes, and on any modification of the index in determining the underlying value for the options, is generally available from the options market where the options are traded.

9. The following paragraph is inserted before the first full paragraph on page 27, as amended by the June 2008 Supplement:

The underlying interest for an index option may be a fraction or multiple of a particular index. An option on a fraction or multiple of a particular index is equivalent to an option on the full value of the index, but with a different contract size. Investors in index options should be aware that the underlying interest for an index option may not

be the full value of a published index with which they are familiar.

10. The last paragraph on page 27 is replaced with the following paragraph:

The exercise settlement values of index options are determined by their reporting authorities in a variety of ways. The exercise settlement values of some index options are based on the reported level of the underlying index derived from the last reported prices of the component securities of the index at the closing on the day of exercise. The exercise settlement values of other options are based on the reported level of the index derived from the opening prices of the component securities on the day of exercise. If an option is exercised on a day that is not scheduled as a trading day for the component securities of the index, the exercise settlement value is based on the reported level of the index derived from the opening or closing prices (depending on the options series) of the component securities on the last prior day that is scheduled as a trading day. If a particular component security does not open for trading on the day the exercise settlement value is determined, a substitute value, such as the last reported price of that security, is used. Other means for determining the exercise settlement values of some index options series have been, and may continue to be, established. For example, the exercise settlement values for options on an index of foreign securities may be fixed in relation to a value fixed by a foreign exchange.

11. The second paragraph on page 28 is deleted.

12. The following paragraph is inserted on page 73, immediately following the caption "Special Risks of Index Options," and immediately before the paragraph inserted at that location by the June 2008 Supplement to this booklet:

The risks described in paragraphs 1 through 10 on pages 73 through 78 of this booklet relate primarily to options on stock indexes. The risks described in paragraph 11 relate to options on implied volatility indexes. Risks described in paragraphs 12 through 14 relate to options on variability indexes or strategy-based indexes. The risks described in paragraph 15 relate to delayed start options, and the risk described in paragraph 16 relates to dividend index options.

13. The following paragraphs are inserted on page 78 immediately following paragraph number 10, as amended by the June 2008 Supplement:

11. Because different values may be used in calculating indicative values and exercise settlement values of

the volatility indexes underlying implied volatility options, there is a risk that there may be a divergence between the exercise settlement value and an indicative value calculated at the opening on the date on which the exercise settlement value is being determined. (Please refer to the discussion in Chapter IV under the heading "Variability Indexes" for the definition of the term indicative value and a description of the method that is used to calculate an exercise settlement value for implied volatility options.) It is to be expected that there will be at least some divergence between the exercise settlement value for expiring implied volatility options and an indicative value calculated at the opening on the same date because the opening price for each of the options series that is used to calculate the exercise settlement value will typically be at either the bid or the ask quotation, depending on the forces of supply and demand for that series, and not at the mid-point between the bid and ask quotations. This divergence may represent a significant percentage of the indicative value for the implied volatility index if the forces of supply and demand cause all or most of the series to open on the same side of the market.

12. Strategies involving the purchase and sale of options on a variability index or strategy-based index are inherently complex and require a thorough understanding of the concepts that are measured by these indexes. Investors must understand the method used to calculate the index in order to understand how conditions in the market for the component securities used to calculate its value may affect the value of the index. Investors may fail to realize their investment objective even if they have correctly predicted certain events if they do not understand how those events may or may not affect the level of the index. The component securities of an implied volatility index are put and call options (not stocks, which are the component securities of stock indexes). A realized variability index, on the other hand, measures the actual volatility of an index and is calculated directly from the values of the reference index. There is no assurance that predicted volatility as measured by a particular implied volatility index will correspond to the actual volatility of the reference index or to measures of predicted volatility calculated using other methods. A strategy-based index may be calculated from the prices of multiple component securities of different types, such as in the case of a buy-write index measuring the return of a strategy that involves transactions in stocks and options. The return from a particular strategy as measured by a strategy-based index may differ from the actual returns that an investor following that strategy achieves, because of assumptions regarding transactions and the failure to

take into account significant factors such as taxes and transaction costs.

13. Persons who exercise variability options or strategy-based index options or are assigned exercises based on an erroneous index level will ordinarily be required to make settlement based on the exercise settlement value as initially reported by the designated reporting authority for the index, even if a corrected value is subsequently announced. In extraordinary circumstances (*e.g.*, where an exercise settlement value as initially reported is obviously wrong, and a corrected value is promptly announced), OCC has discretion to direct that exercise settlements be based on a corrected exercise settlement value. Ordinarily, however, the exercise settlement value as initially reported by the designated reporting authority for the underlying variability index will be conclusive for exercise settlement purposes. As described in paragraph 8. on page 77 with respect to other indexes, reported levels of a variability or strategy-based index may be based on non-current information. This may occur as a result of delays or interruptions in the market for the component securities of the underlying index or the reference index (which are the same in the case of realized variability indexes).

14. As in the case of writers of other index options, writers of variability or strategy-based index options cannot provide in advance for their potential settlement obligations by acquiring the underlying interest. Offsetting the risk of writing a variability option or strategy-based index option may be even more difficult than offsetting the risk of writing other index options. Even where some offsetting of risk is possible, there are timing risks and other risks analogous to those discussed in paragraphs 3 and 4 on pages 74 and 75 of the booklet whenever an investor attempts to employ strategies involving transactions in variability or strategy-based index options and transactions in stocks or in options, futures contracts or other investments related to stocks.

14. The following paragraph is inserted on page 78 immediately following paragraph number 15, as added by the June 2008 Supplement:

16. The reported values of dividend indexes may be affected by factors other than the financial ability of the issuers of the component securities of a dividend index to pay cash dividends. For example, an issuer's determination to pay stock dividends in lieu of cash dividends or to forego payment of cash dividends notwithstanding its ability to do so may affect the level of a dividend index.

Part II. Definition of Ordinary Cash Dividend. The following replaces Part I of the May 2007 Supplement:

The fourth paragraph on page 19 of the Booklet is amended to read as follows:

As a general rule, no adjustment is made for ordinary cash dividends or cash distributions. A cash dividend or distribution announced prior to February 1, 2009, will generally be considered "ordinary" unless it exceeds 10% of the aggregate market value of the underlying security outstanding as of the close of trading on the declaration date. The same rule will continue to apply on and after that date with respect to options series designated by OCC as "grandfathered" for purposes of this rule (*i.e.*, series opened prior to publication of the May 2007 Supplement that remain outstanding on February 1, 2009). In the case of all other options series, a cash dividend or distribution announced *on or after* February 1, 2009, will generally be considered "ordinary," regardless of size, if OCC believes that it was declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly or other regular basis. No adjustment will normally be made for any cash dividend or distribution that amounts to less than $12.50 per contract. If an option contract has been previously adjusted to cover more shares than a standard-size option contract (*i.e.*, a contract covering 100 shares or any other number of shares specified as the standard size for a contract prior to any adjustments) and if a corresponding standard-size option contract also exists, the previously adjusted option contract will be adjusted only if the corresponding standard-size option contract is also adjusted. As an exception to the general rule, options on fund shares will generally be adjusted for capital gains distributions even if made on a regular basis, and adjustments may be made for certain other distributions in respect of fund shares in special circumstances described in OCC's rules, provided in each case that the amount of the adjustment would be $.125 or more per fund share. Determinations whether to adjust for cash dividends or distributions not covered by the preceding rules, or when other special circumstances apply, are made on a case-by-case basis.

MAY 2010 SUPPLEMENT

The February 1994 version of the booklet entitled *Characteristics and Risks of Standardized Options* (the "Booklet") is amended as provided below to accommodate the introduction of options on index-linked securities.

1. The first full paragraph on page 2 of the Booklet, as previously amended in the May 2007 and September 2008 Supplements, is replaced by the following:

Each options market selects the underlying interests on which options are traded on that market. Options are currently available covering four types of underlying interests: equity securities (which term includes "fund shares" described in Chapter III), indexes (including stock, variability, strategy-based and dividend indexes), debt securities and credit events, and foreign currencies. Options on other types of underlying interests may become available in the future.

2. The first three paragraphs in Chapter V appearing on page 29 of the Booklet, as amended by the June 2007 Supplement, are replaced by the following four paragraphs:

Three kinds of debt options have been approved for trading at the date of this booklet. Two of these kinds are sometimes referred to as price-based options. Price-based options are options which give their holders the right either to purchase or sell a specified underlying debt security or to receive a cash settlement payment based on the value of an underlying debt security (depending on whether the options are physical delivery or cash-settled options). Options on securities issued by the U.S. Treasury are one kind of price-based debt options. Options on index-linked securities are a second kind of price-based debt options. An "index-linked security" is a debt security that trades on one or more exchanges similarly to an equity security, and that provides a cash return to its owner based on the performance of a "reference asset" which may, for example, consist of a securities or commodities index, a futures index, a physical commodity, a foreign currency, another debt security, or some combination of the above. The term "index" in the context of an index-linked security has a broader meaning than that set forth in Chapter IV since, in the context of an index-linked security, the term is a synonym for the term "reference asset" and is not limited to securities indexes.

A third kind of debt options, called yield-based options, are options that are cash-settled based on the difference between the exercise price and the value of an underlying yield. At the date of this booklet, all yield-based options that have been approved for trading are based on the yields of U.S. Treasury securities. The distinctions between price-based and yield-based options are fundamental and should be understood by readers interested in investing in debt options.

A fourth kind of options, called credit default options, are also described in this Chapter. Credit default options are cash-settled options that are related to the creditworthiness of issuers or guarantors of debt securities, and are exercised upon confirmation of a credit event affecting an underlying debt security or securities.

The principal risks of holders and writers of debt options and credit default options are discussed in Chapter X. Readers interested in buying or writing debt options or credit default options should not only read this chapter but should also carefully read Chapter X, particularly the discussions under the headings "Risks of Option Holders," "Risks of Option Writers," "Other Risks," "Special Risks of Debt Options," and "Special Risks of Credit Default Options."

3. The first paragraph on page 31, immediately following the heading "Treasury Securities," is replaced by the following:

The underlying debt securities of one kind of price-based options that have been approved for trading at the date of this booklet, and the debt securities from which the underlying yields of yield-based options are derived, are Treasury securities — e.g., 30-year Treasury bonds, 10-year Treasury notes, 5-year Treasury notes and Treasury bills.

4. The following section is inserted immediately after the last paragraph on page 34 of the Booklet prior to the paragraphs inserted by the June 2007 Supplement:

OPTIONS ON CONVENTIONAL INDEX-LINKED SECURITIES

Index-linked securities are debt securities that trade on exchanges similarly to equity securities. Index-linked securities are issued by financial institutions such as banks and may take the form of trust certificates, units or some other interest. An index-linked security provides owners with a cash return based on the performance of a "reference asset" which may, for example, consist of a securities or commodities index, a futures index, a physical commodity, a foreign currency, another debt security, or some combination of the above. References in this booklet to "units" of underlying index-linked securities include these various forms of interests. The term "index" in the context of an index-linked security has a broader meaning than that set forth in Chapter IV because, in the context of an index-linked security, the term is a synonym for the term "reference asset" and is not limited to securities indexes. As of the date of this Supplement, options are approved to be traded on conventional index-linked securities, but not on leveraged or inverse index-linked securities.

As a general rule, a single index-linked security option covers 100 units of the underlying security. However, it is possible that the number of underlying units covered by an index-linked security option would be adjusted after the option is issued if an adjustment panel determines, as described below, that it is appropriate to make such an adjustment.

The exercise prices of options on index-linked securities that are approved for trading at the date of this booklet are stated in U.S. dollars per unit. As with a stock option, the exercise price of an index-linked security option must be multiplied by the number of units underlying the option in order to determine the aggregate exercise price and aggregate premium of the option.

Index-linked securities generally have a term of at least one year but not greater than thirty years. Index-linked securities may be redeemable at certain intervals at the option of the holder through the issuer at a price related to the applicable underlying reference asset,

subject to a minimum redemption increment and other conditions. Redemption of index-linked securities may affect the market for the securities by reducing the quantity of securities available for trading. Index-linked securities may return less than the principal originally invested, regardless of the solvency of the issuer of the securities.

An adjustment may be made to certain of the standardized terms of outstanding options on index-linked securities if a particular event occurs that is determined by an adjustment panel to warrant the adjustment. As in the case of stock options, an adjustment panel for options on index-linked securities would be composed of representatives of one or more U.S. options markets and a representative of OCC, as described above in Chapter II.

As a general rule, if the issuer of a particular index-linked security calls the entire issue of the security, the event will be treated like an event in which an underlying equity security is converted into the right to receive a fixed amount of cash. If an event is treated in this manner, when the issue of index-linked securities is called, outstanding options on that issue will be adjusted to require the delivery upon exercise of a fixed amount of cash, and trading in the options will ordinarily cease. As a result, after such an adjustment is made all options on that security that are not in the money will become worthless and all that are in the money will have no time value. The expiration date of the options will ordinarily be accelerated to fall on or shortly after the date on which the underlying security is called. Holders of an in-the-money option whose expiration date is accelerated must be prepared to exercise that option prior to the accelerated exercise cut-off time in order to prevent the option from expiring unexercised. See the discussion in Chapter VIII under "How to Exercise." Writers of options whose expiration date is subject to being accelerated bear the risk that, in the event of such an acceleration, they may be assigned an exercise notice and be required to perform their obligations as writers prior to the original expiration date. When the expiration date of an option is accelerated, no adjustment will be made to compensate for the accelerated expiration date. As with a stock option whose underlying security is converted into a right to receive a fixed amount of cash,

there is no assurance that the exercise settlement date for an accelerated index-linked security option will coincide with the date on which the cash payment to the holders of the underlying security becomes available from the issuer. Covered writers of an accelerated option may therefore be required to pay the cash amount in respect of the option before they receive the cash payment on the underlying security.

In contrast to a situation in which the issuer calls an entire issue of index-linked securities, as a general rule no adjustment will be made to the terms of options on index-linked securities in the event of a call of less than an entire issue of the securities. In addition, as a general rule, no adjustment will be made to the terms of options on index-linked securities for any interest payment on the securities.

As is the case with equity options, an adjustment panel with respect to options on index-linked securities has discretion to make exceptions to the general rules described above.

5. The following paragraph is inserted near the top of page 58 of the Booklet, after the paragraph inserted by the June 2008 Supplement and immediately before the caption "Risks of Option Holders":

The value of an option is affected by the value of the underlying interest. It is beyond the scope of this booklet to discuss the characteristics or risks of underlying interests. If a description or risk factor is mentioned in this booklet with respect to a particular class of underlying interest, you should not assume that the same statements will be made with respect to all underlying interests discussed herein to which they may be applicable. You should look to disclosures made by issuers of underlying securities or information provided by publishers of underlying indexes and to information available from your broker or other sources to determine the nature and risks of the interests underlying the options that you trade. Some underlying interests may themselves involve a high degree of risk. Where the value of an underlying security is based in whole or in part on the performance of an index, information provided by the publisher of the referenced index, as well as financial and other disclosures made by the issuer of the underlying security regarding the issuer's ability to perform its obligations, may be relevant.

6. The following paragraph is inserted on page 78 of the Booklet, immediately following the caption "Special Risks of Debt Options":

The risks described in paragraphs 1 through 9 of this section relate to debt options other than options on index-linked securities. The risks described in paragraphs 10 and 11 relate exclusively to options on index-linked securities.

7. The following new paragraphs are inserted on page 82 of the Booklet immediately before the section in Chapter X titled "Special Risks of Foreign Currency Options":

10. In the event of a shortage of index-linked securities that are deliverable on exercise of a physical delivery option, OCC may impose special exercise settlement procedures similar to those applicable to stock options, including the fixing of a cash settlement price payable by writers who would otherwise be unable to meet their delivery obligations (see the discussion in Chapter VIII under "Settlement"), and/or prohibit the exercise of puts by holders who would be unable to meet the resulting settlement obligations (see paragraph 5 under "Risks of Option Holders" above).

11. In the event that an issuer of an index-linked security calls the entire issue of the security, outstanding options on that issue will be adjusted to require delivery upon exercise of a fixed amount of cash. After such an adjustment, all options on that security that are not in the money will become worthless, and all that are in the money will have no time value. Holders must be prepared to exercise the option to prevent the option from expiring unexercised, and writers must be prepared to perform their obligations prior to the accelerated exercise cut-off date. There is no assurance that the exercise settlement date for an index-linked security option will coincide with the date on which the cash payment to the holders of the underlying security becomes available from the issuer, and covered writers of an accelerated option therefore may be required to pay the cash amount in respect of the option before they receive cash payment on the underlying security.

JANUARY 2011 SUPPLEMENT

The February 1994 version of the booklet entitled *Characteristics and Risks of Standardized Options* (the "Booklet") is amended as provided below. This January 2011 Supplement amends and restates the June 2007 Supplement in its entirety to accommodate changes pertaining to credit default options.

Credit default options, including credit default basket options, have characteristics that are different from those of any other options described in the Booklet at the date of this Supplement. Accordingly, some of the statements and terms in Chapters I and II of the Booklet are inapplicable to credit default options. For example, as further described in this Booklet, the sentence at the bottom of page 1 and the top of page 2 which notes that the owner of a cash-settled option has "the right to receive a cash payment based on the difference between a determined value of the underlying interest at the time the option is exercised and the fixed exercise price of the option" is not applicable to credit default options. The description of credit default options in this Supplement supersedes material in the Booklet applicable to other standardized options to the extent such material is inconsistent with statements in this Supplement. Credit default options are described by amendment to Chapter V of the Booklet as follows:

1. *The title of Chapter V (on page 29 of the Booklet) is changed to "DEBT OPTIONS AND CREDIT DEFAULT OPTIONS".*

2. *On page 34, the following is inserted immediately following the paragraph inserted by the May 2010 Supplement:*

Credit Default Options and Credit Default Basket Options

Credit default options are based on debt securities of one or more issuers or guarantors other than the U.S. Treasury. A significant difference between such debt securities and Treasury securities is the non-negligible risk that an issuer or guarantor of debt securities other than Treasury securities may default on its obligations. For example, the issuer might not pay the full interest and face amount of the securities when due or might file for bankruptcy, thereby making it nearly certain that it will not make timely payment of the full interest and face amount. Financial market participants call this credit risk. Credit risk is an important component of the value of most debt securities.

Credit default options relate to the credit risk presented by one or more specified debt securities, called reference

obligation(s), of one or more specified issuers or guarantors, each of which is called a reference entity. The reference obligation(s) and each reference entity for a class of credit default options are selected by the listing options market. When a credit default option is based on reference obligation(s) of more than one issuer or guarantor, it is referred to as a credit default basket option. There are further variations on credit default basket options as described below.

A credit default option is automatically exercised and pays a fixed cash settlement amount if a credit event is confirmed for one or more reference obligations of a reference entity prior to expiration of the option. The reference obligations of a reference entity may include all of the outstanding debt securities constituting general obligations of the reference entity or direct claims on the reference entities (excluding any non-recourse debt). A credit event may include a failure to make a payment on a reference obligation and/or any other event(s) that the listing options market may specify at the time a class of credit default options is listed. The specified credit event(s) will be defined in accordance with the terms of the reference obligation(s). However, not every event that might constitute an event of default by the reference entity under the terms of the reference obligations will necessarily be specified by the listing options market as a credit event. Investors should be certain that they understand the various possible events that will or will not constitute credit events. The determination of whether a particular event meets the criteria of a credit event, however defined, for a specific credit default option is within the sole discretion of the listing options market.

In order to result in automatic exercise of the option, a credit event must be confirmed to have occurred during the covered period (*i.e.*, the period between the initial listing of the series of options and the time specified by the options market as the last day of trading of the option series prior to the expiration date). An event that would otherwise be deemed a credit event will not result in an exercise of the option if it occurs either before or after this period. A series of credit default options ordinarily does not expire until a specified number of business days following the end of the covered period in order to provide the listing options market an opportunity to confirm whether or not a credit event occurred within the covered period. If an event otherwise meeting the definition of a credit event occurs after the end of the covered period but before the option expires, the option will not be exercised and will expire worthless.

If the listing options market determines that a credit event has occurred within the covered period for a class of credit default options, it will provide a credit event confirmation to OCC, and the options will be automatically exercised. Holders of the exercised options will receive, and writers will be obligated to pay, the fixed cash settlement amount. If OCC does not receive a credit event confirmation from the listing options market before expiration of a series of credit default options, the options will expire worthless.

Credit default options are binary options in that they have a specified, all-or-nothing cash settlement amount. Credit default options, however, have additional unique characteristics. For example, credit default options have no exercise price and cannot be in the money and have no intrinsic value. The discussion of these terms in Chapter I and/or Chapter II of the Booklet is therefore inapplicable to credit default options. In addition, a credit default option is automatically exercised whenever a credit event occurs within the covered period. Credit default options are thus a unique style of options and are neither American-style nor European-style.

A credit default basket option is similar to an aggregation of individual credit default options, each based on one or more reference obligations of a different reference entity. All of the outstanding debt securities constituting general obligations of each reference entity or direct claims on reference entities (excluding non-recourse debt) in the basket may be included in the reference obligations.

There are two different kinds of credit default basket options. A single payout credit default basket option is automatically exercised and pays a specified cash settlement amount upon the confirmation of the first credit event to occur with respect to a reference obligation of any one of the basket's reference entities. It is exercised only once. Once exercised, the expiration of the option will be accelerated to correspond to the exercise date. A multiple payout credit default basket option automatically pays a specified cash settlement amount each time a credit event is confirmed with respect to a reference obligation of any one of the reference entities during the covered period. In the case of either single payout or multiple payout credit default basket options, the listing options market may specify a different cash settlement amount for different reference entities or may specify the same cash settlement amount for each reference entity in the basket. The percentage of the total cash settlement amount that is attributable to any individual reference entity is referred to as its weight in the basket. Investors should note that the options markets on which credit default basket options trade may determine "weight" according to their own specified rules, and investors should contact the listing options market for information about how it determines weight. In the case of a multiple payout credit default basket option, a cash settlement amount will be paid only once with respect to any particular reference entity, after which time the affected reference entity will be removed from the credit default basket.

Premiums for both credit default options and credit default basket options are expressed in points and decimals. In order to obtain the aggregate premium for a single option, the quoted premium is multiplied by a premium multiplier specified by the listing options market.

ADJUSTMENT OF CREDIT DEFAULT OPTIONS

Adjustments may be made to the standardized terms of outstanding credit default options when certain events occur, such as a succession event or a redemption event, both of which will be defined by the listing options market in accordance with the terms of the reference obligations. Adjustments of credit default options will be within the sole discretion of the listing options market. Investors should familiarize themselves with the listing options market's rules and procedures governing credit default option adjustments. The listing option market's rules governing adjustments of outstanding options may be changed with regulatory approval, and the listing options market may have authority to make such exceptions as it deems appropriate to its general adjustment rules.

Redemption Event Adjustments. A redemption event occurs when reference obligations of a reference entity are redeemed (or paid in full) by, or on behalf of, the issuer. In the case of all types of credit default options, if only some of the reference obligations are redeemed, the option is ordinarily adjusted such that the remaining reference obligations are the reference obligations for the option and no other adjustment will ordinarily be made. If all of the reference obligations of a reference entity are redeemed and there are other debt obligations of the reference entity that the listing options market deems appropriate to specify as successor reference obligations, then they will be substituted as the reference obligations. If, however, all of the reference obligations of a reference entity are redeemed and there are no other debt obligations of the reference entity that the listing options market deems appropriate to specify as successor reference obligations for the reference entity (a complete redemption), then the adjustment will depend upon whether or not there are other reference entities for the options.

Adjustment of credit default options for a complete redemption. If there is a complete redemption affecting a credit default option, the option will cease trading on the date that the redemption event is confirmed by the listing options market. Expiration of the option will be accelerated to a specified number of days following the confirmation date of the redemption, and the option will expire unexercised if, prior to such expiration, no credit event is confirmed to have occurred prior to the effective date of the redemption event.

EXAMPLE: Company XYZ is the reference entity for a credit default option contract and its 8% May 15, 2022 bond issue is the only reference obligation. During the life of the option, Company XYZ redeems the 8% May 15, 2022 bond issue and there are no other obligations of Company XYZ that the listing options market deems to be suitable for specifying as successor reference obligations. The option will cease trading on the confirmation date, and its expiration date will be accelerated. If no credit event is confirmed to have occurred within the covered period, the option will expire worthless.

Adjustment of credit default basket options for a complete redemption. In the case of a single or multiple payout credit default basket option, if a complete redemption event occurs with respect to one of the reference entities in the basket and no credit event is confirmed, pursuant to the rules of the listing options market, to have occurred prior to the effective date of such redemption event, the options will be adjusted by removing the affected reference entity from the basket of reference entities. When a reference entity is deleted from the basket of reference entities because of a redemption event, the cash settlement amount of the option will be reduced by an amount reflecting the weight of the deleted reference entity in the basket. The *relative* weights of the other components in the basket will remain unchanged, although each will represent a proportionally larger percentage of the adjusted cash settlement amount.

EXAMPLE: Company XYZ is one of ten reference entities for a class of multiple payout credit default option contracts and its 8% May 15, 2022 bond issue is specified as its only reference obligation. Company XYZ was assigned a weight of 15% when the credit default option was opened for trading. During the life of the option, Company XYZ redeems the 8% May 15, 2022 bond issue. No reference obligations remain and the listing options market determines that there are no other outstanding debt obligations of the issuer suitable for specification as reference obligations. The basket component will be removed from the credit default basket, and the cash settlement amount will be reduced by 15%.

Succession Event Adjustments. A succession event occurs when one or more new entities assume one or more reference obligations of a reference entity or become the obligor with respect to any obligation that is substituted for the original reference obligations. This may occur, for example, when a reference entity is merged into a new entity or spins off a part of its business into a new entity. If, as the result of a succession event, more than one entity is the obligor of the original reference obligations, or obligations that were substituted for the original reference obligations, all of those obligors, including, as the case may be, the original reference entity, are referred to as successor reference entities.

Adjustment of credit default options after a succession event. Where a succession event results in assumption of all reference obligations by a single entity, the listing options market will ordinarily adjust the option by substituting the entity that assumes the reference obligation(s) as the new reference entity. Where a succession event results in more than one successor reference entity, the credit default option may be adjusted by dividing it into two or more options.

EXAMPLE: Company XYZ is the reference entity for a credit default option contract, and its 8% May 15, 2022 bond issue is the only reference obligation. During the life of the option, Company XYZ spins off Company LMN. Company XYZ remains the obligor with respect to 70% of the principal amount of the original reference obligation. Company LMN

becomes the obligor of a new reference obligation that is issued to holders of the remaining 30% of the original reference obligation. Company XYZ and LMN are identified by the listing options market as the successor entities. Following the succession event, the credit default option based on Company XYZ is adjusted into two separate credit default option contracts that specify Company XYZ and Company LMN as reference entities. The cash settlement amount of the original credit default option and the premium multiplier are allocated between the new credit default options in accordance with the 70/30 division of the reference obligation as specified by the listing options market.

Adjustment of credit default basket options after a succession event. When a succession event occurs with respect to a reference entity that is included in a single payout or multiple payout credit default basket option, the listing options market will ordinarily adjust the option by replacing the affected reference entity with the successor entity or entities, and, if one or more new obligations are issued to replace some or all of the existing reference obligations, the new obligations will be substituted as the reference obligations. The listing options market will specify the weight of each new reference entity, and the sum of the weights will equal the weight of the original reference entity.

EXAMPLE: Company XYZ is one of ten equally weighted reference entities for a multiple payout default basket option and its 8% May 15, 2022 bond issue and its 8.5% September 1, 2030 bond issue are specified as its only reference obligations. During the life of the option, Company XYZ spins off Company LMN. Company XYZ remains the obligor for the 2022 bond issue and LMN becomes the obligor of a debt security issued to holder of the 2030 bond issue. The listing options market adjusts the option by specifying XYZ and LMN as the successor reference entities. The reference obligations are the original 2022 bond issue and the replacement for the 2030 bond issue. The listing options market determines the appropriate basket weight for the successor reference entities is 7.5% and 2.5%. The sum of the newly specified weights equals the 10% weight of the predecessor basket reference entity (Company XYZ) replaced by the successor reference entities (Company XYZ and Company LMN).

3. *On page 88, the following is inserted immediately following the last paragraph:*

SPECIAL RISKS OF CREDIT DEFAULT OPTIONS

1. Pricing of credit default options is complex. As stated elsewhere in this document, complexity not well understood is, in itself, a risk factor. In order to price these options, investors must estimate the probability of default from available security or other prices, primarily bond and credit default swap ("CDS") prices. Models typically used by market professionals to infer the probability of default from prices may be more complex than the average investor is used to.

2. The sources of price information used to price credit default options are subject to a lack of transparency and, at times, illiquid markets. This is attributable to, among other things: (1) the absence of last sale information and the limited availability of quotations for the reference obligation(s), (2) lack of ready availability of information on related products traded primarily in the over-the-counter market, and (3) the fact that related over-the-counter market credit derivative transactions are privately negotiated and may not be made public in a timely fashion or at all.

3. Dealers in the underlying debt securities and in the over-the-counter credit derivatives markets have access to private quotation networks that give actual current bids and offers of other dealers. This information is not available to most investors. As a result, these dealers may have an advantage over participants with regard to credit default options.

4. If the listing options market determines that a credit default option is subject to a redemption event (*i.e.*, the issuer or guarantor pays off the reference obligation), the option will expire worthless unless a credit event has been confirmed to have occurred prior to the effective date of the redemption event. As a result, purchasers of such options will lose their premium since there is no chance of occurrence of a credit event for the reference entity. On the other hand, if a redemption event occurs but a credit event is confirmed to have occurred prior to the effective date of the redemption event, a seller would be obligated to pay the cash settlement amount even though a holder of the reference obligation may not incur a loss.

5. Since succession events are determined by the listing options market, credit default options may be modified to specify a different reference entity or several different reference entities. As a result, there may be new reference obligations that have higher or lower credit quality than the original reference obligation. In addition, other factors may exist that could affect the likelihood of the occurrence of a credit event. As a result, the occurrence of a succession event could affect the price of these options. Moreover, since the listing options market determines whether a succession event occurred and the adjustment resulting from such an event, the adjustment made to these options may be at variance with the treatment given to the same succession event with respect to related credit derivative products.

6. The occurrence of a credit event must be confirmed by the listing options market. This means that there will be a lag time between the actual occurrence of a credit event and the listing options market's confirmation of the credit event. Rules of the options market may provide a specified time period (*e.g.*, four business days) between the end of the covered period and the expiration date for a series of credit default options to allow the options market to confirm whether a credit event occurred during the covered period. There is a risk, however, that the sources used to monitor a credit event may not identify and report a credit event in a timely fashion. For example, it is possible that a credit event could occur on the last day of trading, but the

sources which report the occurrence of a credit event do not make this information publicly available until *after* the expiration date. In this case, the cash settlement value of a credit default option would be zero. There is also a risk that the listing options market may determine that a credit event has occurred based on information available to it when in fact no credit event has occurred. This could happen, for example, if the sources used to confirm the credit event are erroneous. The rules of OCC and/or the listing options market may provide that a confirmation of a credit event or other contract adjustment may be revoked up to a specified time prior to exercise settlement. Settlements based on a listing options market's confirmation of a credit event are irrevocable even if no credit event has occurred.

7. Every determination by the listing options market of a redemption event, succession event or credit event will be within the listing options market's sole discretion and will be conclusive and binding on all holders and sellers and not subject to review. OCC shall have no authority to make such determinations and shall have no responsibility therefor.

8. Prior to the period when a credit default option has been automatically exercised, the only means through which the holder can realize value from the option is to sell it at its then market price in an available secondary market. If a secondary market for such an option is not available, it will not be possible for its holder to realize any value from the option at that time.

9. There is no underlying interest for credit default options that is quoted in the marketplace. Because of this, there are no underlying interest prices to provide a reference to investors for pricing credit default options.

10. As discussed above under the caption "Other Risks," options markets have discretion to halt trading in an option in certain circumstances — such as when the market determines that the halt would be advisable in maintaining a fair and orderly market in the option. In the case of credit default options, options markets may take into consideration, among other factors, that current quotes for debt securities or other securities of the reference entity are unavailable or have become unreliable.

11. The risk that a trading market for particular options may become unavailable and the potential consequences are also discussed above under the caption "Other Risks." The SEC has approved certain credit default options for listing and trading on a national securities exchange as securities. OCC filed its rules for clearing credit default options with the CFTC, and the CFTC issued an exemption permitting OCC to clear such options when traded on a national securities exchange whether or not they are within the CFTC's jurisdiction. By its terms, the exemption is revocable, and its revocation would be one of the events that could lead to the unavailability of a trading market for credit default options.

MARCH 2011 SUPPLEMENT

The February 1994 version of the booklet entitled *Characteristics and Risks of Standardized Options* (the "Booklet") is amended as provided below to accommodate (i) options on any index intended to measure the implied volatility of a single reference security; and (ii) options on relative performance indexes.

1. *The first full paragraph on page 2 of the Booklet, as amended by the May 2007, December 2009 and May 2010 Supplements, is replaced by the following:*

Each options market selects the underlying interests on which options are traded on that market. Options are currently available covering four types of underlying interests: equity securities (which term includes "fund shares" described in Chapter III), indexes (including stock, variability, strategy-based, dividend and relative performance indexes), debt securities and credit events, and foreign currencies. Options on other types of underlying interests may become available in the future.

2. *The first three paragraphs on page 23 of the Booklet, under the caption "About Indexes," as amended by the December 2009 Supplement, are replaced by the following:*

As referred to in this booklet, an index is a measure of the prices or other attributes of a group of securities* or other interests. Although indexes have been developed to cover a variety of interests, such as stocks and other equity securities, debt securities and foreign currencies, and even to measure the cost of living, the following discussion relates only to (i) indexes on equity securities (which are called stock indexes in this booklet), (ii) indexes intended to measure the implied volatility, or the realized variance or volatility, of specified stock indexes or specified securities (which are collectively called variability indexes in this booklet), (iii) strategy-based indexes, such as indexes measuring the return of a particular strategy involving the component securities of a stock index and options on that index, (iv) indexes intended to measure the stock price changes of the component securities of underlying indexes that result solely from the distribution of ordinary cash dividends, as calculated on their respective ex-dividend dates (which are called dividend indexes in this booklet), (v) relative performance indexes, which are a special type of strategy-based indexes that measure the relative

* Some indexes reflect values of companies, rather than securities, by taking into account both the prices of component securities and the number of those securities outstanding.

performance over a given time period of one index component to another index component, and (vi) options on the above indexes (including binary index options and range options).

Stock indexes are compiled and published by various sources, including securities markets. A stock index may be designed to be representative of the stock market of a particular nation as a whole, of securities traded in a particular market, of a broad market sector (*e.g.*, industrials), or of a particular industry (*e.g.*, electronics). A stock index may be based on securities traded primarily in U.S. markets, securities traded primarily in a foreign market, or a combination of securities whose primary markets are in various countries. A stock index may be based on the prices of all, or only a sample, of the securities whose prices it is intended to represent. Like stock indexes, variability indexes, strategy-based indexes, dividend indexes and relative performance indexes are securities indexes. However, variability indexes may measure the implied volatility of an index, using the premiums for series of options on that index, or may measure the historical variance or volatility of the returns of an index using daily returns over a certain period assuming a mean daily return of zero. Strategy-based indexes measure the return of a particular strategy involving the component securities of an index and options on that index. Dividend indexes measure the stock price changes of the component securities of underlying indexes that result solely from the distribution of ordinary cash dividends, as calculated on their respective ex-dividend dates. Relative performance indexes measure the performance of two index components relative to one another over a period of time. In this booklet options on variability indexes are referred to generically as variability options, options on strategy-based indexes are referred to as strategy-based index options, options on dividend indexes are referred to as dividend index options and options on relative performance indexes are referred to as relative performance options.

Information relating specifically to the various types of indexes appears below under the captions "Stock Indexes," "Variability Indexes," "Strategy-based Indexes," "Dividend Indexes" and "Relative Performance Indexes."

3. *The first sentence of the second paragraph under the caption "Variability Indexes," which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, is replaced by the following:*

Economic, political, social and other events affecting the *level* of the reference index or the *price* of the reference security may also affect the *variability* of the reference index or reference security.

4. *The last sentence of the second paragraph under the caption "Variability Indexes," which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, is replaced by the following:*

But this relationship does not always hold true and, indeed, a variability index may be rising at a time when its reference index or the price of its reference security is also rising.

5. *The last sentence of the third paragraph under the heading "Variability Indexes," which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, is replaced by the following:*

Whether the variability option is in the money is determined in relation only to the value of the underlying variability index, and not in relation to the reference index or reference security.

6. *The fifth paragraph under the heading "Variability Indexes," which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, is replaced by the following:*

As of the date of this Supplement, options are approved for trading on three different types of variability indexes representing three different ways of measuring variability. A realized variance index represents the variability of returns of a specified reference index or reference security (in either case, a "reference interest") over a specified period of time relative to an average (mean) daily return of zero. The realized volatility of the same index over the same time period, also referred to as the standard deviation, is equal to the square root of the realized variance. Both of these measures are calculated from historical index values over the relevant period of time. An implied volatility index is a measure of the predicted future variability of the reference interest over a specified future time period. It measures the predicted standard deviation of the daily returns of the reference interest measured over the specified future time period. An implied volatility index reflects *predictions* about the future volatility of the reference interest as those predictions are *implied* by reported current premium values for options on the reference interest. The realized volatility of the reference interest may not conform to those predictions.

7. *The sixth paragraph under the heading "Variability Indexes," which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, is replaced by the following:*

There are various methods of estimating implied volatility, and different methods may provide different estimates. Under the method that is used for volatility options that are traded at the date of this Supplement, implied volatility index values are calculated using premium values of options on the reference interest in expiration months that are selected and weighted to yield a measure of the volatility of the reference interest over a specified future time period. For example, an implied volatility index that is calculated using this method and that is designed to provide a prediction of volatility over 30 calendar days is based on premium values of options on the reference interest expiring in the two nearest months with at least 8 calendar days left to expiration. Implied volatility index values will be affected by any factor that affects the component options series of the index, including, among other things, applicable laws, regulations and trading rules, the market-making and order processing systems of the markets on which the options are traded, and the liquidity and efficiency of those markets.

8. *The first and second sentences of the ninth paragraph under the heading "Variability Indexes," which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement, are replaced by the following:*

Investors should keep in mind that indicative values of an implied volatility index can reflect changes in the implied volatility of the reference interest only to the extent that quotations of the component options of the index are current. Indicative values for an implied volatility index may be disseminated, and implied volatility options may be traded, during times when the reference security or one or more component securities in the reference index are not trading, or when the quotations for the reference security or one or more of the options series comprising the implied volatility index are not current.

9. *The following caption and paragraphs are added to Chapter IV of the Booklet immediately following the section captioned "Strategy-Based Indexes," which is part of the discussion that was added on page 25 of the Booklet by the December 2009 Supplement:*

RELATIVE PERFORMANCE INDEXES

A relative performance index measures the relative performance — generally the relative total return — of two index components. As of the date of this booklet, the only relative performance options approved for trading are options on indexes of which both index components are equity securities (one of which could be a fund share). One of the components in each pair is referred to as the target component and the second is referred to as the benchmark component. The index is calculated by measuring the total return of the target component relative to the total return of the benchmark component. The index will rise as and to the extent that the target component outperforms the benchmark component, and will fall as and to the extent that the opposite occurs. The value of the relative performance index will be set to a base value (*e.g.*, 100) initially.

Investors should be certain that they understand the method of calculation of any relative performance index and the uses for which relative performance options are suited before buying or selling such options. Different relative performance indexes may measure relative performance in different ways. Investors should contact the listing options market for information on the method of calculation of a particular relative performance index.

In the event that one of the index components in an underlying relative performance index is eliminated as the result of a cash-out merger or other event, the reporting authority may cease to publish the value of the index. In that

case, the exercise settlement value of the options would become fixed based upon the last published value for the index, and the market on which the options are traded may determine to accelerate the expiration date for the options (and, in the case of European-style options, their exercisability). The expiration date will ordinarily be accelerated to fall on the next standard expiration date for options as specified in OCC's rules or on such other date as OCC establishes in consultation with the market on which the options are traded. All options that are not in the money will become worthless and all that are in the money will have no time value. Holders of an in-the-money option whose expiration date is accelerated must be prepared to exercise that option prior to the accelerated exercise cut-off time in order to prevent the option from expiring unexercised. Writers of European-style options whose expiration date is subject to being accelerated bear the risk that, in the event of such an acceleration, they may be assigned an exercise notice and be required to perform their obligations as writers prior to the original expiration date. As with any other option for which the expiration date is accelerated, no adjustment would be made to compensate for the accelerated expiration date of a relative performance option.

10. *The caption "Stock Indexes, Variability Indexes, Strategy-Based Indexes and Dividend Indexes," as it appears in the December 2009 Supplement as the heading of the section immediately preceding the section captioned "Features of Index Options" beginning on page 26 of the Booklet, is replaced by the new caption "Information Concerning Underlying Indexes."*

11. *The first paragraph appearing under the caption "Features of Index Options" on page 26 of the Booklet, as amended by the June 2008 Supplement, is replaced by the following:*

All index options that are traded on the date of this booklet are cash-settled. Cash-settled index options do not relate to a particular number of shares. Rather, the "size" of a cash-settled index option is determined by the multiplier of the option. The "size" of a range option is determined by its multiplier and maximum range exercise value, and is equal to the maximum cash settlement amount (*i.e.*, the maximum range exercise value times the multiplier). In the case of a binary index option, the "size" of the contract is simply its fixed cash settlement amount, which for certain binary index options is defined as the product of a fixed settlement value times a multiplier.

12. *The following caption and paragraphs are inserted at the end of page 27 of the Booklet:*

ADJUSTMENT OF INDEX OPTIONS

No adjustments will ordinarily be made in the terms of index option contracts in the event that index components are added to or deleted from the underlying index or reference index or when the relative weight of one or more such index components has changed. However, if an

adjustment panel determines that any such addition, deletion, or change causes significant discontinuity in the level of the underlying index or reference index, the panel may adjust the terms of the affected index option contracts by adjusting the index multiplier and/or exercise price with respect to such contracts or by taking such other action as the panel deems fair to both the holders and writers of such contracts.

If the option market on which an option series is traded should increase or decrease the index multiplier for any index option contract, or the reporting authority should change the method of calculation of an underlying index or reference index so as to create a discontinuity or change in the level of the index that does not reflect a change in the prices or values of the index components, or a successor index (as defined in the paragraph below) should be substituted for an underlying index or reference index, the adjustment panel may make such adjustments in the number of outstanding affected options or the exercise prices of such options or such other adjustments, if any, as the panel deems fair to both the holders and the writers of such options.

The adjustment panel may substitute another index (a successor index) for an underlying index or reference index in the event the panel determines that: (i) publication of the underlying index or reference index has been discontinued; (ii) the underlying index or reference index has been replaced by another index; or (iii) the composition or method of calculation of an underlying index or reference index is so materially changed since its selection as an underlying index or reference index that it is deemed to be a different index. A successor index will be reasonably comparable to the original underlying index or reference index for which it substitutes. An index may be created specifically for the purpose of becoming a successor index.

The adjustment panel's determinations shall be conclusive, binding on all investors, and not subject to review.

13. *The paragraph that was added immediately following the caption "Special Risks of Index Options" on page 73 of the Booklet by the December 2009 Supplement is replaced by the following:*

The risks described in paragraphs 1 through 10 on pages 73 through 78 of this booklet relate primarily to options on stock indexes. The risks described in paragraph 11 relate to options on implied volatility indexes. The risks described in paragraphs 12 through 14 relate to options on variability indexes, strategy-based indexes or relative performance indexes. The risks described in paragraph 15 relate to delayed start options. The risk described in paragraph 16 relates to dividend index options, and the risks described in paragraphs 17 relate to relative performance options.

14. *The paragraphs that were added on page 78 of the Booklet as paragraphs 12 through 14 under the section captioned "Special Risks of Index Options" by the December 2009 Supplement are replaced by the following:*

12. Strategies involving the purchase and sale of options on a variability index, strategy-based index or relative performance index are inherently complex and require a thorough understanding of the concepts that are measured by these indexes. Investors must understand the method used to calculate the index in order to understand how conditions in the market for the component securities used to calculate its value may affect the value of the index. Investors may fail to realize their investment objective even if they have correctly predicted certain events if they do not understand how those events may or may not affect the level of the index. The component securities of an implied volatility index are put and call options (not stocks, which are the component securities of stock indexes). A realized variability index, on the other hand, measures the actual volatility of an index and is calculated directly from the values of the reference index. There is no assurance that predicted volatility as measured by a particular implied volatility index will correspond to the actual volatility of the reference interest or to measures of predicted volatility calculated using other methods. A strategy-based index may be calculated from the prices of multiple component securities of different types, such as in the case of a buy-write index measuring the return of a strategy that involves transactions in stocks and options. The return from a particular strategy as measured by a strategy-based index may differ from the actual returns that an investor following that strategy achieves, because of assumptions regarding transactions and the failure to take into account significant factors such as taxes and transaction costs. Different relative performance indexes may measure relative performance in different ways. Investors should contact the listing options market for information on the method of calculation of a particular variability index, strategy-based index or relative performance index.

13. Persons who exercise variability options, strategy-based index options or relative performance options or are assigned exercises based on an erroneous index level will ordinarily be required to make settlement based on the exercise settlement value as initially reported by the designated reporting authority for the index, even if a corrected value is subsequently announced. In extraordinary circumstances (*e.g.*, where an exercise settlement value as initially reported is obviously wrong, and a corrected value is promptly announced), OCC has discretion to direct that exercise settlements be based on a corrected exercise settlement value. Ordinarily, however, the exercise settlement value as initially reported by the designated reporting authority for the underlying variability index will be conclusive for exercise settlement purposes. As described in paragraph 8. on page 77 with respect to other indexes, reported levels of a variability index, strategy-based index or relative performance index may be based on

non-current information. This may occur as a result of delays or interruptions in the market for the reference security or the component securities of the underlying index or the reference index (which are the same in the case of realized variability indexes).

14. As in the case of writers of other index options, writers of variability options, strategy-based index options or relative performance options cannot provide in advance for their potential settlement obligations by acquiring the underlying interest. Offsetting the risk of writing a variability option, strategy-based index option or relative performance option may be even more difficult than offsetting the risk of writing other index options. Even where some offsetting of risk is possible, there are timing risks and other risks analogous to those discussed in paragraphs 3 and 4 on pages 74 and 75 of the booklet whenever an investor attempts to employ strategies involving transactions in variability options, strategy-based index options or relative performance options and transactions in stocks or in options, futures contracts or other investments related to stocks.

15. *The following paragraph is inserted on page 78 of the Booklet immediately following the paragraph that was added as paragraph 16 under the section captioned "Special Risks of Index Options" by the December 2009 Supplement:*

17. In the event that one of the index components of a relative performance index is eliminated as a result of a cash-out merger or other event, the reporting authority may cease to publish the value of the relative performance index and the market on which options on that relative performance index are traded may determine to accelerate the expiration date of the options (and, in the case of European-style options, their exercisability). In that case, the exercise settlement value of the options would become fixed based upon the last published value for the underlying relative performance index. As a result, all such options that are not in the money will become worthless and all that are in the money will have no time value. Holders of an in-the-money option whose expiration date is accelerated must be prepared to exercise that option prior to the accelerated exercise cut-off time in order to prevent the option from expiring unexercised. Writers of a European-style option whose expiration date is subject to being accelerated bear the risk that, in the event of such an acceleration, they may be assigned an exercise notice and be required to perform their obligations as writers prior to the original expiration date. As with any other option for which the expiration date is accelerated, no adjustment would be made to compensate for the accelerated expiration date of a relative performance option.

JANUARY 2012 SUPPLEMENT

The February 1994 version of the booklet entitled *Characteristics and Risks of Standardized Options* (the "Booklet") is amended as provided below to accommodate options on relative performance indexes of which the index components are equity securities (including fund shares).

1. *The first paragraph following the caption "Relative Performance Indexes," which was added to Chapter IV of the Booklet by the March 2011 Supplement immediately following the section captioned "Strategy-Based Indexes" (which was added on page 25 of the Booklet by the December 2009 Supplement), is replaced by the following paragraphs:*

A relative performance index measures the relative performance — generally the relative total return — of two index components. As of the date of this booklet, the only relative performance options approved for trading are options on indexes of which both index components are equity securities (one or both of which could be non-leveraged fund shares). One of the components in each pair is referred to as the target component and the second is referred to as the benchmark component. The index is calculated by measuring the total return of the target component relative to the total return of the benchmark component. The index will rise as and to the extent that the target component outperforms the benchmark component, and will fall as and to the extent that the opposite occurs. The value of the relative performance index will be set to a base value, such as 100, initially. The following example illustrates the calculation of a relative performance index.

EXAMPLE: Assume that a relative performance index has an initial base value of 100. If the total return of the target component in one day is 10% and the total return of the benchmark component in the one day period is 9%, the index value of the relative performance index at the end of the one day period would equal $100 \times (1 + 10\%)/(1 + 9\%) = 100.92$. If the total return of the target component in the one day period is 9% and the total return of the benchmark component in the one day period is 10%, the index value of the relative performance index at the end of the one day period would equal $100 \times (1 + 9\%)/(1 + 10\%) = 99.09$.

The example above illustrates only a scenario where the total return assumed is for a one day period. Other periods would yield different results. Market participants should contact the exchange on which these options are traded for a more complete description of the index calculation methodology.

November 2012 Supplement to Characteristics and Risks of Standardized Options

The February 1994 version of the booklet entitled *Characteristics and Risks of Standardized Options* (the "Booklet") is amended as provided below to accommodate the introduction of options originally listed to overlie less than 100 shares.

The following replaces Part II of the December 2009 Supplement:

1. *The fourth paragraph on page 19 of the Booklet is amended to read as follows:*

<u>As a general rule, no adjustment is made for ordinary cash dividends or cash distributions.</u> A cash dividend or distribution announced prior to February 1, 2009, will generally be considered "ordinary" unless it exceeds 10% of the aggregate market value of the underlying security outstanding as of the close of trading on the declaration date. The same rule will continue to apply on and after that date with respect to options series designated by OCC as "grandfathered" for purposes of this rule (*i.e.*, series opened prior to publication of the May 2007 Supplement that remain outstanding on February 1, 2009). In the case of all other options series, a cash dividend or distribution announced *on or after* February 1, 2009, will generally be considered "ordinary," regardless of size, if OCC believes that it was declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly or other regular basis. No adjustment will normally be made for any cash dividend or distribution that amounts to less than $0.125 per underlying share. For contracts originally listed with a unit of trading larger than 100 shares, no adjustment normally would be made for any cash dividends or distributions that amount to less than $12.50 per contract. As an exception to the general rule, options on fund shares will generally be adjusted for capital gains distributions even if made on a regular basis, and adjustments may be made for certain other distributions in respect of fund shares in special circumstances described in OCC's rules, provided in each case that the amount of the adjustment would be $0.125 or more per fund share. Determinations whether to adjust for cash dividends or distributions not covered by the preceding rules, or when other special circumstances apply, are made on a case-by-case basis.

Dated: November 2012

DISCLOSURE OF RISKS OF MARGIN TRADING

Interactive Brokers ("IB") is furnishing this document to you to provide some basic facts about purchasing securities and futures contracts on margin, and to alert you to the risks involved with trading in a margin account. "Margin trading" can mean engaging in a transaction in which securities are purchased partially through a margin loan extended to you by IB, for which the securities act as collateral. Margin trading can also mean trading investment products such as futures or options in which an initial "margin" deposit is made to secure your obligations and further margin may be required to secure your obligations as the value of your positions changes.

This document also describes special risks associated with trading on margin in an IRA account, as described below.

Before trading stocks, futures or other investment products in a margin account, you should carefully review the margin agreement provided by IB and you should consult IB regarding any questions or concerns you may have with your margin accounts.

When you purchase securities, you may pay for the securities in full or you may borrow part of the purchase price from IB. If you choose to borrow funds from IB, you will open a margin account with the firm. The securities purchased are IB's collateral for the loan to you. If the securities or futures contracts in your account decline in value, so does the value of the collateral supporting your loan, and, as a result, IB can take action, such as sell securities or other assets in any of your accounts held with IB or issue a margin call, in order to maintain the required equity in the account.

You should understand that pursuant to the IB Margin Agreement, IB generally will not issue margin calls, that IB will not credit your account to meet intraday margin deficiencies, and that IB generally will liquidate positions in your account in order to satisfy margin requirements without prior notice to you and without an opportunity for you to choose the positions to be liquidated or the timing or order of liquidation.

In addition, it is important that you fully understand the risks involved in trading securities or futures contracts on margin. These risks include the following:

- You can lose more funds than you deposit in the margin account. A decline in the value of securities or futures contracts that are purchased on margin may require you to provide additional funds to IB or you must put up margin to avoid the forced sale of those securities or futures contracts or other assets in your account(s).

- IB can force the sale of securities or other assets in your account(s). If the equity in your account falls below the maintenance margin requirements, or if IB has higher "house" requirements, IB can sell the securities or futures contracts or other assets in any of your accounts held at the firm to cover the margin deficiency. You also will be responsible for any shortfall in the account after such a sale.

- IB can sell your securities or other assets without contacting you. Some investors mistakenly believe that a firm must contact them for a margin call to be valid, and that the firm cannot liquidate securities or other assets in their accounts to meet the call unless the firm has contacted them first. This is not the case. As noted above, IB generally will not issue margin calls and can immediately sell your securities or futures contracts without notice to you in the event that your account has insufficient margin.

- You are not entitled to choose which securities or futures contracts or other assets in your account(s) are liquidated or sold to meet a margin call. IB has the right to decide which positions to sell in order to protect its interests.

- <u>IB can increase its “house” maintenance margin requirements at any time and is not required to provide you with advance written notice.</u> These changes in firm policy often take effect immediately. Your failure to maintain adequate margin in the event of an increased margin rate generally will cause IB to liquidate or sell securities or futures contracts in your account(s).

- <u>If IB chooses to issue a margin call rather than immediately liquidating undermargined positions, you are not entitled to an extension of time on the margin call.</u>

- <u>Special Risks of Trading on Margin in an IRA Account:</u>

    - **Margin Trading in an IRA Account May Not Be Suitable Depending on Your Financial Circumstances.** Trading requiring margin (including futures trading and short option trading) involves a high degree of risk and may result in a loss of funds greater than the amount you have deposited in your IRA account. You must determine whether trading on margin in an IRA account is advisable based on your financial circumstances, your tolerance for risk, the number of years until your retirement, and other factors. You should consult a professional financial advisor to determine if margin trading in your IRA account is consistent with your financial goals.

    - **You Must Closely Monitor Your Account and Your Trading to Avoid Adverse Tax Consequences:** Trading requiring margin (including futures trading and short option trading) may require the deposit of additional funds to your account to maintain sufficient margin. At the same time, provisions of the Internal Revenue Code place limits on the amount of funds that can be deposited to an IRA account. Deposits to the account in excess of such limits may cause adverse tax consequences, including but not limited to, forfeiture of the tax-advantaged status of the IRA account and/or penalties. As described above, IB will liquidate positions in your account in the event that you cannot or do not deposit sufficient funds to satisfy margin requirements.

Portfolio Margin Risk Disclosure Statement

OVERVIEW OF PORTFOLIO MARGINING

1. Portfolio margining is a margin methodology that sets margin requirements for an account using a "risk-based" pricing model that calculates the largest potential loss of all positions in a product class or group across a range of underlying prices and volatilities. This model, known as the Theoretical Intermarket Margining System ("TIMS"), is applied each night to U.S. stocks, OCC stock and index options, and U.S. single stock futures positions by the federally-chartered Options Clearing Corporation ("OCC") and is disseminated by the OCC to participating brokerage firms each night. Interactive Brokers evaluates margin compliance throughout the trading day based on the current positions in the account and current market prices, but the margin calculations are based on TIMS parameters received the prior evening.

2. The goal of portfolio margining is to set levels of margin that more precisely reflect actual net risk. The customer may benefit from portfolio margining in that margin requirements that are calculated based on net risk are generally lower than alternative “position” or “strategy” based methodologies for determining margin requirements. Lower margin requirements allow the customer more leverage in an account.

CUSTOMERS ELIGIBLE FOR PORTFOLIO MARGINING

3. To be eligible for portfolio margining, customers (other than broker-dealers or members of a national futures exchange) must be approved for writing uncovered options. If a customer (other than a broker-dealer or member of a national futures exchange) wishes to trade in unlisted derivatives, the customer must have and maintain at all times account equity of not less than five million dollars, aggregated across all accounts under identical ownership at the carrying broker-dealer and/or its US-regulated affiliated broker-dealers or Futures Commission Merchants. This identical ownership requirement excludes accounts held by the same customer in different capacities (e.g., as a trustee and as an individual) and accounts where ownership is overlapping but not identical (e.g., individual accounts and joint accounts). In addition to the requirements of the self-regulatory organization rule, carrying broker-dealers may have their own minimum equity requirement and possibly other eligibility requirements.

POSITIONS ELIGIBLE FOR A PORTFOLIO MARGIN ACCOUNT

4. All margin equity securities (as defined in Section 220.2 of Regulation T of the Board of Governors of the Federal Reserve System), warrants on margin equity securities or on eligible indices of equity securities, equity-based or equity-index based listed options, and security futures products (as defined in Section 3(a)(56) of the Securities Exchange Act of 1934) are eligible to be margined in a portfolio margin account. In addition, a customer that has an account with equity of at least five million dollars may establish and maintain positions in unlisted derivatives (e.g., OTC swaps, options) on a margin equity security or an eligible index of equity securities that can be priced by a theoretical pricing model approved by the Securities and Exchange Commission (“SEC”).

SPECIAL RULES FOR PORTFOLIO MARGIN ACCOUNTS

5. A portfolio margin account may be either a separate account or a sub-account of a customer’s standard margin account. In the case of a sub-account, equity in the standard account may be available to satisfy any margin requirement in the portfolio margin sub-account without transfer to the sub-account.

6. A portfolio margin account or sub-account will be subject to a minimum margin requirement of $.375 for each listed option, unlisted derivative and security futures product, multiplied by the contract’s or instrument’s multiplier, carried long or short in the account. Other eligible products are not subject to a minimum margin requirement.

7. A margin deficiency in the portfolio margin account or sub-account, regardless of whether due to new commitments or the effect of adverse market movements on existing positions, must be met within three business days. Failure to meet a portfolio margin deficiency by the end of the third business day will result in a prohibition on entering any new orders, with the exception of new orders that reduce the margin requirement. Failure to meet a portfolio margin deficiency by the end of the third business day will result in the prompt liquidation of positions on the fourth business day, to the extent necessary to eliminate the margin deficiency.

8. Any shortfall in aggregate equity across accounts, when required, must be met within three business days. Failure to meet a minimum equity deficiency by the end of the third business day will result in a prohibition on entering any new orders, with the exception of new orders that reduce the margin requirement, beginning on the fourth business day and continuing until such time as the minimum equity requirement is satisfied, or if applicable, all unlisted derivatives are liquidated or transferred out of the portfolio margin account.

**Please note that pursuant to the IB Customer Agreement, IB reserves theright to liquidate positions prior to the fourth business day. **

SPECIAL RISKS OF PORTFOLIO MARGIN ACCOUNTS

9. Portfolio margining generally permits greater leverage in an account, and greater leverage creates greater losses in the event of adverse market movements.

10. Because the maximum time limit for meeting a margin deficiency is shorter than in a standard margin account, there is increased risk that a customer's portfolio margin account will be liquidated involuntarily, possibly causing losses to the customer.

11. Because portfolio margin requirements are determined using sophisticated mathematical calculations and theoretical values that must be calculated from market data, it may be more difficult for customers to predict the size of future margin deficiencies in a portfolio margin account. This is particularly true in the case of customers who do not have access to specialized software necessary to make such calculations or who do not receive theoretical values calculated and distributed periodically by an approved vendor of theoretical values.

12. Trading of margin equity securities, warrants on margin equity securities or on eligible indices of equity securities, listed options, unlisted derivatives on margin equity securities or an eligible index of equity securities, and security futures products in a portfolio margin account is generally subject to all the risks of trading those same products in a standard securities margin account. Customers should be thoroughly familiar with the risk disclosure materials applicable to those products, including the booklets entitled "Characteristics and Risks of Standardized Options" and "Security Futures Risk Disclosure Statement". Because this disclosure statement does not disclose the risks and other significant aspects of trading in security futures and options, customers should review those materials carefully before trading these products in a portfolio margin account.

13. Customers should consult with their tax advisers to be certain that they are familiar with the tax treatment of transactions in margin equity securities, warrants on margin equity securities or on eligible indices of equity securities, listed options, unlisted derivatives on margin equity securities or an eligible index of equity securities, and security futures products, including tax consequences of trading strategies involving both security futures and option contracts.

14. The descriptions in this disclosure statement relating to eligibility requirements for portfolio margin accounts, and minimum equity and margin requirements for those accounts, are minimums imposed under the self-regulatory organization rules. Time frames within which margin and equity deficiencies must be met are maximums imposed under the self-regulatory organization rules. Broker-dealers may impose their own more stringent requirements.

15. Customers should bear in mind that the discrepancies in the cash flow characteristics of security futures and certain options are still present even when those products are carried together in a portfolio margin account. In addition, discrepancies in the cash flow characteristics of certain unlisted derivatives may also be present when those products are carried in a portfolio margin account. Both security futures and options contracts are generally marked to the market at least once each business day. Similarly, certain unlisted derivatives may also be marked to the market on a daily basis. However, there may be incongruity between the marking to the market of each eligible product in that marks may take place with different frequency and at different times within the day. For example,

when a security futures contract is marked to the market, the gain or loss is immediately credited to or debited from, respectively, the customer's account in cash. While a change in the value of a long option contract may increase or decrease the equity in the account, the gain or loss is not realized until the option is liquidated, exercised or assigned. Accordingly, a customer may be required to deposit cash in the account in order to meet a variation payment on a security futures contract even though the customer is in a hedged position and has experienced a corresponding (but yet unrealized) gain on an option. Alternatively, a customer who is in a hedged position and would otherwise be entitled to receive a variation payment on a security futures contract may find that the cash is required to be held in the account as margin collateral on an offsetting option position.

The general provisions governing portfolio margining (including definitions used in this document) are set forth in NYSE Rule 431(g) and FINRA Rule 4210(g), which can be found at http://nyserules.nyse.com/NYSE/Rules and www.finra.org.

ACKNOWLEDGEMENT FOR CUSTOMERS UTILIZING A PORTFOLIO MARGINACCOUNT

BY SIGNING BELOW, I/WE AFFIRM THAT I/WE HAVE READ AND UNDERSTOOD THE PORTFOLIOMARGINING RISK DISCLOSURE STATEMENT.

CUSTOMER NAME:

BY: DATE

Appendix A to CFTC Rule 1.55(c) - Generic Risk Disclosure Statement

Risk Disclosure Statement for Futures and Options

This brief statement does not disclose all of the risks and other significant aspects of trading in futures and options. In light of the risks, you should undertake such transactions only if you understand the nature of the contracts (and contractual relationships) into which you are entering and the extent of your exposure to risk. Trading in futures and options is not suitable for many members of the public. You should carefully consider whether trading is appropriate for you in light of your experience, objectives, financial resources and other relevant circumstances.

Futures

1. Effect of "Leverage" or "Gearing"

Transactions in futures carry a high degree of risk. The amount of initial margin is small relative to the value of the futures contract so that transactions are 'leveraged' or 'geared'. A relatively small market movement will have a proportionately larger impact on the funds you have deposited or will have to deposit: this may work against you as well as for you. You may sustain a total loss of initial margin funds and any additional funds deposited with the firm to maintain your position. If the market moves against your position or margin levels are increased, you may be called upon to pay substantial additional funds on short notice to maintain your position. If you fail to comply with a request for additional funds within the time prescribed, your position may be liquidated at a loss and you will be liable for any resulting deficit.

2. Risk-reducing orders or strategies

The placing of certain orders (e.g. 'stop-loss' orders, where permitted under local law, or 'stop-limit' orders) which are intended to limit losses to certain amounts may not be effective because market conditions may make it impossible to execute such orders. Strategies using combinations of positions, such as 'spread' and 'straddle' positions may be as risky as taking simple 'long' or 'short' positions.

Options

3. Variable degree of risk

Transactions in options carry a high degree of risk. Purchasers and sellers of options should familiarize themselves with the type of option (i.e. put or call) which they contemplate trading and the associated risks. You should calculate the extent to which the value of the options must increase for your position to become profitable, taking into account the premium and all transaction costs.

The purchaser of options may offset or exercise the options or allow the options to expire. The exercise of an option results either in a cash settlement or in the purchaser acquiring or delivering the underlying interest. If the option is on a future, the purchaser will acquire a futures position with associated liabilities for margin (see the section on Futures above). If the purchased options expire worthless, you will suffer a total loss of your investment which will consist of the option premium plus transaction costs. If you are contemplating purchasing deep-out-of-the-money options, you should be aware that the chance of such options becoming profitable ordinarily is remote.

Selling ('writing' or 'granting') an option generally entails considerably greater risk than purchasing options. Although the premium received by the seller is fixed, the seller may sustain a loss well in excess of that amount. The seller will be liable for additional margin to maintain the position if the market moves unfavorably. The seller will also be exposed to the risk of the purchaser exercising the option and the seller will be obligated to either settle the option in cash or to acquire or deliver the underlying interest. If the option is on a future, the seller will acquire a position in a future with associated liabilities for margin (see the section on Futures above). If the option is 'covered' by the seller holding a corresponding position in the underlying interest or a future or another option, the risk may be reduced. If the option is not covered, the risk of loss can be unlimited.

Certain exchanges in some jurisdictions permit deferred payment of the option premium, exposing the purchaser to liability for margin payments not exceeding the amount of the premium. The purchaser is still subject to the risk of losing the premium and transaction costs. When the option is exercised or expires, the purchaser is responsible for any unpaid premium outstanding at that time.

Additional risks common to futures and options

4. Terms and conditions of contracts

You should ask the firm with which you deal about the terms and conditions of the specific futures or options which you are trading and associated obligations (e.g. the circumstances under which you may become obligated to make or take delivery of the underlying interest of a futures contract and, in respect of options, expiration dates and restrictions on the time for exercise). Under certain circumstances the specifications of outstanding contracts (including the exercise price of an option) may be modified by the exchange or clearing house to reflect changes in the underlying interest.

5. Suspension or restriction of trading and pricing relationships

Market conditions (e.g. illiquidity) and/or the operation of the rules of certain markets (e.g. the suspension of trading in any contract or contract month because of price limits or "circuit breakers") may increase the risk of loss by making it difficult or impossible to effect transactions or liquidate/offset positions. If you have sold options, this may increase the risk of loss. Further, normal pricing relationships between the underlying interest and the future, and the underlying interest and the option may not exist. This can occur when, for example, the futures contract underlying the option is subject to price limits while the option is not. The absence of an underlying reference price may make it difficult to judge "fair" value.

6. Deposited cash and property

You should familiarize yourself with the protections accorded money or other property you deposit for domestic and foreign transactions, particularly in the event of a firm insolvency or bankruptcy. The extent to which you may recover your money or property may be governed by specific legislation or local rules. In some jurisdictions, property which had been specifically identifiable as your own will be pro-rated in the same manner as cash for purposes or distribution in the event of a shortfall.

7. Commission and other charges

Before you begin to trade, you should obtain a clear explanation of all commission, fees and other charges for which you will be liable. These charges will affect your net profit (if any) or increase your loss.

8. Transactions in other jurisdictions

Transactions on markets in other jurisdictions, including markets formally linked to a domestic market, may expose you to additional risk. Such markets may be subject to regulation which may offer different or diminished investor protection. Before you trade you should enquire about any rules relevant to your particular transactions. Your local regulatory authority will be unable to compel the enforcement of the rules of regulatory authorities or markets in other jurisdictions where your transactions have been effected. You should ask the firm with which you deal for details about the types of redress available in both your home jurisdiction and other relevant jurisdictions before you start to trade.

9. Currency risks

The profit or loss in transactions in foreign currency-denominated contracts (whether they are traded in your own or another jurisdiction) will be affected by fluctuations in currency rates where there is a need to convert from the currency denomination of the contract to another currency.

10. Trading facilities

Most open-outcry and electronic trading facilities are supported by computer-based component systems for the order-routing, execution, matching, registration or clearing of trades. As with all facilities and systems, they are vulnerable to temporary disruption or failure. Your ability to recover certain losses may be subject to limits on liability imposed by the system provider, the market, the clearing house and/or member firms. Such limits may vary: you should ask the firm with which you deal for details in this respect.

11. Electronic trading

Trading on an electronic trading system may differ not only from trading in an open-outcry market but also from trading on other electronic trading systems. If you undertake transactions on an electronic trading system, you will be exposed to risks associated with the system including the failure of hardware and software. The result of any system failure may be that your order is either not executed according to your instructions or is not executed at all.

12. Off-exchange transactions

In some jurisdictions, and only then in restricted circumstances, firms are permitted to effect off-exchange transactions. The firm with which you deal may be acting as your counterparty to the transaction. It may be difficult or impossible to liquidate an existing position, to assess the value, to determine a fair price or to assess the exposure to risk. For these reasons, these transactions may involve increased risks. Off-exchange transactions may be less regulated or subject to a separate regulatory regime. Before you undertake such transactions, you should familiarize yourself with applicable rules and attendant risks.

I hereby acknowledge that I have received and understood this risk disclosure statement.

CFTC RULE 15.05 NOTICE TO NON-U.S. TRADERS

In accordance with Rules 15.05 and 21.03 of the Commodity Futures Trading Commission ("CFTC"), 17 C.F.R. §§15.05 and 21.03, Interactive Brokers is required to notify you that we are considered to be your agent for purposes of accepting delivery and service of communications from or on behalf of the CFTC regarding any commodity futures contracts or commodity option contracts which are or have been maintained in your account(s) with us.

In the event that you are acting as agent or broker for any other person(s), we are also considered to be their agent, and the agent of any person(s) for whom they may be acting as agent or broker, for purposes of accepting delivery and service of such communications. Service or delivery to us of any communication issued by or on behalf of the CFTC (including any summons, complaint, order, subpoena, special call, request for information, notice, correspondence or other written document) will be considered valid and effective service or delivery upon you or any person for whom you may be acting, directly or indirectly, as agent or broker.

You should be aware that Rule 15.05 also provides that you may designate an agent other than Interactive Brokers. Any such alternative designation of agency must be evidenced by a written agency agreement which you must furnish to us and which we, in turn, must forward to the CFTC. If you wish to designate an agent other than us, please contact us in writing. You should consult 17 C.FR. § 15.05 for a more complete explanation of the foregoing.

Upon a determination by the CFTC that information concerning your account(s) with us may be relevant in enabling the CFTC to determine whether the threat of a market manipulation, corner, squeeze, or other market disorder exists, the CFTC may issue a call for specific information from us or from you. In the event that the CFTC directs a call for information to us, we must provide the information requested within the time specified by the CFTC. If the CFTC directs a call for information to you through us as your agent, we must promptly transmit the call to you, and you must provide the information requested within the time specified by the CFTC. If any call by the CFTC for information regarding your account(s) with us is not met, the CFTC has authority to restrict such account(s) to trading for liquidation only. You have the right to a hearing before the CFTC to contest any call for information concerning your account(s) with us, but your request for a hearing will not suspend the CFTC's call for information unless the CFTC modifies or withdraws the call. Please consult 17 C.F.R. §21.03 for a more complete description of the foregoing (including the type of information you may be required to provide).

Certain additional regulations may affect you. Part 17 of the CFTC Regulations, 17 C.F.R. Part 17, requires each futures commission merchant and foreign broker to submit a report to the CFTC with respect to each account carried by such futures commission merchant or foreign broker which contains a reportable futures position. (Specific reportable position levels for all futures contracts traded on U.S. exchanges are established in Rule 15.03.) In addition, Part 18 of the CFTC Regulations, 17 C.F.R. Part 18, requires all traders (including foreign traders) who own or control a reportable futures or options position and who have received a special call from the CFTC to file certain reports with the CFTC, including, but not limited to, a Statement of Reporting Trader (Form 40). Please consult 17 C.F.R. Parts 17 and 18 for more complete information with respect to the foregoing.

DISCLOSURE REGARDING INTERACTIVE BROKERS' PROCEDURES FOR ALLOCATING EQUITY OPTION ASSIGNMENT NOTICES FROM OCC

As described in the Options Clearing Corporation ("OCC") Publication "Characteristics and Risks of Standardized Options", the OCC assigns exercise notices to clearing firms such as Interactive Brokers LLC ("IB LLC"), [the US-located affiliate of Interactive Brokers (U.K.) Limited ("IB UK") and Interactive Brokers Canada, Inc. ("IBC") that arranges for the execution and clearing of IB UK and IBC customer trades] using a specified assignment procedure. IB LLC, in turn, is required to maintain a procedure to allocate such exercise notices to those customer accounts carried by IB LLC that hold short positions in the relevant options. Upon assignment, customers whose accounts are carried by IB LLC shall be required: (1) in the case of an equity option, to deliver or accept the required number of shares of the underlying security, or (2) in the case of an equity index option, to pay or receive the settlement price, in cash. Customer understands that it may not receive notice of an assignment until one or more days following the date of the initial assignment by OCC to IB LLC and that the lack of such notice creates a special risk for uncovered writers of physical delivery call stock options.

Described below are IB LLC's procedures for allocation of exercise notices, which are based on a random selection process:

<u>Steps</u>

1. Each night, IB LLC receives from the OCC the "OCC E&A" (exercise and assignment activity) file in machine-readable format setting forth, on a per contract basis, the aggregate exercise and assignment quantities to IB LLC.

2. For each contract assignment record, the IB LLC System compiles a list, in ascending account number order, of all customer accounts held at IB LLC with short positions in the relevant contract.

3. If only one customer holds a short position in the contract assigned, that customer is automatically allocated the assignment and no lottery is needed.

4. If more than one customer holds a short position in the contract assigned, the IB LLC System runs an automated random lottery to determine the allocation of quantities that are to be assigned to each customer. The IB LLC System shall:

    a. Assign two sequence ranges to each customer's holdings (see Exhibit A).

    b. Generate a random number to find a "Starting Point". The Starting Point is the customer contract sequence number from which the allocation of the assignment quantity begins. To generate a Random Number, the IB System will:

        - Initialize the Oracle random number generator with the system time (HH24MISS)

        - Find the Random Number by taking the MOD (random number, total position) + 1 to ensure that the Random Number is between one and the total number of short contracts.

   (Note: the IB System will generate a new Random Number for each lottery to be run.)

5. The IB LLC System will then (a) find the account that has the assigned sequence range into which the Random Number falls; and (b) select contracts to be assigned in increments of one, beginning with the contract that correlates with the Random Number until the total number of contracts assigned has been satisfied.

6. The IB LLC System will then process the assigned positions by (a) removing the options positions from customers' accounts and (b) if the option delivers underlying stock, entering the corresponding stock trades at the strike price or (c) if the option assignment settles in cash, entering the corresponding cash debit.

EXHIBIT "A"

Assume there are 1186 options contracts held at OCC for 10 customers and that 50 contracts are assigned to IB LLC by OCC.

1. Assign sequence numbers to each security:

Customer Accounts	No. of Contracts held at OCC	Assigned Sequence Numbers 1st Range	2nd Range
A	1	0001	1187
B	50	0002-0051	1188-1237
C	100	0052-0151	1238-1337
D	2	0152-0153	1338-1339
E	1	0154	1340
F	1	0155	1341
G	1000	0156-1155	1342-2341
H	1	1156	2342
I	10	1157-1166	2343-2352
J	20	1167-1186	2353-2372
Total in OCC	1186		

2. FIND A STARTING RANDOM NUMBER BETWEEN 0001 AND 1186 using the Oracle random number generator.

3. ASSUMING THE RANDOM NUMBER GENERATED WAS 0396, ALLOCATE THE 50 CONTRACTS TO CUSTOMERS STARTING AT CONTRACT NUMBER 0396.

SUMMARY OF ALLOCATION

Customer Accounts	No of Contracts Held at OCC	Allocation of Assigned Options Contracts
A	1	0
B	50	0
C	100	0
D	2	0
E	1	0
F	1	0
G	1000	50
H	1	0
I	10	0
J	20	0
Total at OCC	1186	50

Day Trading Risk Disclosure Statement

This Day Trading Risk Disclosure Statement is being provided to you in the event your Interactive Brokers (IB) margin account becomes, or already is, classified as a Pattern Day Trader account. As required by current SEC and SRO rules and regulations, IB will classify an account that effects three (3) day trades within a five (5) day period as a Pattern Day Trader account. (A day trade is a buy and sell of the same security on the same day). The regulations prohibit IB from permitting a Pattern Day Trader account from effecting any transactions unless such account maintains a Minimum Equity Requirement of at least $25,000.

You should consider the following points before engaging in a day-trading strategy. For purposes of this notice, a "day-trading strategy" means an overall trading strategy characterized by the regular transmission by a customer of intra-day orders to effect both purchase and sale transactions in the same security or securities.

Day trading can be extremely risky. Day trading generally is not appropriate for someone of limited resources and limited investment or trading experience and low risk tolerance. You should be prepared to lose all of the funds that you use for day trading. In particular, you should not fund day-trading activities with retirement savings, student loans, second mortgages, emergency funds, funds set aside for purposes such as education or home ownership, or funds required to meet your living expenses. Further, certain evidence indicates that an investment of less than $50,000 will significantly impair the ability of a day trader to make a profit. Of course, an investment of $50,000 or more will in no way guarantee success.

Be cautious of claims of large profits from day trading. You should be wary of advertisements or other statements that emphasize the potential for large profits in day trading. Day trading can also lead to large and immediate financial losses.

Day trading requires knowledge of securities markets. Day trading requires in-depth knowledge of the securities markets and trading techniques and strategies. In attempting to profit through day trading, you must compete with professional, licensed traders employed by securities firms. You should have appropriate experience before engaging in day trading.

Day trading requires knowledge of a firm's operations. You should be familiar with a securities firm's business practices, including the operation of the firm's order execution systems and procedures. Under certain market conditions, you may find it difficult or impossible to liquidate a position quickly at a reasonable price. This can occur, for example, when the market for a stock suddenly drops, or if trading is halted due to recent news events or unusual trading activity. The more volatile a stock is, the greater the likelihood that problems may be encountered in executing a transaction. In addition to normal market risks, you may experience losses due to systems failures.

Day trading will generate substantial commissions, even if the per trade cost is low. Day trading involves aggressive trading, and generally you will pay commission on each trade. The total daily commissions that you pay on your trades will add to your losses or significantly reduce your earnings. For instance, assuming that a trade costs $16 and an average of 29 transactions are conducted per day, an investor would need to generate an annual profit of $111,360 just to cover commission expenses.

Day trading on margin or short selling may result in losses beyond your initial investment. When you day trade with funds borrowed from a firm or someone else, you can lose more than the funds you originally placed at risk. A decline in the value of the securities that are purchased may require you to provide additional funds to the firm to avoid the forced sale of those securities or other securities in your account. Short selling as part of your day-trading strategy also may lead to extraordinary losses, because you may have to purchase a stock at a very high price in order to cover a short position.

Potential Registration Requirements. Persons providing investment advice for others or managing securities accounts for others may need to register as either an "Investment Advisor" under the Investment Advisors Act of 1940 or as a "Broker" or "Dealer" under the Securities Exchange Act of 1934. Such activities may also trigger state registration requirements.

Risks of After-Hours Trading

There are special characteristics and unique risks associated with trading in securities at times that are outside the ordinary trading hours for the exchange(s) upon which such securities are traded ("After-Hours Trading" or “Extended Hours Trading”). Customers must familiarize themselves with these risks and determine whether After-Hours Trading is appropriate in light of their objectives and experience. Customers are responsible for familiarizing themselves with the hours of the relevant markets upon which they trade and for determining when to place orders for particular securities, how they wish to direct those orders, and what types of orders to use. Interactive Brokers' offer of After-Hours Trading does not constitute a recommendation or conclusion that After-Hours Trading will be successful or appropriate for all customers or trades.

Some risks associated with After-Hours Trading are as follows:

1. **Risk of Lower Liquidity.** Liquidity refers to the ability of market participants to buy and sell securities. Generally, the more orders that are available in a market, the greater the liquidity. Liquidity is important because with greater liquidity it is easier for investors to buy or sell securities, and as a result, investors are more likely to pay or receive a competitive price for securities purchased or sold. There may be lower liquidity in extended hours trading as compared to regular market hours. As a result, your order may only be partially executed, or not at all.

2. **Risk of Higher Volatility.** Volatility refers to the changes in price that securities undergo when trading. Generally, the higher the volatility of a security, the greater its price swings. There may be greater volatility in extended hours trading than in regular market hours. As a result, your order may only be partially executed, or not at all, or you may receive an inferior price in extended hours trading than you would during regular markets hours.

3. **Risk of Changing Prices.** The prices of securities traded in extended hours trading may not reflect the prices either at the end of regular market hours, or upon the opening of the next morning. As a result, you may receive an inferior price in extended hours trading than you would during regular market hours.

4. **Risk of Unlinked Markets.** Depending on the extended hours trading system or the time of day, the prices displayed on a particular extended hours system may not reflect the prices in other concurrently operating extended hours trading systems dealing in the same securities. Accordingly, you may receive an inferior price in one extended hours trading system than you would in another extended hours trading system.

5. **Risk of News Announcements.** Normally, issuers make news announcements that may affect the price of their securities after regular market hours. Similarly, important financial information is frequently announced outside of regular market hours. In extended hours trading, these announcements may occur during trading, and if combined with lower liquidity and higher volatility, may cause an exaggerated and unsustainable effect on the price of a security.

6. **Risk of Wider Spreads.** The spread refers to the difference in price between what you can buy a security for and what you can sell it for. Lower liquidity and higher volatility in extended hours trading may result in wider than normal spreads for a particular security.

7. **Risk of Lack of Calculation or Dissemination of Underlying Index Value or Intraday Indicative Value ("IIV").** For certain Derivative Securities Products, an updated underlying index value or IIV may not be calculated or publicly disseminated in extended trading hours. Since the underlying index value and IIV are not calculated or widely disseminated during the pre-market and post-market sessions, an investor who is unable to calculate implied values for certain Derivative Securities Products in those sessions may be at a disadvantage to market professionals. Additionally, securities underlying the indexes or portfolios will not be regularly trading as they are during Regular Trading Hours, or may not be trading at all. This may cause prices during Extended Trading Hours to not reflect the prices of those securities when they open for trading.

8. **Index Values.** The Exchange will not report a value of an index underlying an index option trading during Extended Trading Hours, because the value of the underlying index will not be recalculated during or at the close of Extended Trading Hours.

During After-Hours Trading, Interactive Brokers ("IB") may provide quotations from and execute Customer trades through various Electronic Communications Networks ("ECNs"), exchanges or other trading systems ("After-Hours Trading Facilities"). Quotations provided during After-Hours Trading may be different than quotations provided during exchange trading hours. Likewise, it is possible that the quotations displayed by IB from After-Hours Trading Facilities on which IB can execute Customer trades may be less favorable than those on other After-Hours Trading Facilities to which IB does not have access. Last sale information provided by IB may not reflect the prices of the most recent trades on all of the various After-Hours Trading Facilities.

For a list of trading hours for exchanges and ECNs, click here.

Disclosure Concerning Auto Trading Service Providers

The U.S. Securities & Exchange Commission (the "SEC") has provided investors with the following information concerning Auto-Trading on the SEC's website at http://www.sec.gov/investor/pubs/autotrading.htm:

All About Auto-Trading

If you subscribe, or are thinking about subscribing to, an investment newsletter service that offers "auto-trading," please read this investor alert. Investment newsletters market "auto-trading" programs as a way to receive quick execution of trades recommended by the investment newsletter. In an "auto-trading" program, you establish an account at a brokerage firm that has agreed to accept trading instructions from the investment newsletter. In order to allow "auto-trading" in your account, you must sign an agreement with the broker authorizing it to accept trading instructions directly from the investment newsletter and to execute trades in your account without first getting your permission. The broker will make trades in your account *without consulting you* about the price, the type of security, the amount and when to buy or sell.

"Auto-trading," like any other arrangement that allows someone else to trade in your account without first asking your permission, can be highly risky. Here are some steps you'll want to take to check out an auto-trading program, before you hand over any money:

Check Out the Newsletter — Find out whether the firm that's selling the investment newsletter is registered to do business as an investment adviser. You can do this by \u0000\u0000siting the SEC website and clicking on the words " Check Out Your Broker or Adviser." Generally, the SEC considers firms that publish investment newsletters and that also engage in "auto-trading" to be investment advisers. If you cannot find proof that the firm is registered as an investment adviser, please let us know by using our online Center for Complaints and Enforcement Tips.

Independently Confirm Performance — Be wary of claims of superior performance, especially ones that rely upon "cherry picking" successful recommendations and ignoring those that generated losses. You'll want to see a complete track record of how the firm's recommendations fared over several months to evaluate whether it is living up to its promises. If the firm isn't willing to provide this information, think twice about entrusting your accounts and your money to them.

Steer Clear of Testimonials — Watch out if the investment newsletter's promotional materials, such as its website, contain "testimonials" from supposedly satisfied clients, especially if all the "testimonials" are full of praise. The SEC forbids registered investment advisers from advertising their services using testimonials.

Follow the Money — Find out whether the firm offering the investment newsletter is being paid by others to recommend particular stocks. This is particularly important because you are giving the firm the ability to make trades in your brokerage account without asking your permission. You'll want to evaluate any conflicts of interest they might have in making recommendations.

Fully Vet the Broker — Before you establish a brokerage account with the firm the newsletter recommends, be sure to thoroughly check out the disciplinary history of both the brokerage firm and any sales representative assigned to your account. You can do this by using FINRA's free BrokerCheck service and by calling your state securities regulator.

* * *

Be very wary if any firm claims to always make profits investing in the stock market, or if the firm claims to make extraordinarily high profits for customers. If it sounds too good to be true, it usually is! For more information on how to invest wisely and avoid costly mistakes, please visit the Investor Information section of our website.

Master Securities Lending Agreement for Interactive Brokers LLC Fully-Paid LendingProgram

This Master Securities Lending Agreement ("Agreement") is entered into by and between Interactive Brokers LLC ("IB") and the undersigned party or parties ("Counterparty").

1. **Applicability.**

From time to time the parties hereto may enter into transactions in which one party ("Lender") will lend to the other party ("Borrower") certain Securities (as defined herein) against a transfer of Collateral (as defined herein). Each such transaction shall be referred to herein as a "Loan" and, unless otherwise agreed in writing, shall be governed by this Agreement, including any supplemental terms or conditions contained in an Annex or Schedule hereto and in any other annexes identified herein or therein as applicable hereunder); provided however that Securities borrowed by Counterparty from IB, and Securities borrowed by IB from Counterparty, pursuant to a margin account agreement between IB and Counterparty shall not be subject to this Agreement. Capitalized terms not otherwise defined herein shall have the meanings provided in Section 25.

2. **Loans of Securities.**

   1. Subject to the terms and conditions of this Agreement, Borrower or Lender may, from time to time, seek to initiate a transaction in which Lender will lend Securities to Borrower. Borrower and Lender shall agree on the terms of each Loan (which terms may be amended during the Loan), including the issuer of the Securities, the amount of Securities to be lent, the basis of compensation, the amount of Collateral to be transferred by Borrower, and any additional terms. Such agreement shall be confirmed (a) by a schedule and receipt listing the Loaned Securities provided by Borrower to Lender in accordance with Section 3.2, (b) through any system that compares Loans and in which Borrower and Lender are participants, or (c) in such other manner as may be agreed by Borrower and Lender in writing. Such confirmation (the "Confirmation"), together with the Agreement, shall constitute conclusive evidence of the terms agreed between Borrower and Lender with respect to the Loan to which the Confirmation relates, unless with respect to the Confirmation specific objection is made promptly after receipt thereof. In the event of any inconsistency between the terms of such Confirmation and this Agreement, this Agreement shall prevail unless each party has executed such Confirmation.

   2. Notwithstanding any other provision in this Agreement regarding when a Loan commences, unless otherwise agreed, a Loan hereunder shall not occur until the Loaned Securities and the Collateral therefore have been transferred in accordance with Section 15.

3. **Transfer of Loaned Securities.**

   1. Unless otherwise agreed, Lender shall transfer Loaned Securities to Borrower hereunder on or before the Cutoff Time on the date agreed to by Borrower and Lender for the commencement of the Loan.

   2. Unless otherwise agreed, Borrower shall provide Lender, for each Loan in which Lender is a Customer, with a schedule and receipt listing the Loaned Securities. Such schedule and receipt may consist of (a) a schedule provided to Borrower by Lender and executed and returned by Borrower when the Loaned Securities are received, (b) in the case of Securities transferred through a Clearing Organization which provides transferors with a notice evidencing such transfer, such notice, or (c) a confirmation or other document provided to Lender by Borrower.

3. Notwithstanding any other provision in this Agreement, the parties hereto agree that they intend the Loans hereunder to be loans of Securities. If, however, any Loan is deemed to be a loan of money by Borrower to Lender, then Borrower shall have, and Lender shall be deemed to have granted, a security interest in the Loaned Securities and the proceeds thereof.

4. **Collateral.**

1. Unless otherwise agreed, Borrower shall, prior to or concurrently with the transfer of the Loaned Securities to Borrower, but in no case later than the Close of Business on the day of such transfer, transfer to Lender Collateral with a Market Value at least equal to the Margin Percentage of the Market Value of the Loaned Securities.

2. Borrower shall be deemed to have transferred Collateral to Lender by crediting Lender's account carried by Borrower with Collateral with a Market Value at least equal to the Margin Percentage of the Market Value of the Loaned Securities. The Collateral transferred by Borrower to Lender, as adjusted pursuant to Section 9, shall be security for Borrower's obligations in respect of such Loan and for any otherobligations of Borrower to Lender hereunder. Borrower hereby pledges with, assigns to, and grants Lender a continuing first priority security interest in, and a lien upon, the Collateral, which shall attach upon the transfer of the Loaned Securities by Lender to Borrower and which shall cease upon the transfer of the Loaned Securities by Borrower to Lender. Lender will be deemed to have transferred Loaned Securities to Borrower on the date Borrower treats such securities as having been borrowed pursuant to Exchange Act rule 15c3-3(b)(3) and therefore not subject to the general possession or control requirements of Exchange Act rule 15c3-3(b). Borrower will be deemed to have transferred Loaned Securities to Lender on the date Borrower treats such securities as customer securities subject to the general possession or control requirements of Exchange Act Rule 15c3-3(b), without giving effect to Exchange Act rule 15c3-3(b)(3), without regard to whethersuch securities are thereby returned to Lender or continue to be borrowed by Borrower pursuant to any hypothecation agreement between Lender and Borrower.

3. Except as otherwise provided herein, upon transfer to Lender of the Loaned Securities on the day a Loan is terminated pursuant to Section 6, Lender shall be obligated to transfer, and hereby authorizes Borrower to effect the transfer of, the Collateral (as adjusted pursuant to Section9) to Borrower on such day or, if such day is not a day on which a transfer of such Collateral may be effected under Section 15, the next day on which such a transfer may be effected.

4. If Borrower transfers Collateral to Lender, as provided in Section 4.1, and Lender does not transfer the Loaned Securities to Borrower, Borrower shall have the absolute right to the return of the Collateral; and if Lender transfers Loaned Securities to Borrower and Borrower does not transfer Collateral to Lender as provided in Section 4.1, Lender shall have the absolute right to the return of the Loaned Securities.

5. Borrower may, upon reasonable notice to Lender (taking into account all relevant factors, including industry practice, the type of Collateral to be substituted, and the applicable method of transfer), substitute Collateral for Collateral securing any Loan or Loans; provided, however, that such substituted Collateral shall (a) consist only of cash, securities or other property that Borrower and Lender agreed would be acceptable Collateral prior to the Loan or Loans and (b) have a Market Value such that the aggregate Market Value of such substituted Collateral, together with all other Collateral for Loans in which the party substituting such Collateral is acting as Borrower, shall equal or exceed the agreed upon Margin Percentage of the Market Value of the Loaned Securities.

6. In the event Borrower and Lender agree to a Loan of Securities collateralized by a Letter of Credit, in order to enable the Issuing Bank to identify Lender and issue the Letter of Credit in favor of Lender, Lender hereby agrees that Borrower may provide information in its possession concerning Lender's identity to the Issuing Bank. Prior to the expiration of any letter of credit supporting Borrower's obligations hereunder, Borrower shall, no later than the Extension Deadline, (a) obtain an extension of the expiration of such letter of credit, (b) replace such letter of credit by providing Lender with a substitute letter of credit in an amount at least equal to the amount of the letter of credit for which it is substituted, or (c) transfer such other Collateral to Lender as may be acceptable to Lender.

5. **Income for Loan.**

1. Unless otherwise agreed, Borrower agrees to pay Lender interest on the cash Collateral securing each Loan ("Interest "), computed daily as further described in the Borrower's Important Characteristics and Risks of Participating in Borrower's Fully-Paid Securities Lending Program as it may be amended from time to time by Borrower. Interest on non-cash Collateral will be paid as agreed upon by the parties.

2. Unless otherwise agreed, Interest payable hereunder shall be payable within fifteen (15) Business Days following the last Business Day of the calendar month in which such Interest was incurred.

6. **Termination of the Loan.**

   1.

      1. (a) Unless otherwise agreed, either party may terminate a Loan on a termination date established by notice given to the other party prior to the Close of Business on a Business Day. Unless an earlier date is agreed by the Parties, the termination date established by a termination notice shall be a date no earlier than the standard settlement date that would apply to a purchase or sale of the Loaned Securities (in the case of a notice given by Lender) or the non-cash Collateral securing the Loan (in the case of a notice given byBorrower) entered into at the time of such notice, which date shall, unless Borrower and Lender agree to the contrary, be (a) in the case of Government Securities, the next Business Day following such notice and (b) in the case of all other Securities, the third Business Day following such notice.

      2. (b) Notwithstanding paragraph (a) and unless otherwise agreed, Borrower may terminate a Loan on any Business Day, effective as of such Business Day, by transferring the Loaned Securities to Lender on such Business Day. Borrower will be deemed to have transferred Loaned Securities by the end of a Business Day if it treats such securities as customer securities subject to the general possession or control requirements of Exchange Act Rule 15c3-3(b), without giving effect to Exchange Act rule 15c3-3(b)(3), without regard to whether such securities are thereby returned to Lender or may continue to be borrowed by Borrower pursuant to any hypothecation agreement between Lender and Borrower.

      3. (c) The execution by Borrower of an order to sell the Loaned Securities by Lender shall constitute notice of termination by Lender to Borrower. The termination date established by such a sale of the Loaned Securities shall be the settlement date of such sale of the Loaned Securities or any earlier date on which Borrower is deemed to have transferred Loaned Securities to Lender under paragraph (b) of this Section.

   2. Unless otherwise agreed, Borrower shall, on or before the Cutoff Time on the termination date of a Loan, transfer the Loaned Securities to Lender; provided, however, that upon such transfer by Borrower, Lender shall transfer the Collateral (as adjusted pursuant to Section 9) to Borrower in accordance with Section 4.3.

7. **Rights in Respect of Loaned Securities and Collateral.**

   1. Except as set forth in Sections 8.1 and 8.2 and as otherwise agreed by Borrower and Lender, until Loaned Securities are required to be redelivered to Lender upon termination of a Loan hereunder, Borrower shall have all of the incidents of ownership of the Loaned Securities, including the right to transfer the Loaned Securities to others. Lender hereby waives the right to vote, or to provide any consent or to take any similar action with respect to, the Loaned Securities in the event that the record date or deadline for such vote, consent or other action falls during the term of the Loan.

8. **Distributions.**

   1. Lender shall be entitled to receive all Distributions made on or in respect of the Loaned Securities which are not otherwise received byLender, to the full extent it would be so entitled if the Loaned Securities had not been lent to Borrower.

   2. Any cash Distributions made on or in respect of the Loaned Securities, which Lender is entitled to receive pursuant to Section 8.1, shall be paid by the transfer of cash to Lender by Borrower, on the date any such Distribution is paid, in an amount equal to such cash Distribution, so long as Lender is not in Default at the time of such payment. Non-cash Distributions that Lender is entitled to receive pursuant to Section8.1 shall be added to the Loaned Securities on the date of distribution and shall be considered such for all purposes, except that if the Loan has terminated, Borrower shall forthwith transfer the same to Lender.

   3. Borrower shall be entitled to receive all Distributions made on or in respect of non-cash Collateral which are not otherwise received by Borrower, to the full extent it would be so entitled if the Collateral had not been transferred to Lender.

   4. Any cash Distributions made on or in respect of such Collateral, which Borrower is entitled to receive pursuant to Section 8.3, shall be paid by the transfer of cash to Borrower by Lender, on the date any such Distribution is paid, in an amount equal to such cash Distribution, so long as Borrower is not in Default at the time of such payment. Non-cash Distributions that Borrower is entitled to receive pursuant to Section 8.3 shall be added to the Collateral on the date of distribution and shall be considered such for all purposes, except that if each Loan secured by such Collateral has terminated, Lender shall forthwith transfer the same to Borrower.

   5. Unless otherwise agreed by the parties:

      a. If (i) Borrower is required to make a payment (a "Borrower Payment") with respect to cash Distributions on Loaned Securities underSections 8.1 and 8.2 ("Securities Distributions"), or (ii) Lender is required to make a payment (a "Lender Payment") with respect tocash Distributions on Collateral under Sections 8.3 and 8.4 ("Collateral Distributions"), and (iii) Borrower or Lender, as the case may be ("Payor"), shall be required by law to collect any withholding or other tax, duty, fee, levy or charge required to be deducted or withheld from such Borrower Payment or Lender Payment ("Tax"), then Payor shall (subject to subsections (b) and (c) below), pay suchadditional amounts as may be necessary in order that the net amount of the Borrower Payment or Lender Payment received by the Lender or Borrower, as the case may be ("Payee"), after payment of such Tax equals the net amount of the Securities Distribution or Collateral Distribution that would have been received if such Securities Distribution or Collateral Distribution had been paid directly to the Payee.

b. No additional amounts shall be payable to a Payee under subsection (a) above to the extent that Tax would have been imposed on aSecurities Distribution or Collateral Distribution paid directly to the Payee.

c. No additional amounts shall be payable to a Payee under subsection (a) above to the extent that such Payee is entitled to an exemption from, or reduction in the rate of, Tax on a Borrower Payment or Lender Payment subject to the provision of a certificate or other documentation, but has failed timely to provide such certificate or other documentation.

d. Each party hereto shall be deemed to represent that, as of the commencement of any Loan hereunder, no Tax would be imposed on any cash Distribution paid to it with respect to (i) Loaned Securities subject to a Loan in which it is acting as Lender or (ii) Collateral for any Loan in which it is acting as Borrower, unless such party has given notice to the contrary to the other party hereto (which notice shall specify the rate at which such Tax would be imposed). Each party agrees to notify the other of any change that occurs during the term of a Loan in the rate of any Tax that would be imposed on any such cash Distributions payable to it.

6. To the extent that, under the provisions of Sections 8.1 through 8.5, (a) a transfer of cash or other property by Borrower would give rise to a Margin Excess or (b) a transfer of cash or other property by Lender would give rise to a Margin Deficit, Borrower or Lender (as the case may be) shall not be obligated to make such transfer of cash or other property in accordance with such Sections, but shall in lieu of such transfer immediately credit the amounts that would have been transferable under such Sections to the account of Lender or Borrower (as the case may be)..

9. Mark to Market.

1. If Lender is a Customer, Borrower shall daily mark to market any Loan hereunder and in the event that at the Close of Trading on any Business Day the Market Value of the Collateral for any Loan to Borrower shall be less than 100% of the Market Value of all the outstanding Loaned Securities subject to such Loan, Borrower shall transfer additional Collateral no later than the Close of Business on the next Business Day so that the Market Value of such additional Collateral, when added to the Market Value of the other Collateral for such Loan, shallequal at least 100% of the Market Value of the Loaned Securities. As agreed by the parties or if Borrower determines in its discretion that applicable laws or market custom so require, Borrower may deposit additional collateral greater than 100% of the market value of the Loaned Securities.

2. In addition to any rights of Lender under Section 9.1, if at any time the aggregate Market Value of all Collateral for Loans by Lender shall be less than the Margin Percentage of the Market Value of all the outstanding Loaned Securities subject to such Loans (a "Margin Deficit"), Borrower shall transfer additional Collateral no later than the Close of Business on the next Business Day so that the Market Value of such additional Collateral, when added to the Market Value of the other Collateral for such Loan, shall equal or exceed the Margin Percentage of the Market Value of the Loaned Securities.

3. Subject to Borrower's obligations under Section 9.1, if at any time the Market Value of all Collateral for Loans to Borrower shall be greater than the Margin Percentage of the Market Value of all the outstanding Loaned Securities subject to such Loans (a "Margin Excess"), Lender hereby authorizes Borrower to transfer to Borrower such amount of the Collateral selected by Borrower so that the Market Value of the Collateral for such Loans, after deduction of such amounts, shall thereupon not exceed the Margin Percentage of the Market Value of the Loaned Securities.

4. Borrower and Lender may agree, with respect to one or more Loans hereunder, to mark the values to market pursuant to Sections 9.2 and 9.3 by separately valuing the Loaned Securities lent and the Collateral given in respect thereof on a Loan-by-Loan basis.

5. Borrower and Lender may agree, with respect to any or all Loans hereunder, that the respective rights of Lender and Borrower under Sections 9.2 and 9.3 may be exercised only where a Margin Excess or Margin Deficit exceeds a specified dollar amount or a specified percentage of the Market Value of the Loaned Securities under such Loans (which amount or percentage shall be agreed to by Borrower and Lender prior to entering into any such Loans).

10. Representations.

The parties to this Agreement hereby make the following representations and warranties, which shall continue during the term of any Loan hereunder:

1. Each party hereto represents and warrants that (a) it has the power to execute and deliver this Agreement, to enter into the Loans contemplated hereby and to perform its obligations hereunder, (b) it has taken all necessary action to authorize such execution, delivery and performance, and (c) this Agreement constitutes a legal, valid and binding obligation enforceable against it in accordance with its terms.

2. Each party hereto represents and warrants that it has not relied on the other for any tax or accounting advice concerning this Agreement and that it has made its own determination as to the tax and accounting treatment of any Loan and any dividends, remuneration or other funds received hereunder.

3. Each party hereto represents and warrants that it is acting for its own account unless it expressly specifies otherwise in writing and complies with Section 11.1(b).

4. To the extent applicable, Borrower represents and warrants that it has, or will have at the time of transfer of any Collateral, the right to grant a first priority security interest therein subject to the terms and conditions hereof.

5.

    a. Borrower represents and warrants that it (or the person to whom it relends the Loaned Securities) is borrowing or will borrow Loaned Securities that are Equity Securities for the purpose of making delivery of such Loaned Securities in the case of short sales, failure to receive securities required to be delivered, or as otherwise permitted pursuant to Regulation T as in effect from time to time.

    b. Borrower and Lender may agree, as provided in Section 24.2, that Borrower shall not be deemed to have made the representation or warranty in subsection (a) with respect to any Loan. By entering into any such agreement, Lender shall be deemed to have represented and warranted to Borrower (which representation and warranty shall be deemed to be repeated on each day during the term of the Loan) that Lender is either (i) an "exempted borrower" within the meaning of Regulation T or (ii) a member of a national securities exchange or a broker or dealer registered with the U.S. Securities and Exchange Commission that is entering into such Loan to finance its activities as a market maker or an underwriter.

6. Lender represents and warrants that it has, or will have at the time of transfer of any Loaned Securities, the right to transfer the Loaned Securities subject to the terms and conditions hereof.

11. Covenants.

1. Each party agrees either (a) to be liable as principal with respect to its obligations hereunder or (b) to execute and comply fully with the provisions of Annex I (the terms and conditions of which Annex are incorporated herein and made a part hereof).

12. Events of Default.

All Loans hereunder may, at the option of the non-defaulting party (which option shall be deemed to have been exercised immediately upon the occurrence of an Act of Insolvency), be terminated immediately upon the occurrence of any one or more of the following events (individually, a "Default"):

1. if any Loaned Securities shall not be transferred to Lender upon termination of the Loan as required by Section 6;
2. if any Collateral shall not be transferred to Borrower upon termination of the Loan as required by Sections 4.3 and 6;
3. if either party shall fail to transfer Collateral as required by Section 9;
4. if either party (a) shall fail to transfer to the other party amounts in respect of Distributions required to be transferred by Section 8, (b) shall have been notified of such failure by the other party prior to the Close of Business on any day, and (c) shall not have cured such failure by the Cutoff Time on the next day after such Close of Business on which a transfer of cash may be effected in accordance with Section 15;
5. if an Act of Insolvency occurs with respect to either party;
6. if any representation made by either party in respect of this Agreement or any Loan or Loans hereunder shall be incorrect or untrue in any material respect during the term of any Loan hereunder;
7. if either party notifies the other of its inability to or its intention not to perform its obligations hereunder or otherwise disaffirms, rejects or repudiates any of its obligations hereunder; or
8. if either party (a) shall fail to perform any material obligation under this Agreement not specifically set forth in clauses 12.1 through 12.7, above, including but not limited to the payment of Interest as required by Section 5, and the payment of transfer taxes as required by Section 14, (b) shall have been notified of such failure by the other party prior to the Close of Business on any day, and (c) shall not have cured such failure by the Cutoff Time on the next day after such Close of Business on which a transfer of cash may be effected in accordance with Section 15.

The non-defaulting party shall (except upon the occurrence of an Act of Insolvency) give notice as promptly as practicable to the defaulting party of the exercise of its option to terminate all Loans hereunder pursuant to this Section 12.

13. **Remedies.**

1. Upon the occurrence of a Default under Section 12 entitling Lender to terminate all Loans hereunder, Lender shall have the right, in addition to any other remedies provided herein, (a) to purchase a like amount of Loaned Securities ("Replacement Securities") in the principal market for such Loaned Securities in a commercially reasonable manner, (b) to sell any Collateral in the principal market for such Collateral in a commercially reasonable manner and (c) to apply and set off the Collateral and any proceeds thereof (including any amounts drawn under a letter of credit supporting any Loan) against the payment of the purchase price for such Replacement Securities and any amounts due to Lender under Sections 5, 8, 14 and 16. In the event that Lender shall exercise such rights, Borrower's obligation to return a like amount of the Loaned Securities shall terminate. Lender may similarly apply the Collateral and any proceeds thereof to any other obligation of Borrower under this Agreement, including Borrower's obligations with respect to Distributions paid to Borrower (and not forwarded to Lender) in respect of Loaned Securities. In the event that (i) the purchase price of Replacement Securities (plus all other amounts, if any, due to Lender hereunder) exceeds (ii) the amount of the Collateral, Borrower shall be liable to Lender for the amount of such excess together with interest thereon at a rate equal to (A) in the case of purchases of Foreign Securities, LIBOR, (B) in the case of purchases of any other Securities (or other amounts, if any, due to Lender hereunder), the Federal Funds Rate or (C) such other rate as may be specified in Schedule B, in each case as such rate fluctuates from day to day, from the date of such purchase until the date of payment of such excess. As security for Borrower's obligation to pay such excess, Lender shall have, and Borrower hereby grants, a security interest in any property of Borrowerthen held by or for Lender and a right of setoff with respect to such property and any other amount payable by Lender to Borrower. The purchase price of Replacement Securities purchased under this Section 13.1 shall include, and the proceeds of any sale of Collateral shall be determined after deduction of, broker's fees and commissions and all other reasonable costs, fees and expenses related to such purchase or sale (as the case may be). In the event Lender exercises its rights under this Section 13.1, Lender may elect in its sole discretion, in lieu of purchasing all or a portion of the Replacement Securities or selling all or a portion of the Collateral, to be deemed to have made, respectively, such purchase of Replacement Securities or sale of Collateral for an amount equal to the price therefor on the date of such exercise obtained from a generally recognized source or the last bid quotation from such a source at the most recent Close of Trading. Subject to Section 18, upon the satisfaction of all obligations hereunder, any remaining Collateral shall be returned to Borrower.

2. Upon the occurrence of a Default under Section 12 entitling Borrower to terminate all Loans hereunder, Borrower shall have the right, in addition to any other remedies provided herein, (a) to purchase a like amount of Collateral ("Replacement Collateral") in the principalmarket for such Collateral in a commercially reasonable manner, (b) to sell a like amount of the Loaned Securities in the principal market for such Loaned Securities in a commercially reasonable manner and (c) to apply and set off the Loaned Securities and any proceeds thereof against (i) the payment of the purchase price for such Replacement Collateral, (ii) Lender's obligation to return any cash or other Collateral, and (iii) any amounts due to Borrower under Sections 5, 8 and 16. In such event, Borrower may treat the Loaned Securities as its own and Lender's obligation to return a like amount of the Collateral shall terminate; provided, however, that Lender shall immediately return any letters of credit supporting any Loan upon the exercise or deemed exercise by Borrower of its termination rights under Section 12. Borrower may similarly apply the Loaned Securities and any proceeds thereof to any other obligation of Lender under this Agreement, including Lender's obligations with respect to Distributions paid to Lender (and not forwarded to Borrower) in respect of Collateral. In the event that (i) the sales price received from such Loaned Securities is less than (ii) the purchase price of Replacement Collateral (plus the amount of any cash or other Collateral not replaced by Borrower and all other amounts, if any, due to Borrower hereunder), Lender shall be liable to Borrower for the amount of any such deficiency, together with interest on such amounts at a rate equal to (A) in the case of Collateral consisting of Foreign Securities, LIBOR, (B) in the case of Collateral consisting of any other Securities (or other amounts due, if any, to Borrower hereunder), the Federal Funds Rate or (C) such other rate as may be specified in Schedule B, in each case as such rate fluctuates from day to day, from the date of such sale until the date of payment of such deficiency. As security for Lender's obligation to pay such deficiency, Borrower shall have, and Lender hereby grants, a security interest in any property of Lender then held by or for Borrower and a right of setoff with respect to such property and any other amount payable by Borrower to Lender. The purchase price of any Replacement Collateral purchased under this Section shall include, and the proceeds of any sale of Loaned Securities shall be determined after deduction of, broker's fees and commissions and all other reasonable costs, fees and expenses related to such purchase or sale (as the case may be). In the event Borrower exercises its rights under this Section 13.2, Borrower may elect in its sole discretion, in lieu of purchasing all or a portion of the Replacement Collateral or selling all or a portion of the Loaned Securities, to be deemed to have made, respectively, such purchase of Replacement Collateral or sale of Loaned Securities for an amount equal to the price therefor on the date of such exercise obtained from a generally recognized source or the last bid quotation from such a source at the most recent Close of Trading. Subject to Section 18, upon the satisfaction of all Lender's obligations hereunder, any remaining Loaned Securities (or remaining cash proceeds thereof) shall be returned to Lender.

3. Unless otherwise agreed, the parties acknowledge and agree that (a) the Loaned Securities and any Collateral consisting of Securities are of a type traded in a recognized market, (b) in the absence of a generally recognized source for prices or bid or offer quotations for any security, the non-defaulting party may establish the source therefor in its sole discretion, and (c) all prices and bid and offer quotations shall be increased to include accrued interest to the extent not already included therein (except to the extent contrary to market practice with respect to the relevant Securities).

4. In addition to its rights hereunder, the non-defaulting party shall have any rights otherwise available to it under any other agreement or applicable law. In addition to any other remedies to which a non-defaulting party may be entitled under the Agreement, the defaulting party shall, with respect to an individual Loan or with respect to a class of Loans, be liable to the non-defaulting party for (a) the amount of all reasonable legal or other expenses incurred by the non-defaulting party in connection with or as a result of a Default, (b) damages in an amount equal to the cost (including all payments, expenses and commissions) of entering into replacement transactions and entering into or terminating hedge transactions in connection with or as a result of a Default, and (c) any other loss, damage, cost or expense directly arising or resulting from the occurrence of a Default in respect of a Loan.

14. **Transfer Taxes.**

All transfer taxes with respect to the transfer of the Loaned Securities by Lender to Borrower and by Borrower to Lender upon termination of the Loan and with respect to the transfer of Collateral by Borrower to Lender and by Lender to Borrower upon termination of the Loan or pursuant to Section 4.5 or Section 9 shall be paid by Borrower.

15. **Transfers.**

1. All transfers by either Borrower or Lender of Loaned Securities or Collateral consisting of "financial assets" (within the meaning of theUCC) hereunder shall be by (a) in the case of certificated securities, physical delivery of certificates representing such securities together with duly executed stock and bond transfer powers, as the case may be, with signatures guaranteed by a bank or a member firm of the New York Stock Exchange, Inc., (b) registration of an uncertificated security in the transferee's name by the issuer of such uncertificated security, (c)the crediting by a Clearing Organization of such financial assets to the transferee's "securities account" (within the meaning of the UCC) maintained with such Clearing Organization, (d) such other means as specified in this Agreement, including but not limited to those means specified in Sections 3.2(c) and 6.1(b), or (e) such other means as Borrower and Lender may agree.

2. All transfers of cash hereunder shall be by (a) wire transfer in immediately available, freely transferable funds, (b) crediting Lender's account carried by Borrower or (c) such other means as Borrower and Lender may agree.

3. All transfers of letters of credit from Borrower to Lender shall be made by physical delivery to Lender of an irrevocable letter of credit issued by a "bank" as defined in Section 3(a)(6)(A)-(C) of the Exchange Act. Transfers of letters of credit from Lender to Borrower shall be made by causing such letters of credit to be returned or by causing the amount of such letters of credit to be reduced to the amount required after such transfer.

4. A transfer of Securities, cash or letters of credit may be effected under this Section 15 on any day except (a) a day on which the transferee is closed for business at its primary place of business or (b) a day on which a Clearing Organization or wire transfer system is closed, if the facilities of such Clearing Organization or wire transfer system are required to effect such transfer.

5. For the avoidance of doubt, the parties agree and acknowledge that the term "securities," as used herein (except in this Section 15), shall include any "security entitlements" with respect to such securities (within the meaning of the UCC). In every transfer of "financialassets" (within the meaning of the UCC) hereunder, the transferor shall take all steps necessary (a) to effect a delivery to the transferee under Section 8-301 of the UCC, or to cause the creation of a security entitlement in favor of the transferee under Section 8-501 of the UCC, (b) to enable the transferee to obtain "control" (within the meaning of Section 8-106 of the UCC), and (c) to provide the transferee with comparable rights under any applicable foreign law or regulation.

16. **Contractual Currency.**

1. Borrower and Lender agree that (a) any payment in respect of a Distribution under Section 8 shall be made in the currency in which the underlying Distribution of cash was made, (b) any return of cash shall be made in the currency in which the underlying transfer of cash was made, and (c) any other payment of cash in connection with a Loan under this Agreement shall be in the currency agreed upon by Borrower and Lender in connection with such Loan (the currency established under clause (a), (b) or (c) hereinafter referred to as the "Contractual Currency"). Notwithstanding the foregoing, the payee of any such payment may, at its option, accept tender thereof in any other currency; provided, however, that, to the extent permitted by applicable law, the obligation of the payor to make such payment will be discharged only to the extent of the amount of Contractual Currency that such payee may, consistent with normal banking procedures, purchase with such other currency (after deduction of any premium and costs of exchange) on the banking day next succeeding its receipt of such currency.

2. If for any reason the amount in the Contractual Currency received under Section 16.1, including amounts received after conversion of any recovery under any judgment or order expressed in a currency other than the Contractual Currency, falls short of the amount in the Contractual Currency due in respect of this Agreement, the party required to make the payment will (unless a Default has occurred and such party is the non-defaulting party) as a separate and independent obligation and to the extent permitted by applicable law, immediately pay such additional amount in the Contractual Currency as may be necessary to compensate for the shortfall.

3. If for any reason the amount in the Contractual Currency received under Section 16.1 exceeds the amount in the Contractual Currency due in respect of this Agreement, then the party receiving the payment will (unless a Default has occurred and such party is the non-defaulting party) refund promptly the amount of such excess.

17. **ERISA.**

Lender shall, if any of the Securities transferred to the Borrower hereunder for any Loan have been or shall be obtained, directly or indirectly, from or using the assets of any Plan, so notify Borrower in writing upon the execution of this Agreement or upon initiation of such Loan under Section 2.1. If Lender so notifies Borrower, then Borrower and Lender shall conduct the Loan in accordance with the terms and conditions of Department of Labor Prohibited Transaction Exemption 81-6 (46 Fed. Reg. 7527, Jan. 23, 1981; as amended, 52 Fed. Reg. 18754, May 19, 1987), or any successor thereto (unless Borrower and Lender have agreed prior to entering into a Loan that such Loan will be conducted in reliance on another exemption, or without relying on any exemption, from the prohibited transaction provisions of Section 406 of the Employee Retirement Income Security Act of 1974, as amended, and Section 4975 of the Internal Revenue Code of 1986, as amended). Without limiting the foregoing and notwithstanding any other provision of this Agreement, if the Loan will be conducted in accordance with Prohibited Transaction Exemption 81-6, then:

1. Borrower represents and warrants to Lender that it is either (a) a bank subject to federal or state supervision, (b) a broker-dealer registered under the Exchange Act or (c) exempt from registration under Section 15(a)(1) of the Exchange Act as a dealer in Government Securities.

2. Borrower represents and warrants that, during the term of any Loan hereunder, neither Borrower nor any affiliate of Borrower has any discretionary authority or control with respect to the investment of the assets of the Plan involved in the Loan or renders investment advice (within the meaning of 29 C.F.R. Section 2510.3-21(c)) with respect to the assets of the Plan involved in the Loan. Lender agrees that, prior to or at the commencement of any Loan hereunder, it will communicate to Borrower information regarding the Plan sufficient to identify to Borrower any person or persons that have discretionary authority or control with respect to the investment of the assets of the Plan involved in the Loan or that render investment advice (as defined in the preceding sentence) with respect to the assets of the Plan involved in the Loan.In the event Lender fails to communicate and keep current during the term of any Loan such information, Lender rather than Borrower shall be deemed to have made the representation and warranty in the first sentence of this Section 17.2.

3. Borrower shall mark to market daily each Loan hereunder pursuant to Section 9.1 as is required if Lender is a Customer.

4. Borrower and Lender agree that:

    a. the term "Collateral" shall mean cash, securities issued or guaranteed by the United States government or its agencies or instrumentalities, or irrevocable bank letters of credit issued by a person other than Borrower or an affiliate thereof;

    b. prior to the making of any Loans hereunder, Borrower shall provide Lender with (i) the most recent available audited statement of Borrower's financial condition and (ii) the most recent available unaudited statement of Borrower's financial condition (if more recent than the most recent audited statement), and each Loan made hereunder shall be deemed a representation by Borrower that there has been no material adverse change in Borrower's financial condition subsequent to the date of the latest financial statements or information furnished in accordance herewith;

    c. the Loan may be terminated by Lender at any time, whereupon Borrower shall deliver the Loaned Securities to Lender within the lesser of (i) the customary delivery period for such Loaned Securities, (ii) five Business Days, and (iii) the time negotiated for such delivery between Borrower and Lender; provided, however, that Borrower and Lender may agree to a longer period only if permitted by Prohibited Transaction Exemption 81-6; and

    d. the Collateral transferred shall be security only for obligations of Borrower to the Plan with respect to Loans, and shall not be security for any obligation of Borrower to any agent or affiliate of the Plan.

18. **Single Agreement.**

Borrower and Lender acknowledge that, and have entered into this Agreement in reliance on the fact that, all Loans hereunder constitute a single business and contractual relationship and have been entered into in consideration of each other. Accordingly, Borrower and Lender hereby agree that payments, deliveries and other transfers made by either of them in respect of any Loan shall be deemed to have been made in consideration of payments, deliveries and other transfers in respect of any other Loan hereunder, and the obligations to make any such payments, deliveries and other transfers may be applied against each other and netted. In addition, Borrower and Lender acknowledge that, and have entered into this Agreement in reliance on the fact that, all Loans hereunder have been entered into in consideration of each other. Accordingly, Borrower and Lender hereby agree that (a) each shall perform all of its obligations in respect of each Loan hereunder, and that a default in the performance of any such obligation by Borrower or by Lender (the "Defaulting Party") in any Loan hereunder shall constitute a default by the Defaulting Party under all such Loans hereunder, and (b) the non-defaulting party shall be entitled to set off claims and apply property held by it in respect of any Loan hereunder against obligations owing to it in respect of any other Loan with the Defaulting Party.

19. **APPLICABLE LAW.**

THIS AGREEMENT SHALL BE GOVERNED AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT GIVING EFFECT TO THE CONFLICT OF LAW PRINCIPLES THEREOF.

20. **Waiver.**

The failure of a party to this Agreement to insist upon strict adherence to any term of this Agreement on any occasion shall not be considered a waiver or deprive that party of the right thereafter to insist upon strict adherence to that term or any other term of this Agreement. All waivers in respect of a Default must be in writing.

21. **Survival of Remedies.**

All remedies hereunder and all obligations with respect to any Loan shall survive the termination of the relevant Loan, return of Loaned Securities or Collateral and termination of this Agreement.

22. **Notices and Other Communications.**

Any and all notices, statements, demands or other communications hereunder may be given by Interactive Brokers LLC to the undersigned party by telephone, mail, facsimile, e-mail, electronic message, telegraph, messenger or otherwise at the phone and facsimile numbers provided by the undersigned party and maintained by Interactive Brokers LLC in its books and records for such party. Any and all notices, statements, demands or other communications hereunder may be given by the undersigned party to Interactive Brokers LLC in writing electronically via the secure electronic message center maintained by Interactive Brokers for the account of the undersigned party. Any notice, statement, demand or other communication hereunder will be deemed effective on the day and at the time on which it is received or, if not received, on the day and at the time on which its delivery was in good faith attempted; provided, however, that any notice by a party to the other party by telephone shall be deemed effective only if (a) such notice is followed by written confirmation thereof and (b) at least one of the other means of providing notice that are specifically listed above has previously been attempted in good faith by the notifying party.

23. **MANDATORY ARBITRATION.**

1. THE PARTIES HEREBY AGREE THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE PARTIES ARISING OUT OF THIS AGREEMENT OR ANY LOAN HEREUNDER SHALL BE SUBJECT TO THE MANDATORY ARBITRATION PROVISION CONTAINED IN ANY CUSTOMER ACCOUNT OR SIMILAR AGREEMENT ENTERED INTO BETWEEN SUCH PARTIES.

24. **Miscellaneous.**

1. Except as specified in Section 1 or as otherwise agreed by the parties, this Agreement supersedes any other agreement between the parties hereto concerning loans of Securities between Borrower and Lender. This Agreement shall not be assigned by either party without the prior written consent of the other party and any attempted assignment without such consent shall be null and void. Subject to the foregoing, this Agreement shall be binding upon and shall inure to the benefit of Borrower and Lender and their respective heirs, representatives, successors and assigns. This Agreement may be terminated by either party upon notice to the other, subject only to fulfillment of any obligations then outstanding. This Agreement shall not be modified, except by an instrument in writing signed by the party against whom enforcement is sought. The parties hereto acknowledge and agree that, in connection with this Agreement and each Loan hereunder, time is of the essence. Each provision and agreement herein shall be treated as separate and independent from any other provision herein and shall be enforceable notwithstanding the unenforceability of any such other provision or agreement.
2. Any agreement between Borrower and Lender pursuant to Section 10.5(b) or Section 25.37 shall be made (a) in writing, (b) orally, if confirmed promptly in writing or through any system that compares Loans and in which Borrower and Lender are participants, or (c) in such other manner as may be agreed by Borrower and Lender in writing.

25. **Definitions.**

For the purposes hereof:

1. "Act of Insolvency" shall mean, with respect to any party, (a) the commencement by such party as debtor of any case or proceeding under any bankruptcy, insolvency, reorganization, liquidation, moratorium, dissolution, delinquency or similar law, or such party's seeking the appointment or election of a receiver, conservator, trustee, custodian or similar official for such party or any substantial part of its property, or the convening of any meeting of creditors for purposes of commencing any such case or proceeding or seeking such an appointment or election, (b) the commencement of any such case or proceeding against such party, or another seeking such an appointment or election, or the filing against a party of an application for a protective decree under the provisions of the Securities Investor Protection Act of 1970, which (i) is consented to or not timely contested by such party, (ii) results in the entry of an order for relief, such an appointment or election, the issuance of such a protective decree or the entry of an order having a similar effect, or (iii) is not dismissed within 15 days, (c) the making by such party of a general assignment for the benefit of creditors, or (d) the admission in writing by such party of such party's inability to pay such party's debts as they become due.

2. "Bankruptcy Code" shall have the meaning assigned in Section 26.1

3. "Borrower" shall have the meaning assigned in Section 1.

4. "Borrower Payment" shall have the meaning assigned in Section 8.5(a).

5. "Broker-Dealer" shall mean any person that is a broker (including a municipal securities broker), dealer, municipal securities dealer, government securities broker or government securities dealer as defined in the Exchange Act, regardless of whether the activities of such person are conducted in the United States or otherwise require such person to register with the U.S. Securities and Exchange Commission or other regulatory body.

6. "Business Day" shall mean, with respect to any Loan hereunder, a day on which regular trading occurs in the principal market for the Loaned Securities subject to such Loan, provided, however, that for purposes of determining the Market Value of any Securities hereunder, such term shall mean a day on which regular trading occurs in the principal market for the Securities whose value is being determined. Notwithstanding the foregoing, (a) for purposes of Section 9, "Business Day" shall mean any day on which regular trading occurs in the principal market for any Loaned Securities or for any Collateral consisting of Securities under any outstanding Loan hereunder and "next Business Day" shall mean the next day on which a transfer of Collateral may be effected in accordance with Section 15, and (b) in no event shall a Saturday or Sunday be considered a Business Day.

7. "Clearing Organization" shall mean (a) The Depository Trust Company, or, if agreed to by Borrower and Lender, such other "securities intermediary" (within the meaning of the UCC) at which Borrower (or Borrower's agent) and Lender (or Lender's agent) maintain accounts, or (b) a Federal Reserve Bank, to the extent that it maintains a book-entry system.

8. "Close of Business" shall mean 4:00 p.m. (New York City time).

9. "Close of Trading" shall mean, with respect to any Security, the end of the primary trading session established by the principal market for such Security on a Business Day, unless otherwise agreed by the parties.

10. "Collateral" shall mean, whether now owned or hereafter acquired and to the extent permitted by applicable law, (a) any property which Borrower and Lender agree prior to the Loan shall be acceptable collateral and which is transferred to Lender pursuant to Sections 4 or 9 (including as collateral, for definitional purposes, any letters of credit mutually acceptable to Lender and Borrower), (b) any property substituted therefor pursuant to Section 4.5, (c) all accounts in which such property is deposited and all securities and the like in which any cash collateral is invested or reinvested, and (d) any proceeds of any of the foregoing; provided, however, that if Lender is a Customer, "Collateral" shall (subject to Section 17.4(a), if applicable) be limited to cash, U.S. Treasury bills and notes, an irrevocable letter of credit issued by a "bank" (as defined in Section 3(a)(6)(A)-(C) of the Exchange Act), and any other property permitted to serve as collateral securing a loan of securities under Rule 15c3-3 under the Exchange Act or any comparable regulation of the Secretary of the Treasury under Section 15C of the Exchange Act (to the extent that Borrower is subject to such Rule or comparable regulation) pursuant to exemptive, interpretive or no-action relief or otherwise. If any new or different Security shall be exchanged for any Collateral by recapitalization, merger, consolidation or other corporate action, such new or different Security shall, effective upon such exchange, be deemed to become Collateral in substitution for the former Collateral for which such exchange is made. For purposes of return of Collateral by Lender orpurchase or sale of Securities pursuant to Section 13, such term shall include Securities of the same issuer, class and quantity as the Collateral initially transferred by Borrower to Lender, as adjusted pursuant to the preceding sentence.

11. "Collateral Distributions" shall have the meaning assigned in Section 8.5(a).

12. "Confirmation" shall have the meaning assigned in Section 2.1.

13. "Contractual Currency" shall have the meaning assigned in Section 16.1.

14. "Customer" shall mean any person that is a customer of Borrower under Rule 15c3-3 under the Exchange Act or any comparable regulation of the Secretary of the Treasury under Section 15C of the Exchange Act (to the extent that Borrower is subject to such Rule or comparable regulation).

15. "Cutoff Time" shall mean a time on a Business Day by which a transfer of cash, securities or other property must be made by Borrower orLender to the other, as shall be agreed by Borrower and Lender in Schedule B, or shall be as specified in the policies and proceduresdescribed on IB's website or as agreed otherwise orally or in writing or, in the absence of the above, as shall be determined in accordance with market practice.

16. "Default" shall have the meaning assigned in Section 12.

17. "Defaulting Party" shall have the meaning assigned in Section 18.

18. "Distribution" shall mean, with respect to any Security at any time, any distribution made on or in respect of such Security, including, but not limited to: (a) cash and all other property, (b) stock dividends, (c) Securities received as a result of split ups of such Security and distributions in respect thereof, (d) interest payments, (e) all rights to purchase additional Securities, and (f) any cash or other consideration paid or provided by the issuer of such Security in exchange for any vote, consent or the taking of any similar action in respect of such Security (regardless of whether the record date for such vote, consent or other action falls during the term of the Loan). In the event that the holder of a Security is entitled to elect the type of distribution to be received from two or more alternatives, such election shall be made by Lender, in the case of a Distribution in respect of the Loaned Securities, and by Borrower, in the case of a Distribution in respect of Collateral.

19. "Equity Security" shall mean any security (as defined in the Exchange Act) other than a "nonequity security," as defined in Regulation T.

20. "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended.

21. "Extension Deadline" shall mean, with respect to a letter of credit, the Cutoff Time on the Business Day preceding the day on which the letter of credit expires.

22. "FDIA" shall have the meaning assigned in Section 26.4.

23. "FDICIA" shall have the meaning assigned in Section 26.5.

24. "Federal Funds Rate" shall mean the rate of interest (expressed as an annual rate), as published in Federal Reserve Statistical Release H.15 (519) or any publication substituted therefor, charged for federal funds (dollars in immediately available funds borrowed by banks on an overnight unsecured basis) on that day or, if that day is not a banking day in New York City, on the next preceding banking day.

25. "Foreign Securities" shall mean, unless otherwise agreed, Securities that are principally cleared and settled outside the United States.

26. "Government Securities" shall mean government securities as defined in Section 3(a)(42)(A)-(C) of the Exchange Act.

27. "Interest" shall have the meaning assigned in Section 5.1.

28. "Lender" shall have the meaning assigned in Section 1.

29. "Lender Payment" shall have the meaning assigned in Section 8.5(a).

30. "LIBOR" shall mean for any date, the offered rate for deposits in U.S. dollars for a period of three months which appears on the ReutersScreen LIBO page as of 11:00 a.m., London time, on such date (or, if at least two such rates appear, the arithmetic mean of such rates).

31. "Loan" shall have the meaning assigned in Section 1.

32. "Loaned Security" shall mean any Security transferred in a Loan hereunder until such Security (or an identical Security) is transferred back to Lender hereunder, except that, if any new or different Security shall be exchanged for any Loaned Security by recapitalization, merger, consolidation or other corporate action, such new or different Security shall, effective upon such exchange, be deemed to become a Loaned Security in substitution for the former Loaned Security for which such exchange is made. For purposes of return of Loaned Securities by Borrower or purchase or sale of Securities pursuant to Section 13, such term shall include Securities of the same issuer, class and quantity as the Loaned Securities, as adjusted pursuant to the preceding sentence.

33. "Margin Deficit" shall have the meaning assigned in Section 9.2.

34. "Margin Excess" shall have the meaning assigned in Section 9.3.

35. "Margin Notice Deadline" shall mean the time agreed to by the parties in the relevant Confirmation, Schedule B hereto or otherwise as the deadline for giving notice requiring same-day satisfaction of mark-to-market obligations as provided in Section 9 hereof (or, in the absence of any such agreement, the deadline for such purposes established in accordance with market practice).

36. "Margin Percentage" shall mean, with respect to any Loan as of any date, 100%, unless (a) Borrower and Lender agree otherwise, asprovided in Section 24.2, or Borrower in its discretion determines that applicable laws or market custom require greater THAN 100% and (b) Lender is not a Customer. Notwithstanding the previous sentence, in the event that the writing or other confirmation evidencing theagreement described in clause (a) does not set out such percentage with respect to any such Loan, the Margin Percentage shall not be a percentage less than the percentage obtained by dividing (i) the Market Value of the Collateral required to be transferred by Borrower to Lender with respect to such Loan at the commencement of the Loan by (ii) the Market Value of the Loaned Securities required to be transferred by Lender to Borrower at the commencement of the Loan.

37. "Market Value" shall have the meaning set forth in Annex II or otherwise agreed to by Borrower and Lender in writing. Notwithstanding the previous sentence, in the event that the meaning of Market Value has not been set forth in Annex II or in any other writing, as described inthe previous sentence, Market Value shall be reasonably determined by Interactive Brokers LLC in accordance with its standard practices for valuing Securities. The determinations of Market Value provided for in Annex II or in any other writing described in this Section 25.38 shall apply for all purposes under this Agreement, except for purposes of Section 13.

38. "Payee" shall have the meaning assigned in Section 8.5(a).

39. "Payor" shall have the meaning assigned in Section 8.5(a).

40. "Plan" shall mean: (a) any "employee benefit plan" as defined in Section 3(3) of the Employee Retirement Income Security Act of 1974 which is subject to Part 4 of Subtitle B of Title I of such Act; (b) any "plan" as defined in Section 4975(e)(1) of the Internal Revenue Code of 1986;or (c) any entity the assets of which are deemed to be assets of any such "employee benefit plan" or "plan" by reason of the Department ofLabor's plan asset regulation, 29 C.F.R. Section 2510.3-101.

41. "Regulation T" shall mean Regulation T of the Board of Governors of the Federal Reserve System, as in effect from time to time.

42. "Retransfer" shall mean, with respect to any Collateral, to pledge, repledge, hypothecate, rehypothecate, lend, relend, sell or otherwise transfer such Collateral, or to re-register any such Collateral evidenced by physical certificates in any name other than Borrower's.

43. "Securities" shall mean securities or, if agreed by the parties in writing, other assets.

44. "Securities Distributions" shall have the meaning assigned in Section 8.5(a).

45. "Tax" shall have the meaning assigned in Section 8.5(a).

46. "UCC" shall mean the New York Uniform Commercial Code.

26. **Intent.**

1. The parties recognize that each Loan hereunder is a "securities contract," as such term is defined in Section 741 of Title 11 of the United States Code (the "Bankruptcy Code"), as amended (except insofar as the type of assets subject to the Loan would render such definition inapplicable).

2. It is understood that each and every transfer of funds, securities and other property under this Agreement and each Loan hereunder is a"settlement payment" or a "margin payment," as such terms are used in Sections 362(b)(6) and 546(e) of the Bankruptcy Code

3. It is understood that the rights given to Borrower and Lender hereunder upon a Default by the other constitute the right to cause the liquidation of a securities contract and the right to set off mutual debts and claims in connection with a securities contract, as such terms are used in Sections 555 and 362(b)(6) of the Bankruptcy Code.

4. The parties agree and acknowledge that if a party hereto is an "insured depository institution," as such term is defined in the Federal Deposit Insurance Act, as amended ("FDIA"), then each Loan hereunder is a "securities contract" and "qualified financial contract," as such terms are defined in the FDIA and any rules, orders or policy statements thereunder (except insofar as the type of assets subject to the Loan would render such definitions inapplicable).

5. It is understood that this Agreement constitutes a "netting contract" as defined in and subject to Title IV of the Federal Deposit Insurance Corporation Improvement Act of 1991 ("FDICIA") and each payment obligation under any Loan hereunder shall constitute a "covered contractual payment entitlement" or "covered contractual payment obligation," respectively, as defined in and subject to FDICIA (except insofar as one or both of the parties is not a "financial institution" as that term is defined in FDICIA).

6. Except to the extent required by applicable law or regulation or as otherwise agreed, Borrower and Lender agree that Loans hereunder shall in no event be "exchange contracts" for purposes of the rules of any securities exchange and that Loans hereunder shall not be governed by the buy-in or similar rules of any such exchange, registered national securities association or other self-regulatory organization.

27. **DISCLOSURE RELATING TO CERTAIN FEDERAL PROTECTIONS.**

1. **WITHOUT WAIVING ANY RIGHTS GIVEN TO LENDER HEREUNDER, IT IS UNDERSTOOD AND AGREED THAT THE PROVISIONS OF THE SECURITIES INVESTOR PROTECTION ACT OF 1970 MAY NOT PROTECT LENDER WITH RESPECT TO LOANED SECURITIES HEREUNDER AND THAT, THEREFORE, THE COLLATERAL DELIVERED TO LENDER MAY CONSTITUTE THE ONLY SOURCE OF SATISFACTION OF BORROWER'S OBLIGATIONS IN THE EVENT BORROWER FAILS TO RETURN THE LOANED SECURITIES.**

2. **LENDER ACKNOWLEDGES THAT, IN CONNECTION WITH LOANS OF GOVERNMENT SECURITIES AND AS OTHERWISE PERMITTED BY APPLICABLE LAW, SOME SECURITIES PROVIDED BY BORROWER AS COLLATERAL UNDER THIS AGREEMENT MAY NOT BE GUARANTEED BY THE UNITED STATES.**

Executed and Agreed By:

INTERACTIVE BROKERS LLC

By providing this Agreement to eligible IB Customers who are applying to participate in IB's Fully Paid Lending Program, IB agrees to the terms and conditions specified herein.

COUNTERPARTY:

Annex I-A

"Party acting as Agent" hereby does not apply.

Annex II

Market Value Shall not apply.

Annex III

Term Loans

This Annex sets forth additional terms and conditions governing Loans designated as "Term Loans" in which Lender lends to Borrower a specific amount of Loaned Securities ("Term Loan Amount") against a pledge of cash Collateral by Borrower for an agreed upon rate of Interest until a scheduled termination date ("Termination Date"). Unless otherwise defined, capitalized terms used but not defined in this Annex shall have the meanings assigned in the Securities Loan Agreement of which it forms a part (such agreement, together with this Annex and any other annexes, schedules or exhibits, referred to as the "Agreement").

1. The terms of this Annex shall apply to Loans of Equity Securities only if they are designated as Term Loans in a Confirmation therefor provided pursuant to the Agreement and executed by each party, in a schedule to the Agreement or in this Annex. All Loans of Securities other than Equity Securities shall be "Term Loans" subject to this Annex, unless otherwise agreed in a Confirmation or other writing.
2. The Confirmation for a Term Loan shall set forth, in addition to any terms required to be set forth therein under the Agreement, the Term Loan Amount, rate of Interest and the Termination Date. Lender and Borrower agree that, except as specifically provided in this Annex, each Term Loan shall be subject to all terms and conditions of the Agreement, including, without limitation, any provisions regarding the parties' respective rights to terminate a Loan.
3. In the event that either party exercises its right under the Agreement to terminate a Term Loan on a date (the "Early Termination Date") prior to the Termination Date, Lender and Borrower shall, unless otherwise agreed, use their best efforts to negotiate in good faith a new Term Loan (the "Replacement Loan") of comparable or other Securities, which shall be mutually agreed upon by the parties, with a Market Value equal to the Market Value of the Term Loan Amount under the terminated Term Loan (the "Terminated Loan") as of the Early Termination Date. Such agreement shall, in accordance with Section 2 of this Annex, be confirmed in a new Confirmation at the commencement of the Replacement Loan and be executed by each party. Each Replacement Loan shall be subject to the same terms as the corresponding Terminated Loan, other than with respect to the commencement date and the identity of the Loaned Securities. The Replacement Loan shall commence on the date on which the parties agree which Securities shall be the subject of the Replacement Loan and shall be scheduled to terminate on the scheduled TerminationDate of the Terminated Loan.
4. Borrower and Lender agree that, except as provided in Section 5 of this Annex, if the parties enter into a Replacement Loan, the Collateral for the related Terminated Loan need not be returned to Borrower and shall instead serve as Collateral for such Replacement Loan.
5. If the parties are unable to negotiate and enter into a Replacement Loan for some or all of the Term Loan Amount on or before the Early Termination Date, (a) the party requesting termination of the Terminated Loan shall pay to the other party a Breakage Fee computed in accordance with Section 6 of this Annex with respect to that portion of the Term Loan Amount for which a Replacement Loan is not entered into and (b) upon the transfer by Borrower to Lender of the Loaned Securities subject to the Terminated Loan, Lender shall transfer to Borrower Collateral for the Terminated Loan in accordance with and to the extent required under the Agreement, provided that no Default has occurred with respect to Borrower.
6. For purposes of this Annex, the term "Breakage Fee" shall mean a fee agreed by Borrower and Lender in the Confirmation or otherwise orally or in writing. In the absence of any such agreement, the term "Breakage Fee" shall mean, with respect to Loans of Government Securities, a feeequal to the sum of (a) the cost to the non-terminating party (including all payments, expenses and commissions) of entering into replacement transactions and entering into or terminating hedge transactions in connection with or as a

result of the termination of the Terminated Loan, and (b) any other loss, damage, cost or expense directly arising or resulting from the termination of the Terminated Loan that is incurred by the non- terminating party (other than consequential losses or costs for lost profits or lost opportunities), as determined by the non-terminating party in a commercially reasonable manner, and (c) any other amounts due and payable by the terminating party to the non-terminating party under the Agreement on the Early Termination Date.

Schedule A

Names and Addresses for Communications Between Parties Shall not apply.

Schedule B Defined Terms and Supplemental Provisions

None.

Annex I-A

"Party acting as Agent" hereby does not apply.

Annex II

Market Value

Shall not apply

Annex III

Term Loans

This Annex sets forth additional terms and conditions governing Loans designated as "Term Loans" in which Lender lends to Borrower a specific amount of Loaned Securities ("Term Loan Amount") against a pledge of cash Collateral by Borrower for an agreed upon Cash Collateral Fee until a scheduled termination date ("Termination Date"). Unless otherwise defined, capitalized terms used but not defined in this Annex shall have the meanings assigned in the Securities Loan Agreement of which it forms a part (such agreement, together with this Annex and any other annexes, schedules or exhibits, referred to as the "Agreement").

1. The terms of this Annex shall apply to Loans of Equity Securities only if they are designated as Term Loans in a Confirmation therefor provided pursuant to the Agreement and executed by each party, in a schedule to the Agreement or in this Annex. All Loans of Securities other than Equity Securities shall be "Term Loans" subject to this Annex, unless otherwise agreed in a Confirmation or other writing.

2. The Confirmation for a Term Loan shall set forth, in addition to any terms required to be set forth therein under the Agreement, the Term Loan Amount, the Cash Collateral Fee and the Termination Date. Lender and Borrower agree that, except as specifically provided in this Annex, each Term Loan shall be subject to all terms and conditions of the Agreement, including, without limitation, any provisions regarding the parties' respective rights to terminate a Loan.

3. In the event that either party exercises its right under the Agreement to terminate a Term Loan on a date (the "Early Termination Date") prior to the Termination Date, Lender and Borrower shall, unless otherwise agreed, use their best efforts to negotiate in good faith a new Term Loan (the "Replacement Loan") of comparable or other Securities, which shall be mutually agreed upon by the parties, with a Market Value equal to the Market Value of the Term Loan Amount under the terminated Term Loan (the "Terminated Loan") as of the Early Termination Date. Such agreement shall, in accordance with Section 2 of this Annex, be confirmed in a new Confirmation at the commencement of the Replacement Loan and be executed by each party. Each Replacement Loan shall be subject to the same terms as the corresponding Terminated Loan, other than with respect to the commencement date and the identity of the Loaned Securities. The Replacement Loan shall commence on the date on which the parties agree which Securities shall be the subject of the Replacement Loan and shall be scheduled to terminate on the scheduled Termination Date of the Terminated Loan.

4. Borrower and Lender agree that, except as provided in Section 5 of this Annex, if the parties enter into a Replacement Loan, the Collateral for the related Terminated Loan need not be returned to Borrower and shall instead serve as Collateral for such Replacement Loan.

5. If the parties are unable to negotiate and enter into a Replacement Loan for some or all of the Term Loan Amount on or before the Early Termination Date, (a) the party requesting termination of the Terminated Loan shall pay to the other party a Breakage Fee computed in accordance with Section 6 of this Annex with respect to that portion of the Term Loan Amount for which a Replacement Loan is not entered into and (b) upon the transfer by Borrower to Lender of the Loaned Securities subject to the Terminated Loan, Lender shall transfer to Borrower Collateral for the Terminated Loan in accordance with and to the extent required under the Agreement, provided that no Default has occurred with respect to Borrower.

6. For purposes of this Annex, the term "Breakage Fee" shall mean a fee agreed by Borrower and Lender in the Confirmation or otherwise orally or in writing. In the absence of any such agreement, the term "Breakage Fee" shall mean, with respect to Loans of Government Securities, a fee equal to the sum of (a) the cost to the non-terminating party (including all fees, expenses and commissions) of entering into replacement transactions and entering into or terminating hedge transactions in connection with or as a result of the termination of the Terminated Loan, and (b) any other loss, damage, cost or expense directly arising or resulting from the termination of the Terminated Loan that is incurred by the non-terminating party (other than consequential losses or costs for lost profits or lost opportunities), as determined by the non-terminating party in a commercially reasonable manner, and (c) any other amounts due and payable by the terminating party to the non-terminating party under the Agreement on the Early Termination Date.

Schedule A

Names and Addresses for Communications Between Parties

Shall not apply

Schedule B

Defined Terms and Supplemental Provisions

None.

Interactive Brokers

Agreement and Limited Power Of Attorney For Participation in Interactive Brokers Stock Yield Enhancement Program ("Agreement and Power of Attorney")

1. **General:**

   A. Interactive Brokers LLC ("IB" or "Interactive Brokers") offers eligible customers the ability to lend out certain of their fully-paid and excess margin securities (collectively "Fully-Paid Securities" or "Fully-Paid Shares") to IB, who may "on-lend" these securities to other IB customers or to other market participants who wish to use these shares for short selling or other purposes. "Fully-paid securities" are securities in a customer's account that have been completely paid for. "Excess-margin securities" are securities that have not been completely paid for, but whose market value exceeds 140% of the customer's margin debit balance.

   B. Customer wishes to participate in the Interactive Brokers Stock Yield Enhancement Program, under which Customer will grant discretion to Interactive Brokers LLC to initiate, borrow and terminate Fully-Paid Securities loans between Customer and IB. IB will pay interest on the cash collateral posted to Customer's account.

   C. Customer represents that Customer has received and read the separate disclosure document provided by IB entitled Important Characteristics and Risks of Participating in Interactive Brokers Fully-Paid Securities Lending Programs, and that Customer has determined that the benefits and risks of participating in the program are consistent with Customer's financial circumstances, investment objectives and risk tolerance.

   D. In order to participate in the IB Stock Yield Enhancement Program, Customer must execute this Agreement and Power of Attorney and Customer must also execute the Interactive Brokers Customer Agreement and the Interactive Brokers Master Securities Lending Agreement for Fully-Paid Lending. All of the terms of the Interactive Brokers Customer Agreement and the Interactive Brokers Master Securities Lending Agreement for Fully-Paid Lending are applicable to transactions between Customer and IB pursuant to the IB Stock Yield Enhancement Program, but if this Agreement and Power of Attorney is inconsistent with any terms in those agreements, this Agreement is controlling and takes precedence.

2. **Limited Power of Attorney/Discretionary Authorization for Interactive Brokers to Initiate, Borrow and Terminate Loans of Customer Fully-Paid Securities Between Customer as Lender and IB as Borrower:**

   A. The undersigned Customer hereby authorizes Interactive Brokers as Customer's agent and attorney-in-fact to use its discretion to examine the Fully-Paid Securities in Customer's account and to take all necessary steps to initiate, borrow and terminate loans of Fully-Paid Securities between Customer as Lender and IB as Borrower pursuant to the Interactive Brokers Master Securities Lending Agreement for Fully-Paid Lending.

   B. The undersigned Customer grants Interactive Brokers sole discretion to evaluate factors that IB considers relevant in determining whether any of the Fully-Paid Securities in Customer's account can be loaned to IB on terms that are mutually advantageous to

Customer and to IB, taking into account various factors affecting the market and the potential transaction, such as potential size and duration of the loan, the nature of the security and of various market factors affecting the security, prevailing market rates, other IB customers' positions and lending interests, identity and availability of potential secondary borrowers of the shares from IB in the securities lending markets, and other conditions relevant to the potential loan.

C. The undersigned Customer grants Interactive Brokers sole discretion to determine the terms and rates at which IB will borrow Fully-Paid Shares from Customer, taking into account factors such as prevailing rates in the market for loans of various sizes, rates that IB may be paid by its affiliates or third parties for IB lending the shares on to the securities lending markets, payments that IB may make to third parties (such as Customer's financial advisor or introducing brokers who introduce accounts to IB), other IB customers', IB's affiliates' or third parties' needs for the securities, and other relevant factors. Customer authorizes IB to change the rate IB will pay on the cash collateral at IB's sole discretion based on changes in the above factors. Rates may change frequently (as often as daily) due to the nature of the securities lending markets and may involve changes downward (or upward) by 50% or more.

D. This Power of Attorney and Discretionary Authorization shall continue and remain in full force and effect unless and until Customer terminates Customer's participation in the program by providing a written notice of termination through the means provided on the IB website.

3. **Interest Paid To Customer and Rate Spreads:**

A. IB will pay Customer interest on the cash collateral posted to the Customer's account when it borrows Fully-Paid Shares. Ordinarily IB will pay Customer a rate that approximates a specified percentage of the net income earned by IB for relending the securities. The net income received by IB and used to calculate Customer's interest rate may be less than the gross income received by IB for relending the securities because of certain deductions and charges, including payments to affiliates and third parties.

B. Customer understands and agrees that IB may borrow shares from Customer or third parties and then lend those shares to one of its affiliates, such as its market making affiliate Timber Hill LLC ("Timber Hill"), for the affiliate's own purposes (including short selling). In the United States, IB typically also uses Timber Hill as a "conduit" to the securities lending markets. This means that IB may lend the shares to Timber Hill, which will then lend the shares out to other parties in the securities lending market.

C. Customer understands that IB may pay part of the net income earned from lending a Customer's shares to third parties such as Customer's financial advisor or introducing brokers who may introduce accounts to IB. These payments may reduce the interest rate IB will pay on Customer's collateral for the entire duration of the loan.

4. **Rights and Obligations of Customer and IB:**

A. When a loan is initiated or terminated by IB, IB shall confirm this to the Customer on the Customer's daily Interactive Brokers statement. Customer agrees to log in to the IB website and to review Customer's daily statements and the confirmations contained therein.

B. Customer may sell Fully-Paid Shares that have been loaned to IB at any time, and IB will be responsible for terminating the loan, settling the sale of the shares, and providing the proceeds of the sale to Customer by the normal settlement date for the sale.

C. Nothing in this Agreement guarantees that Customer will receive the best possible income for Customer's Fully-Paid Shares. Customer understands and agrees that the securities lending market is not a standardized or transparent market, that there are no rules or mechanisms that guarantee or require that any given participant in the marketplace will receive the best rate for lending shares, and that Interactive Brokers cannot and does not guarantee it will pay the highest rate for borrowing Customer's shares.

D. Nothing in this Agreement obligates IB to borrow specific Fully-Paid Shares, or any Fully-Paid Shares. IB cannot and does not guarantee that all of Customer's Fully-Paid Shares that possibly could be loaned out will be loaned out. There may not be a market to lend Customer's Fully-Paid Shares at a rate that is advantageous, or IB may not have access to a market with willing borrowers. IB, or other IB customers or IB's affiliates might have shares that may be loaned out that will satisfy available borrowing interest and therefore IB may not borrow shares from Customer. Customer understands and agrees that nothing in this Agreement requires IB to place Customer's interest in lending shares ahead of IB's own interests, or those of other IB customers or those of IB's affiliates.

E. Customer may terminate this Agreement and Customer's participation in the Interactive Brokers Stock Yield Enhancement Program at any time upon written notice to IB through the IB website. After Customer's notice of termination, all outstanding loans of Fully-Paid Securities will be terminated and the shares returned to Customer by the deadlines specified in the Interactive Brokers Master Securities Lending Agreement for Fully-Paid Lending (generally, at most three business days from termination).

F. Customer acknowledges that if Customer signs this Agreement and Power Of Attorney and participates in the IB Stock Yield Enhancement Program, Customer will not have the ability or right to approve specific loans before or after they are initiated, will not have the ability to approve or reject interest rate changes and will not have the right to terminate specific loans (except if Customer sells the shares that are being loaned or if Customer terminates Customer's participation in the Program). If Customer is dissatisfied with a particular loan or loans or the rate(s) Customer is receiving or the income earned by IB, Customer may terminate participation in the Program at any time as specified in the preceding paragraph.

G. IB may terminate this Agreement and Power of Attorney and Customer's participation in the IB Stock Yield Enhancement Program at any time upon written notice to Customer. After such termination, all outstanding loans of Fully-Paid Securities will be terminated and the shares returned to Customer by the deadlines specified in the Interactive Brokers Master Securities Lending Agreement for Fully-Paid Lending (generally, at most three business days from termination).

H. Customer is entitled to receive the amount of all dividends and distributions made on or in respect of loaned securities. These cash payments may be characterized as payments "in lieu of" dividends. For U.S. taxpayers, payments in lieu of dividends do not qualify for the preferential qualified dividend income rate (20% for 2016 but subject to change) and are taxed as normal ordinary income (up to 39.6%). IB may be required to withhold tax on payments in lieu of dividends and interest paid on the collateral unless an exception applies. IB may, but is not required to, recall loaned shares from the borrower prior to a dividend, so as to reduce potential negative tax consequences. Customer is responsible for evaluating the tax consequences of participating in the IB Stock Yield Enhancement Program and seeking the advice of a tax professional if needed.

5. Limited Role of Interactive Brokers - No Trading or Investment Advice or Discretion by IB:

A. The power of attorney and discretionary authorization granted by Customer to IB in this Agreement and Power of Attorney is limited to the initiation, borrowing and termination of loans of Fully-Paid Securities as described herein and pursuant to the Interactive Brokers Master Securities Lending Agreement for Fully-Paid Lending.

B. IB SHALL HAVE NO DISCRETION TO BUY OR SELL SECURITIES OR TO MAKE OTHER INVESTMENT DECISIONS FOR CUSTOMER'S ACCOUNT. IB IS NOT OBLIGATED TO AND WILL NOT PROVIDE ANY TRADING OR INVESTMENT OR TAX ADVICE OR RECOMMENDATIONS TO CUSTOMER. THE DECISION WHETHER TO BUY OR HOLD OR SELL FULLY-PAID SHARES OR SECURITIES OF ANY KIND IS SOLELY CUSTOMER'S RESPONSIBILITY. IB'S INITIATION OR TERMINATION OF A LOAN OF FULLY-PAID SECURITIES IS NOT A RECOMMENDATION AS TO THE LONG-TERM VALUE OF THE SECURITIES AND LOANED SECURITIES MAY RISE OR FALL IN VALUE, WHICH IS SOLELY THE RESPONSIBILITY OF CUSTOMER.

6. **Securities Loaned Out By Customer May Not Be Protected by SIPC:**
The provisions of the Securities Investor Protection Act of 1970 may not protect Customer as a lender with respect to securities loan transactions in which Customer lends to Interactive Brokers Customer's Fully-Paid Securities. Therefore, the collateral delivered to Customer (and indicated on Customer's account statement) by Interactive Brokers may constitute the only source of satisfaction of IB's obligation in the event that IB fails to return the securities.

7. **Bankruptcy or Insolvency:**
In the event that Interactive Brokers: (1) applies for or consents to a receiver, custodian, trustee or liquidator of itself or its property; (2) admits in writing its inability, or becomes generally unable, to pay its debts as such debts become due; (3) makes a general assignment for the benefit of its creditors; or (4) files, or has filed against it, a petition for a Chapter 11 bankruptcy filing or a protective decree under Section 5 of the Securities Investor Protection Act of 1970 (SIPA), this Agreement and all outstanding loans shall be terminated and Customer shall have the right to return of Customer's loaned shares or the right to the collateral securing such loaned shares as specified in the Interactive Brokers Master Securities Lending Agreement for Fully-Paid Lending.

8. **Arbitration:**
The Interactive Brokers Customer Agreement contains arbitration clauses requiring Customer and IB to arbitrate any disputes. Such arbitration clauses are incorporated herein by reference. Customer acknowledge and agrees that all disputes regarding this Agreement and Power Of Attorney, Customer's account(s) or IB's provision of services to Customer are subject to arbitration.

Disclosure Regarding Interactive Brokers
Pre-Borrow Program

Introduction: Interactive Brokers ("IB") offers eligible customers the ability to borrow shares in advance of selling such shares short (a "pre-borrow" transaction). Please read the following disclosure carefully for important information about the pre-borrow program.

Basic Nature of Transaction: When you pre-borrow shares through IB, you will be engaging in a securities borrowing transaction with IB as your counterparty and you will be charged an interest rate each day for the borrowed shares. The interest rate may change as often as daily based on changes in market conditions, changes in demand for the shares in the securities lending market, and other factors.

All Borrow Rates Are Merely Indicative Until Confirmed on Daily Statement; Rates May Change Daily: IB may provide indicative interest rates for pre-borrows, but such rates are indicative only and may be higher or lower by a material amount than the actual rate that you will be charged if you borrow securities, which will be determined at or near the end of the trading day and is subject to change each day thereafter.

By using the IB Trader Workstation or other means to initiate a pre-borrow transaction, you are agreeing to borrow securities for at least one day and you are agreeing to pay whatever interest rate IB charges you in its sole discretion for the loan of the securities (i.e., your request to pre-borrow shares is similar to a âmarket orderâ). The rate for your loan will be determined by IB based on a number of factors, including but not limited to demand in the securities lending market, rates charged to IB by its counterparties and borrowing and lending activity by other IB customers. After you have requested a pre-borrow and IB has confirmed the loan to you of the shares during the trading day, IB may provide you with an indicative rate for the loan. Again, this rate is only indicative and the final interest rate is subject to change and will not be determined until at or near the end of the trading day. The interest rate for each day and transaction is not final until it is reported to you on your daily IB statement.

Return of Borrowed Shares: If you wish to return shares after you have borrowed them, you may do so beginning on the next trading day (you cannot return borrowed shares on the same day as the original pre-borrow). In order to return shares on a given day and terminate the borrowing costs, you must initiate a return of the shares by the cut-off time specified on the IB website or by 10:50 a.m. Eastern U.S. time, whichever is earlier.

Pre-Borrow Transactions And Short Sale Transactions Are Separate And Independent: When you pre-borrow shares, the transaction does not automatically involve a short sale of such shares. You must engage in a separate short sale trade to open a short position. Likewise, if you pre-borrow shares and then sell the shares short, and later you cover the short sale by purchasing shares, this will not automatically extinguish the borrow transaction. I.e., you will still be borrowing the shares and in order to return them and stop paying interest for borrowing them, you must separately initiate a return of the borrowed shares using the Trader Workstation or other means specified by IB. If, after pre-borrowing shares, you do not sell them short for settlement within 5 days of the pre-borrow, IB may, but is not required to, terminate the loan and return the shares.

If you have an existing short sale position and you subsequently pre-borrow shares of the same security, IB may, but is not required to, use the pre-borrow to support the existing short position (depending on when and if you engage in other short sales).

No Guaranteed Term for Borrows; Borrowed Shares Subject to Recall at Any Time: Pre-borrowing shares does not give you the right to keep the borrowed shares for any specific period of time. The loan can be terminated by IB at any time and the borrowed shares will be taken from your account and returned. Among other reasons, this may happen if IBâs external stock loan counterparties demand the shares back from IB. If you have pre-borrowed shares and then sold the shares short and IB thereafter terminates your borrow, this will not automatically terminate your short position (IB will not necessarily buy-in the shares you sold short). IB may be able to continue to provide shares to support your short position. If you pre-borrow shares and the loan is later terminated and if IB cannot otherwise find shares to continue to support your short position, you short position will be subject to being bought-in.

Commissions and Interest Rates: In addition to the interest rate you pay for borrowing shares, you will be charged a commission (at the commission rate described on IB's website) for each pro-borrow transaction. While IB will attempt to provide competitive interest rates for your pre-borrow transactions, IB does not guarantee that the rate will be the most favorable rate available. When you pre-borrow shares, IB may lend you shares it has available or may engage in separate transactions with external stock loan counterparties to support the loan to you. In either instance IB and/or its affiliates may earn a profit and/or a spread over market interest rates on the loan of shares to you.

Borrowing charges will be applied to your account on the same day that you initiate a pre-borrow transaction. This is true even though a short sale of those same shares will not settle until three days after the trade date. Thus, pre-borrowing before a short sale will lead you to incur several extra days of interest charges for the borrowed shares compared to an ordinary short sale done without a pre-borrow.

No Voting Or Other Rights: You will not have the right to vote, or to provide any consent or to take any similar action with respect to securities you borrow even if the record date or deadline for such vote, consent or other action falls during the term of the loan.

SIPC May Not Protect Pre-Borrowed Shares Prior to a Short Sale: Prior to using pre-borrowed shares for a short sale, such shares may not be protected under the provisions of the Securities Investor Protection Act of 1970.

Interactive Brokers LLC
Business Continuity Plan Disclosure

I. Introduction

In accordance with applicable regulations, Interactive Brokers LLC has developed a Business Continuity Plan to assist the firm in appropriately responding to a significant business disruption as promptly as possible under prevailing conditions. Among other things, IB's Business Continuity Plan:

- Identifies Emergency Contact Personnel to the firm's regulators;
- Describes the systems infrastructure protections that the firm has established in an effort to minimize the potential adverse effects of a disruption (for example, redundancy of telecommunications and power generation, fire protection and building security);
- Describes the firm's daily back-up of specified data and records and maintenance of back-up media at secure off-site locations;
- Identifies the firm's Disaster Recovery Site(s) and the methods that the firm would use to recover particular data and operations at the site;
- Identifies important firm operations and, where applicable, describes how those operations could be re-established in the event of a disruption;
- Identifies the means by which IB will provide customers prompt access to their funds and securities; and
- Describes the means by which IB will communicate with its customers, employees, business constituents and regulators in the event of a disruption.

In the event of a significant business disruption, IB intends to continue its operations to the extent reasonable and practical under the circumstances and will place utmost priority in reestablishing the data and operational systems necessary to provide its customers with prompt access to their funds and securities.

IB intends to respond to disruptions of particular scope as follows:

II. Branch Office Disruption

Basic Access to Funds and Securities in the Event of a Branch Office Disruption: Critical systems and personnel necessary to provide customers with access to their funds and securities generally are not dependent on operation of IB's branch offices (i.e., the firm's offices in Greenwich, Chicago, Hong Kong, Kwun Tong and Zug). Thus, IB does not anticipate that even a significant disruption to the operations of a single IB branch office would have more than a temporary impact - if any - on customers' basic access to their funds and securities.

Connection to IB Trading System for Certain Customers: In the event of a significant disruption to certain branch offices, customers that connect to the IB online trading system (e.g., the IB Trader Workstation) through a branch office location likely would temporarily lose the ability to connect to the trading system. It is anticipated that this would last only briefly, as connections for these customers could be re-established through other IB offices in as little as a matter of hours.

Recovery time probably would be minimal (measured in hours, though possibly within a day). Customers would still have the ability to place orders by telephone during the temporary outage. Customers' access to account functions other than trading (e.g., deposits and withdrawals, account management, etc.) may be affected, as connections for many Internet-based functions other than trading are location-dependent.

We remind our customers that electronic and computer-based facilities and systems such as those provided by IB are inherently vulnerable to disruption, delay or failure. As specified in the IB Customer Agreement, customers must maintain alternative trading arrangements in addition to their IB accounts for the placement and execution of customer orders in the event that the IB system is unavailable.

Connection to Market Centers in Same Region as Branch: A significant disruption in a branch office could temporarily impact all IB customers' ability to execute trades on market centers in the same geographic region as the branch office, because necessary communications lines or personnel could be affected. In this case, IB would strive to reconnect to affected markets from its Greenwich, CT headquarters, from another branch office, or through a third party. Recovery time to restore some basic ability to trade on local markets probably would be minimal (measured in hours or days).

Other Branch Office Functions: Most important operations performed in IB branch offices, such as Customer Service, Account Application Processing, Compliance, etc. are also performed in other IB offices and could be migrated to similarly-trained personnel in other branch offices promptly. Accordingly, IB does not anticipate that a localized failure in a branch office would have a substantial negative impact on the firm's ability to respond to customer needs and anticipates that recovery time would be minimal.

III. Headquarters Disruption

In the Event of a Moderate Disruption at IB's Headquarters: IB has generally designed its systems, procedures and personnel structure such that there is significant redundancy and cross capability. Limited disruptions affecting particular communications lines, particular pieces of computer hardware, or particular systems typically can be addressed quickly through use of redundant systems with similar capability. Likewise, the firm has significant capacity and capability in its branch offices, both in terms of systems and personnel, such that limited disruptions in particular areas at the firm's headquarters may be ameliorated quickly.

In the Event of a Significant Disruption at IB's Headquarters: IB's response to a significant disruption at its headquarters necessarily will depend on the extent of the damage caused thereby. In the event of a total loss of IB's headquarters, or the data processing center at its headquarters, IB runs a hot Disaster Recovery Site(s) with the relevant data and operational systems (e.g., trade and account data and modified versions of its market data, credit vetting and customer authentication capability) necessary to provide customers prompt access to their funds and securities. IB's Disaster Recovery Site(s) are located in remote geographic locations that are not likely to be not be subject to the same communications, electricity and/or transportation restrictions that may be experienced in the firm's Greenwich headquarters.

During the immediate aftermath of a significant business disruption resulting in the destruction of the firm's Greenwich headquarters, the firm anticipates that customers could continue to place new orders through its Disaster Recovery Site(s) with minor recovery time. IB anticipates that it could recover customer data and position information at its Disaster Recovery Site(s) and establish basic customer access to funds and positions within approximately 1 day of a total loss of its headquarters operations. Thus, while customers may not be able to trade, we anticipate that, within this 1 day window after the loss of the headquarters facility, customers would be able to request a withdrawal of funds or transfer of their positions to another broker whose operations were unaffected by a significant disruption. Although IB's Business Continuity Plan is designed to provide customer access to funds and securities within 1 day, the actual recovery time will depend on the nature of the disruption, how many IB facilities and personnel are affected, the state of the national and global financial and banking system, and a host of other factors.

In the event of a significant disruption or total loss of IB's headquarters facilities, IB anticipates that IB customers may be able to access either of the following websites: www.ibgdr.com or www.interactivebrokers.co.uk to obtain information about the extent of the disruption and the state of IB's operations (assuming that the public Internet remained available). Likewise, because most customer service personnel are in offices other than IB's headquarters, IB anticipates that customers would continue to be able to contact IB by telephone. Of course, in the event of a significant outage or major disaster affecting the markets, large numbers of customers would likely try to contact IB at the same time, potentially causing significant delays.

Beyond the initial aftermath of a significant disruption or total loss of the firm's headquarters, the firm would evaluate the nature of the disruption, the availability of its systems and personnel, its financial condition, the condition of the national and global financial markets, and other factors, and determine whether it could continue to provide full brokerage operations.

IV. City Wide Disruptions and Regional Disruptions

In the event of a significant city-wide or regional disruption in one of the cities in which an IB branch office is located, IB would follow the procedures described in Section II (Branch Office Disruption) above and we expect that the disruption's effects would be limited (see Section II above). In the event of a significant city-wide or regional disruption, affecting the firm's Greenwich, CT headquarters, IB would follow the procedures described in Section III (Headquarters Disruption). IB's Disaster Recovery Site(s) are not located in the same city or region as the firm's headquarters.

V. Important Disclosures

IB will adhere to the procedures set forth in its Business Continuity Plan and described in this disclosure to the extent commercially reasonable and practicable under prevailing circumstances. However, there are innumerable potential causes of a business disruption. In addition, disruptions (and the events that caused them) may vary significantly in nature, size, scope, severity, duration and geographic location and may result in distinct degrees of harm to human life; firm assets; the banks, exchanges, clearing houses and depositories with which the firm conducts business; and local, regional and national systems infrastructure (e.g., telecommunications, Internet connectivity, power generation and transportation) that could affect the firm's recovery in vastly disparate ways. In recognition of this, IB reserves the right to flexibly respond to particular emergencies and business disruptions in a situation-specific manner which the firm deems prudent, in its sole discretion. **Nothing in this document is intended to provide a guarantee or warranty regarding the actions or performance of IB, its computer systems, or its personnel in the event of a significant disruption.**

IB may modify its Business Continuity Plan and this disclosure at any time. IB will post updates to its Business Continuity Plan Disclosure on its website. Should you wish to receive a copy of this disclosure by mail, please contact the IB Document Processing Department at newaccounts@interactivebrokers.com

Privacy Notice

Interactive Brokers Group Privacy Notice

At Interactive Brokers ("IB"), we understand that confidentiality and security of the personal information that you share with us is important. That is why we have developed specific policies and practices designed to protect the privacy of your personal information.

By opening an account with IB or by utilizing the products and services available through IB, you have consented to the collection and use of your personal information in accordance with the privacy notice set forth below. We encourage you to read this privacy notice carefully.

IB does not sell customer lists or customer email addresses to third party marketers.

In order to provide brokerage services and to comply with regulatory requirements, IB collects certain personal, nonpublic information from you. This includes information:

- Provided during the IB account application process (e.g., your name, e-mail address, telephone number, birth date, social security number, investment objectives, etc.);
- Acquired as a result of the transactions you conduct through the IB system;
- Received from consumer-reporting agencies;
- Collected through Internet "cookies."

Cookies are bits of textual information that are sent electronically from a web server to your browser and are stored on your computer. They do not identify you individually or contain personal information about you, unless you have identified yourself or provided the information by, for example, opening an account or registering for an online service. IB may use cookies to measure and identify website traffic patterns and to track the performance of web features and advertisements. By providing IB with a better understanding of how you and others use IB's website and other web services, cookies enable IB to improve the navigation and functionality of its website and to present you with the most useful information and offers. IB may share information obtained from cookies with its employees, agents, and affiliates, but does not sell such information to unaffiliated third parties. IB may permit other companies or their third party ad servers to set cookies on your browser when you visit an IB website. Such companies generally use these cookies as we do. We also use cookies to improve the performance of our advertising on other websites. Although you may not opt out of receiving online advertisements generally, you may control the collection of data on our website that is used for targeted interactivebrokers.com advertising during your visits to other websites. To opt-out of data collection by Interactive Brokers for targeted advertising on other websites visit http://media1.interactivebrokers.com/optout.html.

We safeguard the confidentiality of your information in a number of ways.

For example:

- We do not sell or license lists of our customers or the personal, nonpublic information that you provide to us.
- We restrict access to the personal, nonpublic information that you have shared with us to those IB employees, agents and affiliates who need to know such information in connection with the services that IB provides to you.
- We maintain strict employment policies that prohibit employees who have access to your personal, nonpublic information from using or disclosing such information except for business purposes.
- We take substantial precautions to safeguard your personal, nonpublic information. For example, the IB system can be accessed only by authorized IB personnel via valid user names and passwords. In addition, our Internet-based systems include security measures such as encryption and firewalls.

We do not disclose personal, nonpublic information to individuals or entities that are not affiliated with IB, except as provided by law. For example, among other reasons, we may disclose or report such information: where necessary to authorize, effect, administer or enforce transactions that you request or authorize; to maintain and administer your account; to provide you with account confirmations, statements and records; to maintain appropriate archival records; where we believe that disclosure is required by applicable law, rules or regulations; to cooperate with law enforcement, regulatory or self-regulatory organizations; to enforce our customer and other agreements; to meet our obligations; or to protect our rights and property. As long as consistent with applicable securities laws and regulations, we may share anonymized account information or anonymized delayed order information with third parties (and/or share such information among our affiliates) for the purpose of analysis, research, market data compilation, product creation, establishing order routing and execution relationships, or for any other lawful purpose.

Finally, if you choose to subscribe to any of Interactive Brokers Investors' Marketplace suite of third-party services that are provided through the IB website, we may disclose such information to the service providers as necessary for them to provide the services that you have requested. IB requires these service providers to enter into confidentiality agreements with IB that limit their use of the information that they receive. Such agreements prohibit the service provider from using IB customer information that they receive other than to carry out the purposes for which the information was disclosed.

If you have any questions about these policies, please contact IB Customer Service through the IB website at interactivebrokers.com/help.

REQUIRED DISCLOSURES AND SUPPLEMENTAL AGREEMENT FOR SECURITY FUTURES TRADING AT INTERACTIVE BROKERS

I. Introduction

This information is being provided to you by Interactive Brokers ("IB") to ensure that you understand the risks inherent in trading security futures and also so that you understand how your security futures account is being handled by IB. You must review this document carefully and sign it at the bottom in order to be approved to trade security futures products through IB.

You should be aware that security futures are highly leveraged investments and the risk of loss in trading these products can be substantial. Security futures are not suitable for all investors and you must carefully review this document and consult with a financial advisor, if necessary, to determine whether to trade security futures. IB does not provide any investment advice or recommendations, and you will be solely responsible for decisions regarding the security futures trading conducted in your account.

II. Nature of Your Security Futures Account

Under the federal regulations that apply to security futures, security futures positions may be held in a securities trading account subject to Securities and Exchange Commission (SEC) regulations or in a commodities trading account subject to Commodity Futures Trading Commission (CFTC) regulations.

Because IB is fully registered with both the SEC and the CFTC, IB offers both securities accounts and commodities accounts. Most securities futures products are held in an IB securities account and are subject to SEC customer protection rules. However, certain securities futures products are held in a commodities account and are therefore subject to CFTC customer protection rules. Additional information regarding whether a particular securities future product is held in a securities or commodities account may be found on IB's website.

The types of protections offered to investors for securities and commodities accounts are different. The different protections available to securities accounts and commodities accounts are described in Section 6 of the NASD/NFA Standardized Risk Disclosure for Security Futures Contracts, below.

III. Standardized Risk Disclosure for Security Futures Contracts

The National Futures Association (NFA) and the NASD[1] have jointly prepared a Standardized Risk Disclosure for Security Futures Contracts. It contains valuable information regarding trading of security futures contracts and you should review it carefully before investing in security futures.

To review the NASD/NFA Standardized Risk Disclosure for Security Futures Contracts, click here.

NOTE: Viewing the Standardized Risk Disclosure requires Adobe Acrobat. To download Adobe Acrobat, click here. If you wish to receive a hard copy of the disclosure, call IB Customer Service at (877) 442-2757.

IV. Supplemental Agreement for Security Futures Trading

The Supplemental Agreement provisions below relate to security futures trading in Customer's IB account and are in addition to the terms and conditions of the IB Customer Agreement, and the Customer Agreement is incorporated herein by reference.

By signing below, Customer acknowledges and agrees to the following:

A. Customer acknowledges that Customer's U.S. and non-U.S. securities futures positions may be held in either a securities or commodities account, in IB's sole discretion. Customer acknowledges that U.S. and non-U.S. listed securities futures held in an IB securities account will receive the regulatory protections of a securities account. Customer acknowledges that U.S. and non-U.S. listed securities futures held in an IB commodities account will receive the regulatory protections of a commodities account.

B. Customer acknowledges that IB may in the future, at its sole discretion, decide to hold customer security futures positions in IB securities accounts or commodities accounts and may not allow customers to make this choice. If IB determines to do this, it will provide required notice to customers of the change.

C. Customer represents that Customer has received and reviewed the NASD/NFA Standardized Risk Disclosure for Security Futures Contracts.

D. Customer acknowledges that security futures are highly leveraged investments that are not suitable for all investors. Customer acknowledges that IB representatives are not authorized to provide investment, trading or tax advice and therefore will not provide advice or guidance on trading or hedging strategies involving security futures. Customers who need advice or guidance regarding security futures trading or investments should consult a financial advisor.

E. Customer acknowledges that Customer must review and be aware of, and that Customer is bound by, the rules applicable to the trading of security futures, as established by the NASD, the NFA and the security futures exchanges. Customer represents that it is aware of and agrees not to violate any applicable position limits regarding security futures.

(1) In July 2007, the NASD was consolidated with the member regulation, enforcement and arbitration functions of the New York Stock Exchange to form the Financial Industry Regulatory Authority (FINRA).

RISK DISCLOSURE STATEMENT FOR
SECURITY FUTURES CONTRACTS

This disclosure statement discusses the characteristics and risks of standardized security futures contracts traded on regulated U.S. exchanges. At present, regulated exchanges are authorized to list futures contracts on individual equity securities registered under the Securities Exchange Act of 1934 (including common stock and certain exchange-traded funds and American Depositary Receipts), as well as narrow-based security indices. Futures on other types of securities and options on security futures contracts may be authorized in the future. The glossary of terms appears at the end of the document.

Customers should be aware that the examples in this document are exclusive of fees and commissions that may decrease their net gains or increase their net losses. The examples also do not include tax consequences, which may differ for each customer.

Section 1 – Risks of Security Futures

1.1. Risks of Security Futures Transactions

Trading security futures contracts may not be suitable for all investors. You may lose a substantial amount of money in a very short period of time. The amount you may lose is potentially unlimited and can exceed the amount you originally deposit with your broker. This is because futures trading is highly leveraged, with a relatively small amount of money used to establish a position in assets having a much greater value. If you are uncomfortable with this level of risk, you should not trade security futures contracts.

1.2. General Risks

Trading security futures contracts involves risk and may result in potentially unlimited losses that are greater than the amount you deposited with your broker. As with any high risk financial product, you should not risk any funds that you cannot afford to lose, such as your retirement savings, medical and other emergency funds, funds set aside for purposes such as education or home ownership, proceeds from student loans or mortgages, or funds required to meet your living expenses.

Be cautious of claims that you can make large profits from trading security futures contracts. Although the high degree of leverage in security futures contracts can result in large and immediate gains, it can also result in large and immediate losses. As with any financial product, there is no such thing as a “sure winner.”

Because of the leverage involved and the nature of security futures contract transactions, you may feel the effects of your losses immediately. Gains and losses in security futures contracts are credited or debited to your account, at a minimum, on a daily basis. If movements in the markets for security futures contracts or the underlying security decrease the value of your positions in security futures contracts, you may be required to have or make additional funds available to your carrying firm as margin. If your account is under the minimum margin requirements set by the exchange or the brokerage firm, your position may be liquidated at a loss, and you will be liable for the deficit, if any, in your account. Margin requirements are addressed in Section 4.

Under certain market conditions, it may be difficult or impossible to liquidate a position. Generally, you must enter into an offsetting transaction in order to liquidate a position in a security futures contract. If you cannot liquidate your position in a security futures contracts, you may not be able to realize a gain in the value of your position or prevent losses from mounting. This inability to liquidate could occur, for example, if trading is halted due to unusual trading activity in either the security futures contract or the underlying security; if trading is halted due to recent news events involving the issuer of the underlying security; if systems failures occur on an exchange or at the firm carrying your position; or if the position is on an illiquid market. Even if you can liquidate your position, you may be forced to do so at a price that involves a large loss.

Under certain market conditions, it may also be difficult or impossible to manage your risk from open security futures positions by entering into an equivalent but opposite position in another contract month, on another market, or in the underlying security. This inability to take positions to limit your risk could occur, for example, if trading is halted across markets due to unusual trading activity in the security futures contract or the underlying security or due to recent news events involving the issuer of the underlying security.

Under certain market conditions, the prices of security futures contracts may not maintain their customary or anticipated relationships to the prices of the underlying security or index. These pricing disparities could occur, for example, when the market for the security futures contract is illiquid, when the primary market for the underlying security is closed, or when the reporting of transactions in the underlying security has been delayed. For index products, it could also occur when trading is delayed or halted in some or all of the securities that make up the index.

You may be required to settle certain security futures contracts with physical delivery of the underlying security. If you hold your position in a physically settled security futures contract until the end of the last trading day prior to expiration, you will be obligated to make or take delivery of the underlying securities, which could involve additional costs. The actual settlement terms may vary from contract to contract and exchange to exchange. You should carefully review the settlement and delivery conditions before entering into a security futures contract. Settlement and delivery are discussed in Section 5.

You may experience losses due to systems failures. As with any financial transaction, you may experience losses if your orders for security futures contracts cannot be executed normally due to systems failures on a regulated exchange or at the brokerage firm carrying your position. Your losses may be greater if the brokerage firm carrying your position does not have adequate back-up systems or procedures.

All security futures contracts involve risk, and there is no trading strategy that can eliminate it. Strategies using combinations of positions, such as spreads, may be as risky as outright long or short positions. Trading in security futures contracts requires knowledge of both the securities and the futures markets.

Day trading strategies involving security futures contracts and other products pose special risks. As with any financial product, persons who seek to purchase and sell the same security future in the course of a day to profit from intra-day price movements ("day traders") face a number of special risks, including substantial commissions, exposure to leverage, and competition with professional traders. You should thoroughly understand these risks and have appropriate experience before engaging in day trading. The special risks for day traders are discussed more fully in Section 7.

Placing contingent orders, if permitted, such as "stop-loss" or "stop-limit" orders, will not necessarily limit your losses to the intended amount. Some regulated exchanges may permit you to enter into stop-loss or stop-limit orders for security futures contracts, which are intended to limit your exposure to losses due to market fluctuations. However, market conditions may make it impossible to execute the order or to get the stop price.

You should thoroughly read and understand the customer account agreement with your brokerage firm before entering into any transactions in security futures contracts.

You should thoroughly understand the regulatory protections available to your funds and positions in the event of the failure of your brokerage firm. The regulatory protections available to your funds and positions in the event of the failure of your brokerage firm may vary depending on, among other factors, the contract you are trading and whether you are trading through a securities account or a futures account. Firms that allow customers to trade security futures in either securities accounts or futures accounts, or both, are required to disclose to customers the differences in regulatory protections between such accounts, and, where appropriate, how customers may elect to trade in either type of account.

Section 2 – Description of a Security Futures Contract

2.1. What is a Security Futures Contract?

A security futures contract is a legally binding agreement between two parties to purchase or sell in the future a specific quantity of shares of a security or of the component securities of a narrow-based security index, at a certain price. A person who buys a security futures contract enters into a contract to purchase an underlying security and is said to be "long" the contract. A person who sells a security futures contract enters into a contract to sell the underlying security and is said to be "short" the contract. The price at which the contract trades (the "contract price") is determined by relative buying and selling interest on a regulated exchange.

In order to enter into a security futures contract, you must deposit funds with your brokerage firm equal to a specified percentage (usually at least 20 percent) of the current market value of the contract as a performance bond. Moreover, all security futures contracts are marked-to-market at least daily, usually after the close of trading, as described in Section 3 of this document. At that time, the account of each buyer and seller reflects the amount of any gain or loss on the security futures contract based on the contract price established at the end of the day for settlement purposes (the "daily settlement price").

An open position, either a long or short position, is closed or liquidated by entering into an offsetting transaction (i.e., an equal and opposite transaction to the one that opened the position) prior to the contract expiration. Traditionally, most futures contracts are liquidated prior to expiration through an offsetting transaction and, thus, holders do not incur a settlement obligation.

Examples:

> Investor A is long one September XYZ Corp. futures contract. To liquidate the long position in the September XYZ Corp. futures contract, Investor A would sell an identical September XYZ Corp. contract.
>
> Investor B is short one December XYZ Corp. futures contract. To liquidate the short position in the December XYZ Corp. futures contract, Investor B would buy an identical December XYZ Corp. contract.

Security futures contracts that are not liquidated prior to expiration must be settled in accordance with the terms of the contract. Some security futures contracts are settled by physical delivery of the underlying security. At the expiration of a security futures contract that is settled through physical delivery, a person who is long the contract must pay the final settlement price set by the regulated exchange or the clearing organization and take delivery of the underlying shares. Conversely, a person who is short the contract must make delivery of the underlying shares in exchange for the final settlement price.

Other security futures contracts are settled through cash settlement. In this case, the underlying security is not delivered. Instead, any positions in such security futures contracts that are open at the end of the last trading day are settled through a final cash payment based on a final settlement price determined by the exchange or clearing organization. Once this payment is made, neither party has any further obligations on the contract.

Physical delivery and cash settlement are discussed more fully in Section 5.

2.2. Purposes of Security Futures

Security futures contracts can be used for speculation, hedging, and risk management. Security futures contracts do not provide capital growth or income.

Speculation

Speculators are individuals or firms who seek to profit from anticipated increases or decreases in futures prices. A speculator who expects the price of the underlying instrument to increase will buy the security futures contract. A speculator who expects the price of the underlying instrument to decrease will sell the security futures contract. Speculation involves substantial risk and can lead to large losses as well as profits.

The most common trading strategies involving security futures contracts are buying with the hope of profiting from an anticipated price increase and selling with the hope of profiting from an anticipated price decrease. For example, a person who expects the price of XYZ stock to increase by March can buy a March XYZ security futures contract, and a person who expects the price of XYZ stock to decrease by March can sell a March XYZ security futures contract. The following illustrates potential profits and losses if Customer A purchases the security futures contract at $50 a share and Customer B sells the same contract at $50 a share (assuming 100 shares per contract).

Price of XYZ at Liquidation	Customer A Profit/Loss	Customer B Profit/Loss
$55	$500	- $500
$50	$ 0	$ 0
$45	- $500	$500

Speculators may also enter into spreads with the hope of profiting from an expected change in price relationships. Spreaders may purchase a contract expiring in one contract month and sell another contract on the same underlying security expiring in a different month (e.g., buy June and sell September XYZ single stock futures). This is commonly referred to as a “calendar spread.”

Spreaders may also purchase and sell the same contract month in two different but economically correlated security futures contracts. For example, if ABC and XYZ are both pharmaceutical companies and an individual believes that ABC will have stronger growth than XYZ between now and June, he could buy June ABC futures contracts and sell June XYZ futures contracts. Assuming that each contract is 100 shares, the following illustrates how this works.

Opening Position	Price at Liquidation	Gain or Loss	Price at Liquidation	Gain or Loss
Buy ABC at 50	$53	$300	$53	$300
Sell XYZ at 45	$46	- $100	$50	- $500
Net Gain or Loss		$200		- $200

Speculators can also engage in arbitrage, which is similar to a spread except that the long and short positions occur on two different markets. An arbitrage position can be established by taking an economically opposite position in a security futures contract on another exchange, in an options contract, or in the underlying security.

Hedging

Generally speaking, hedging involves the purchase or sale of a security future to reduce or offset the risk of a position in the underlying security or group of securities (or a close economic equivalent). A hedger gives up the potential to profit from a favorable price change in the position being hedged in order to minimize the risk of loss from an adverse price change.

An investor who wants to lock in a price now for an anticipated sale of the underlying security at a later date can do so by hedging with security futures. For example, assume an investor owns 1,000 shares of ABC that have appreciated since he bought them. The investor would like to sell them at the current price of $50 per share, but there are tax or other reasons for holding them until September. The investor could sell ten 100-share ABC futures contracts and then buy back those contracts in September when he sells the stock. Assuming the stock price and the futures price change by the same amount, the gain or loss in the stock will be offset by the loss or gain in the futures contracts.

Price in September	Value of 1,000 Shares of ABC	Gain or Loss on Futures	Effective Selling Price
$40	$40,000	$10,000	$50,000
$50	$50,000	$ 0	$50,000
$60	$60,000	-$10,000	$50,000

Hedging can also be used to lock in a price now for an anticipated purchase of the stock at a later date. For example, assume that in May a mutual fund expects to buy stocks in a particular industry with the proceeds of bonds that will mature in August. The mutual fund can hedge its risk that the stocks will increase in value between May and August by purchasing security futures contracts on a narrow-based index of stocks from that industry. When the mutual fund buys the stocks in August, it also will liquidate the security futures position in the index. If the relationship between the security futures contract and the stocks in the index is constant, the profit or loss from the futures contract will offset the price change in the stocks, and the mutual fund will have locked in the price that the stocks were selling at in May.

Although hedging mitigates risk, it does not eliminate all risk. For example, the relationship between the price of the security futures contract and the price of the underlying security traditionally tends to remain constant over time, but it can and does vary somewhat. Furthermore, the expiration or liquidation of the security futures contract may not coincide with the exact time the hedger buys or sells the underlying stock. Therefore, hedging may not be a perfect protection against price risk.

Risk Management

Some institutions also use futures contracts to manage portfolio risks without necessarily intending to change the composition of their portfolio by buying or selling the underlying securities. The institution does so by taking a security futures position that is opposite to some or all of its position in the underlying securities. This strategy involves more risk than a traditional hedge because it is not meant to be a substitute for an anticipated purchase or sale.

2.3. Where Security Futures Trade

By law, security futures contracts must trade on a regulated U.S. exchange. Each regulated U.S. exchange that trades security futures contracts is subject to joint regulation by the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC).

A person holding a position in a security futures contract who seeks to liquidate the position must do so either on the regulated exchange where the original trade took place or on another regulated exchange, if any, where a fungible security futures contract trades. (A person may also seek to manage the risk in that position by taking an opposite position in a comparable contract traded on another regulated exchange.)

Security futures contracts traded on one regulated exchange might not be fungible with security futures contracts traded on another regulated exchange for a variety of reasons. Security futures traded on different regulated exchanges may be non-fungible because they have different contract terms (e.g., size, settlement method), or because they are cleared through different clearing organizations. Moreover, a regulated exchange might not permit its security futures contracts to be offset or liquidated by an identical contract traded on another regulated exchange, even though they have the same contract terms and are cleared through the same clearing organization. You should consult your broker about the fungibility of the contract you are considering purchasing or selling, including which exchange(s), if any, on which it may be offset.

Regulated exchanges that trade security futures contracts are required by law to establish certain listing standards. Changes in the underlying security of a security futures contract may, in some cases, cause such contract to no longer meet the regulated exchange's listing standards. Each regulated exchange will have rules governing the continued trading of security futures contracts that no longer meet the exchange's listing standards. These rules may, for example, permit only liquidating trades in security futures contracts that no longer satisfy the listing standards.

2.4. How Security Futures Differ from the Underlying Security

Shares of common stock represent a fractional ownership interest in the issuer of that security. Ownership of securities confers various rights that are not present with positions in security futures contracts. For example, persons owning a share of common stock may be entitled to vote in matters affecting corporate governance. They also may be entitled to receive dividends and corporate disclosure, such as annual and quarterly reports.

The purchaser of a security futures contract, by contrast, has only a contract for future delivery of the underlying security. The purchaser of the security futures contract is not entitled to exercise any voting rights over the underlying security and is not entitled to any dividends that may be paid by the issuer. Moreover, the purchaser of a security futures contract does not receive the corporate disclosures that are received by shareholders of the underlying security, although such corporate disclosures must be made publicly available through the SEC's EDGAR system, which can be accessed at www.sec.gov. You should review such disclosures before entering into a security futures contract. See Section 9 for further discussion of the impact of corporate events on a security futures contract.

All security futures contracts are marked-to-market at least daily, usually after the close of trading, as described in Section 3 of this document. At that time, the account of each buyer and seller is credited with the amount of any gain, or debited by the amount of any loss, on the security futures contract, based on the contract price established at the end of the day for settlement purposes (the "daily settlement price"). By contrast, the purchaser or seller of the underlying instrument does not have the profit and loss from his or her investment credited or debited until the position in that instrument is closed out.

Naturally, as with any financial product, the value of the security futures contract and of the underlying security may fluctuate. However, owning the underlying security does not require an investor to settle his or her profits and losses daily. By contrast, as a result of the mark-to-market requirements discussed above, a person who is long a security futures contract often will be required to deposit additional funds into his or her account as the price of the security futures contract decreases. Similarly, a person who is short a security futures contract often will be required to deposit additional funds into his or her account as the price of the security futures contract increases.

Another significant difference is that security futures contracts expire on a specific date. Unlike an owner of the underlying security, a person cannot hold a long position in a security futures contract for an extended period of time in the hope that the price will go up. If you do not liquidate your security futures contract, you will be required to settle the contract when it expires, either through physical delivery or cash settlement. For cash-settled contracts in particular, upon expiration, an individual will no longer have an economic interest in the securities underlying the security futures contract.

2.5. Comparison to Options

Although security futures contracts share some characteristics with options on securities (options contracts), these products are also different in a number of ways. Below are some of the important distinctions between equity options contracts and security futures contracts.

If you purchase an options contract, you have the right, but not the obligation, to buy or sell a security prior to the expiration date. If you sell an options contract, you have the obligation to buy or sell a security prior to the expiration date. By contrast, if you have a position in a security futures contract (either long or short), you have both the right and the obligation to buy or sell a security at a future date. The only way that you can avoid the obligation incurred by the security futures contract is to liquidate the position with an offsetting contract.

A person purchasing an options contract runs the risk of losing the purchase price (premium) for the option contract. Because it is a wasting asset, the purchaser of an options contract who neither liquidates the options contract in the secondary market nor exercises it at or prior to expiration will necessarily lose his or her entire investment in the options contract. However, a purchaser of an options contract cannot lose more than the amount of the premium. Conversely, the seller of an options contract receives the premium and assumes the risk that he or she will be required to buy or sell the underlying security on or prior to the expiration date, in which event his or her losses may exceed the amount of the premium received. Although the seller of an options contract is required to deposit margin to reflect the risk of its obligation, he or she may lose many times his or her initial margin deposit.

By contrast, the purchaser and seller of a security futures contract each enter into an agreement to buy or sell a specific quantity of shares in the underlying security. Based upon the movement in prices of the underlying security, a person who holds a position in a security futures contract can gain or lose many times his or her initial margin deposit. In this respect, the benefits of a security futures contract are similar to the benefits of *purchasing* an option, while the risks of entering into a security futures contract are similar to the risks of *selling* an option.

Both the purchaser and the seller of a security futures contract have daily margin obligations. At least once each day, security futures contracts are marked-to-market and the increase or decrease in the value of the contract is credited or debited to the buyer and the seller. As a result, any person who has an open position in a security futures contract may be called upon to meet additional margin requirements or may receive a credit of available funds.

Example:

> Assume that Customers A and B each anticipate an increase in the market price of XYZ stock, which is currently $50 a share. Customer A purchases an XYZ 50 call (covering 100 shares of XYZ at a premium of $5 per share). The option premium is $500 ($5 per share X 100 shares). Customer B purchases an XYZ security futures contract (covering 100 shares of XYZ). The total value of the contract is $5000 ($50 share value X 100 shares). The required margin is $1000 (or 20% of the contract value).

Price of XYZ at expiration	Customer A Profit/Loss	Customer B Profit/Loss
65	1000	1500
60	500	1000
55	0	500
50	-500	0

45	-500	-500
40	-500	-1000
35	-500	-1500

The most that Customer A can lose is $500, the option premium. Customer A breaks even at $55 per share, and makes money at higher prices. Customer B may lose more than his initial margin deposit. Unlike the options premium, the margin on a futures contract is not a cost but a performance bond. The losses for Customer B are not limited by this performance bond. Rather, the losses or gains are determined by the settlement price of the contract, as provided in the example above. Note that if the price of XYZ falls to $35 per share, Customer A loses only $500, whereas Customer B loses $1500.

2.6. Components of a Security Futures Contract

Each regulated exchange can choose the terms of the security futures contracts it lists, and those terms may differ from exchange to exchange or contract to contract. Some of those contract terms are discussed below. However, you should ask your broker for a copy of the contract specifications before trading a particular contract.

2.6.1. Each security futures contract has a set size. The size of a security futures contract is determined by the regulated exchange on which the contract trades. For example, a security futures contract for a single stock may be based on 100 shares of that stock. If prices are reported per share, the value of the contract would be the price times 100. For narrow-based security indices, the value of the contract is the price of the component securities times the multiplier set by the exchange as part of the contract terms.

2.6.2. Security futures contracts expire at set times determined by the listing exchange. For example, a particular contract may expire on a particular day, e.g., the third Friday of the expiration month. Up until expiration, you may liquidate an open position by offsetting your contract with a fungible opposite contract that expires in the same month. If you do not liquidate an open position before it expires, you will be required to make or take delivery of the underlying security or to settle the contract in cash after expiration.

2.6.3. Although security futures contracts on a particular security or a narrow-based security index may be listed and traded on more than one regulated exchange, the contract specifications may not be the same. Also, prices for contracts on the same security or index may vary on different regulated exchanges because of different contract specifications.

2.6.4. Prices of security futures contracts are usually quoted the same way prices are quoted in the underlying instrument. For example, a contract for an individual security would be quoted in dollars and cents per share. Contracts for indices would be quoted by an index number, usually stated to two decimal places.

2.6.5. Each security futures contract has a minimum price fluctuation (called a tick), which may differ from product to product or exchange to exchange. For example, if a particular security futures contract has a tick size of 1¢, you can buy the contract at $23.21 or $23.22 but not at $23.215.

2.7. Trading Halts

The value of your positions in security futures contracts could be affected if trading is halted in either the security futures contract or the underlying security. In certain circumstances, regulated exchanges are required by law to halt trading in security futures contracts. For example, trading on a particular security futures contract must be halted if trading is halted on the listed market for the underlying security as a result of pending news, regulatory concerns, or market volatility. Similarly, trading of a security futures contract on a narrow-based security index must be halted under such circumstances if trading is halted on securities accounting for at least 50 percent of the market capitalization of the index. In addition, regulated exchanges are required to halt trading in all security futures contracts for a specified period of time when the Dow Jones Industrial Average ("DJIA") experiences one-day declines of 10-, 20- and 30-percent. The regulated exchanges may also have discretion under their rules to halt trading in other circumstances – such as when the exchange determines that the halt would be advisable in maintaining a fair and orderly market.

A trading halt, either by a regulated exchange that trades security futures or an exchange trading the underlying security or instrument, could prevent you from liquidating a position in security futures contracts in a timely manner, which could prevent you from liquidating a position in security futures contracts at that time.

2.8. Trading Hours

Each regulated exchange trading a security futures contract may open and close for trading at different times than other regulated exchanges trading security futures contracts or markets trading the underlying security or securities. Trading in security futures contracts prior to the opening or after the close of the primary market for the underlying security may be less liquid than trading during regular market hours.

Section 3 – Clearing Organizations and Mark-to-Market Requirements

Every regulated U.S. exchange that trades security futures contracts is required to have a relationship with a clearing organization that serves as the guarantor of each security futures contract traded on that exchange. A clearing organization performs the following functions: matching trades; effecting settlement and payments; guaranteeing performance; and facilitating deliveries.

Throughout each trading day, the clearing organization matches trade data submitted by clearing members on behalf of their customers or for the clearing member's proprietary accounts. If an account is with a brokerage firm that is not a member of the clearing organization, then the brokerage firm will carry the security futures position with another brokerage firm that is a member of the clearing organization. Trade records that do not match, either because of a discrepancy in the details or because one side of the transaction is missing, are returned to the submitting clearing members for resolution. The members are required to resolve such "out trades" before or on the open of trading the next morning.

When the required details of a reported transaction have been verified, the clearing organization assumes the legal and financial obligations of the parties to the transaction. One way to think of the role of the clearing organization is that it is the "buyer to every seller and the seller to every buyer." The insertion or substitution of the clearing organization as the counterparty to every transaction enables a customer to liquidate a security futures position without regard to what the other party to the original security futures contract decides to do.

The clearing organization also effects the settlement of gains and losses from security futures contracts between clearing members. At least once each day, clearing member brokerage firms must either pay to, or receive from, the clearing organization the difference between the current price and the trade price earlier in the day, or for a position carried over from the previous day, the difference between the current price and the previous day's settlement price. Whether a clearing organization effects settlement of gains and losses on a daily basis or more frequently will depend on the conventions of the clearing organization and market conditions. Because the clearing organization assumes the legal and financial obligations for each security futures contract, you should expect it to ensure that payments are made promptly to protect its obligations.

Gains and losses in security futures contracts are also reflected in each customer's account on at least a daily basis. Each day's gains and losses are determined based on a daily settlement price disseminated by the regulated exchange trading the security futures contract or its clearing organization. If the daily settlement price of a particular security futures contract rises, the buyer has a gain and the seller a loss. If the daily settlement price declines, the buyer has a loss and the seller a gain. This process is known as "marking-to-market" or daily settlement. As a result, individual customers normally will be called on to settle daily.

The one-day gain or loss on a security futures contract is determined by calculating the difference between the current day's settlement price and the previous day's settlement price.

For example, assume a security futures contract is purchased at a price of $120. If the daily settlement price is either $125 (higher) or $117 (lower), the effects would be as follows:

(1 contract representing 100 shares)

Daily Settlement Value	Buyer's Account	Seller's Account
$125	$500 gain (credit)	$500 loss (debit)
$117	$300 loss (debit)	$300 gain (credit)

The cumulative gain or loss on a customer's open security futures positions is generally referred to as "open trade equity" and is listed as a separate component of account equity on your customer account statement.

A discussion of the role of the clearing organization in effecting delivery is discussed in Section 5.

Section 4 – Margin and Leverage

When a broker-dealer lends a customer part of the funds needed to purchase a security such as common stock, the term "margin" refers to the amount of cash, or down payment, the customer is required to deposit. By contrast, a security futures contract is an obligation and not an asset. A security futures contract has no value as collateral for a loan. Because of the potential for a loss as a result of the daily marked-to-market process, however, a margin deposit is required of each party to a security futures contract. This required margin deposit also is referred to as a "performance bond."

In the first instance, margin requirements for security futures contracts are set by the exchange on which the contract is traded, subject to certain minimums set by law. The basic margin requirement is 20% of the current value of the security futures contract, although some strategies may have lower margin requirements. Requests for additional margin are known as "margin calls." Both buyer and seller must individually deposit the required margin to their respective accounts.

It is important to understand that individual brokerage firms can, and in many cases do, require margin that is higher than the exchange requirements. Additionally, margin requirements may vary from brokerage firm to brokerage firm. Furthermore, a brokerage firm can increase its "house" margin requirements at any time without providing advance notice, and such increases could result in a margin call.

For example, some firms may require margin to be deposited the business day following the day of a deficiency, or some firms may even require deposit on the same day. Some firms may require margin to be on deposit in the account before they will accept an order for a security futures contract. Additionally, brokerage firms may have special requirements as to how margin calls are to be met, such as requiring a wire transfer from a bank, or deposit of a certified or cashier's check. You should thoroughly read and understand the customer agreement with your brokerage firm before entering into any transactions in security futures contracts.

If through the daily cash settlement process, losses in the account of a security futures contract participant reduce the funds on deposit (or equity) below the maintenance margin level (or the firm's higher "house" requirement), the brokerage firm will require that additional funds be deposited.

If additional margin is not deposited in accordance with the firm's policies, the firm can liquidate your position in security futures contracts or sell assets in any of your accounts at the firm to cover the margin deficiency. You remain responsible for any shortfall in the account after such liquidations or sales. Unless provided otherwise in your customer agreement or by applicable law, you are not entitled to choose which futures contracts, other securities or other assets are liquidated or sold to meet a margin call or to obtain an extension of time to meet a margin call.

Brokerage firms generally reserve the right to liquidate a customer's security futures contract positions or sell customer assets to meet a margin call at any time without contacting the customer. Brokerage firms may also enter into equivalent but opposite positions for your account in order to manage the risk created by a margin call. Some customers mistakenly believe that a firm is required to contact them for a margin call to be valid, and that the firm is not allowed to liquidate securities or other assets in their accounts to meet a margin call unless the firm has contacted them first. This is not the case. While most firms notify their customers of margin calls and allow some time for deposit of additional margin, they are not required to do so. Even if a firm has notified a customer of a margin call and set a specific due date for a margin deposit, the firm can still take action as necessary to protect its financial interests, including the immediate liquidation of positions without advance notification to the customer.

Here is an example of the margin requirements for a long security futures position.

A customer buys 3 July EJG security futures at 71.50. Assuming each contract represents 100 shares, the nominal value of the position is $21,450 (71.50 x 3 contracts x 100 shares). If the initial margin rate is 20% of the nominal value, then the customer’s initial margin requirement would be $4,290. The customer deposits the initial margin, bringing the equity in the account to $4,290.

First, assume that the next day the settlement price of EJG security futures falls to 69.25. The marked-to-market loss in the customer’s equity is $675 (71.50 – 69.25 x 3 contacts x 100 shares). The customer’s equity decreases to $3,615 ($4,290 – $675). The new nominal value of the contract is $20,775 (69.25 x 3 contracts x 100 shares). If the maintenance margin rate is 20% of the nominal value, then the customer’s maintenance margin requirement would be $4,155. Because the customer’s equity had decreased to $3,615 (see above), the customer would be required to have an additional $540 in margin ($4,155 – $3,615).

Alternatively, assume that the next day the settlement price of EJG security futures rises to 75.00. The mark-to-market gain in the customer’s equity is $1,050 (75.00 – 71.50 x 3 contacts x 100 shares). The customer’s equity increases to $5,340 ($4,290 + $1,050). The new nominal value of the contract is $22,500 (75.00 x 3 contracts x 100 shares). If the maintenance margin rate is 20% of the nominal value, then the customer’s maintenance margin requirement would be $4,500. Because the customer’s equity had increased to $5,340 (see above), the customer’s excess equity would be $840.

The process is exactly the same for a short position, except that margin calls are generated as the settlement price rises rather than as it falls. This is because the customer's equity decreases as the settlement price rises and increases as the settlement price falls.

Because the margin deposit required to open a security futures position is a fraction of the nominal value of the contracts being purchased or sold, security futures contracts are said to be highly leveraged. The smaller the margin requirement in relation to the underlying value of the security futures contract, the greater the leverage. Leverage allows exposure to a given quantity of an underlying asset for a fraction of the investment needed to purchase that quantity outright. In sum, buying (or selling) a security futures contract provides the same dollar and cents profit and loss outcomes as owning (or shorting) the underlying security. However, as a percentage of the margin deposit, the potential immediate exposure to profit or loss is much higher with a security futures contract than with the underlying security.

For example, if a security futures contract is established at a price of $50, the contract has a nominal value of $5,000 (assuming the contract is for 100 shares of stock). The margin requirement may be as low as 20%. In the example just used, assume the contract price rises from \$50 to \$52 (a \$200 increase in the nominal value). This represents a \$200 profit to the buyer of the security futures contract, and a 20% return on the \$1,000 deposited as margin. The reverse would be true if the contract price decreased from \$50 to \$48. This represents a \$200 loss to the buyer, or 20% of the \$1,000 deposited as margin. Thus, leverage can either benefit or harm an investor.

Note that a 4% decrease in the value of the contract resulted in a loss of 20% of the margin deposited. A 20% decrease would wipe out 100% of the margin deposited on the security futures contract.

Section 5 – Settlement

If you do not liquidate your position prior to the end of trading on the last day before the expiration of the security futures contract, you are obligated to either 1) make or accept a cash payment ("cash settlement") or 2) deliver or accept delivery of the underlying securities in exchange for final payment of the final settlement price ("physical delivery"). The terms of the contract dictate whether it is settled through cash settlement or by physical delivery.

The expiration of a security futures contract is established by the exchange on which the contract is listed. On the expiration day, security futures contracts cease to exist. Typically, the last trading day of a security futures contract will be the third Friday of the expiring contract month, and the expiration day will be the following Saturday. This follows the expiration conventions for stock options and broad-based stock indexes. Please keep in mind that the expiration day is set by the listing exchange and may deviate from these norms.

5.1. Cash settlement

In the case of cash settlement, no actual securities are delivered at the expiration of the security futures contract. Instead, you must settle any open positions in security futures by making or receiving a cash payment based on the difference between the final settlement price and the previous day's settlement price. Under normal circumstances, the final settlement price for a cash-settled contract will reflect the opening price for the underlying security. Once this payment is made, neither the buyer nor the seller of the security futures contract has any further obligations on the contract.

5.2. Settlement by physical delivery

Settlement by physical delivery is carried out by clearing brokers or their agents with National Securities Clearing Corporation ("NSCC"), an SEC-regulated securities clearing agency. Such settlements are made in much the same way as they are for purchases and sales of the underlying security. Promptly after the last day of trading, the regulated exchange's clearing organization will report a purchase and sale of the underlying stock at the previous day's settlement price (also referred to as the "invoice price") to NSCC. In general, if NSCC does not reject the transaction by a time specified in its rules, settlement is effected pursuant to the rules of the exchange and NSCC's Rules and Procedures within the normal clearance and settlement cycle for securities transactions, which currently is three business days. However, settlement may be effected on a shorter timeframe based on the rules of the exchange and subject to NSCC's Rules and Procedures.

If you hold a short position in a physically settled security futures contract to expiration, you will be required to make delivery of the underlying securities. If you already own the securities, you may tender them to your brokerage firm. If you do not own the securities, you will be obligated to purchase them. Some brokerage firms may not be able to purchase the securities for you. If your brokerage firm cannot purchase the underlying securities on your behalf to fulfill a settlement obligation, you will have to purchase the securities through a different firm.

Section 6 – Customer Account Protections

Positions in security futures contracts may be held either in a securities account or in a futures account. Your brokerage firm may or may not permit you to choose the types of account in which your positions in security futures contracts will be held. The protections for funds deposited or earned by customers in connection with trading in security futures contracts differ depending on whether the positions are carried in a securities account or a futures account. If your positions are carried in a securities account, you will not receive the protections available for futures accounts. Similarly, if your positions are carried in a futures account, you will not receive the protections available for securities accounts. You should ask your broker which of these protections will apply to your funds.

You should be aware that the regulatory protections applicable to your account are not intended to insure you against losses you may incur as a result of a decline or increase in the price of a security futures contract. As with all financial products, you are solely responsible for any market losses in your account.

Your brokerage firm must tell you whether your security futures positions will be held in a securities account or a futures account. If your brokerage firm gives you a choice, it must tell you what you have to do to make the choice and which type of account will be used if you fail to do so. You should understand that certain regulatory protections for your account will depend on whether it is a securities account or a futures account.

6.1. Protections for Securities Accounts

If your positions in security futures contracts are carried in a securities account, they are covered by SEC rules governing the safeguarding of customer funds and securities. These rules prohibit a broker/dealer from using customer funds and securities to finance its business. As a result, the broker/dealer is required to set aside funds equal to the net of all its excess payables to customers over receivables from customers. The rules also require a broker/dealer to segregate all customer fully paid and excess margin securities carried by the broker/dealer for customers.

The Securities Investor Protection Corporation (SIPC) also covers positions held in securities accounts. SIPC was created in 1970 as a non-profit, non-government, membership corporation, funded by member broker/dealers. Its primary role is to return funds and securities to customers if the broker/dealer holding these assets becomes insolvent. SIPC coverage applies to customers of current (and in some cases former) SIPC members. Most broker/dealers registered with the SEC are SIPC members; those few that are not must disclose this fact to their customers. SIPC members must display an official sign showing their membership. To check whether a firm is a SIPC member, go to www.sipc.org, call the SIPC Membership Department at (202) 371-8300, or write to SIPC Membership Department, Securities Investor Protection Corporation, 805 Fifteenth Street, NW, Suite 800, Washington, DC 20005-2215.

SIPC coverage is limited to $500,000 per customer, including up to $100,000 for cash. For example, if a customer has 1,000 shares of XYZ stock valued at $200,000 and $10,000 cash in the account, both the security and the cash balance would be protected. However, if the customer has shares of stock valued at $500,000 and $100,000 in cash, only a total of $500,000 of those assets will be protected.

For purposes of SIPC coverage, customers are persons who have securities or cash on deposit with a SIPC member for the purpose of, or as a result of, securities transactions. SIPC does not protect customer funds placed with a broker/dealer just to earn interest. Insiders of the broker/dealer, such as its owners, officers, and partners, are not customers for purposes of SIPC coverage.

6.2. Protections for Futures Accounts

If your security futures positions are carried in a futures account, they must be segregated from the brokerage firm's own funds and cannot be borrowed or otherwise used for the firm’s own purposes. If the funds are deposited with another entity (e.g., a bank, clearing broker, or clearing organization), that entity must acknowledge that the funds belong to customers and cannot be used to satisfy the firm’s debts. Moreover, although a brokerage firm may carry funds belonging to different customers in the same bank or clearing account, it may not use the funds of one customer to margin or guarantee the transactions of another customer. As a result, the brokerage firm must add its own funds to its customers’ segregated funds to cover customer debits and deficits. Brokerage firms must calculate their segregation requirements daily.

You may not be able to recover the full amount of any funds in your account if the brokerage firm becomes insolvent and has insufficient funds to cover its obligations to all of its customers. However, customers with funds in segregation receive priority in bankruptcy proceedings. Furthermore, all customers whose funds are required to be segregated have the same priority in bankruptcy, and there is no ceiling on the amount of funds that must be segregated for or can be recovered by a particular customer.

Your brokerage firm is also required to separately maintain funds invested in security futures contracts traded on a foreign exchange. However, these funds may not receive the same protections once they are transferred to a foreign entity (e.g., a foreign broker, exchange or clearing organization) to satisfy margin requirements for those products. You should ask your broker about the bankruptcy protections available in the country where the foreign exchange (or other entity holding the funds) is located.

Section 7 – Special Risks for Day Traders

Certain traders who pursue a day trading strategy may seek to use security futures contracts as part of their trading activity. Whether day trading in security futures contracts or other securities, investors engaging in a day trading strategy face a number of risks.

Day trading in security futures contracts requires in-depth knowledge of the securities and futures markets and of trading techniques and strategies. In attempting to profit through day trading, you will compete with professional traders who are knowledgeable and sophisticated in these markets. You should have appropriate experience before engaging in day trading.

Day trading in security futures contracts can result in substantial commission charges, even if the per trade cost is low. The more trades you make, the higher your total commissions will be. The total commissions you pay will add to your losses and reduce your profits. For instance, assuming that a round-turn trade costs $16 and you execute an average of 29 round-turn transactions per day each trading day, you would need to generate an annual profit of $111,360 just to cover your commission expenses.

Day trading can be extremely risky. Day trading generally is not appropriate for someone of limited resources and limited investment or trading experience and low risk tolerance. You should be prepared to lose all of the funds that you use for day trading. In particular, you should not fund day trading activities with funds that you cannot afford to lose.

Section 8 – Other

8.1. Corporate Events

As noted in Section 2.4, an equity security represents a fractional ownership interest in the issuer of that security. By contrast, the purchaser of a security futures contract has only a contract for future delivery of the underlying security. Treatment of dividends and other corporate events affecting the underlying security may be reflected in the security futures contract depending on the applicable clearing organization rules. Consequently, individuals should consider how dividends and other developments affecting security futures in which they transact will be handled by the relevant exchange and clearing organization. The specific adjustments to the terms of a security futures contract are governed by the rules of the applicable clearing organization. Below is a discussion of some of the more common types of adjustments that you may need to consider.

Corporate issuers occasionally announce stock splits. As a result of these splits, owners of the issuer's common stock may own more shares of the stock, or fewer shares in the case of a reverse stock split. The treatment of stock splits for persons owning a security futures contract may vary according to the terms of the security futures contract and the rules of the clearing organization. For example, the terms of the contract may provide for an adjustment in the number of contracts held by each party with a long or short position in a security future, or for an adjustment in the number of shares or units of the instrument underlying each contract, or both.

Corporate issuers also occasionally issue special dividends. A special dividend is an announced cash dividend payment outside the normal and customary practice of a corporation. The terms of a security futures contract may be adjusted for special dividends. The adjustments, if any, will be based upon the rules of the exchange and clearing organization. In general, there will be no adjustments for ordinary dividends as they are recognized as a normal and customary practice of an issuer and are already accounted for in the pricing of security futures. However, adjustments for ordinary dividends may be made for a specified class of security futures contracts based on the rules of the exchange and the clearing organization.

Corporate issuers occasionally may be involved in mergers and acquisitions. Such events may cause the underlying security of a security futures contact to change over the contract duration. The terms of security futures contracts may also be adjusted to reflect other corporate events affecting the underlying security.

8.2. Position Limits and Large Trader Reporting

All security futures contracts trading on regulated exchanges in the United States are subject to position limits or position accountability limits. Position limits restrict the number of security futures contracts that any one person or group of related persons may hold or control in a particular security futures contract. In contrast, position accountability limits permit the accumulation of positions in excess of the limit without a prior exemption. In general, position limits and position accountability limits are beyond the thresholds of most retail investors.

Whether a security futures contract is subject to position limits, and the level for such limits, depends upon the trading activity and market capitalization of the underlying security of the security futures contract.

Position limits apply are required for security futures contracts that overlie a security that has an average daily trading volume of 20 million shares or fewer. In the case of a security futures contract overlying a security index, position limits are required if any one of the securities in the index has an average daily trading volume of 20 million shares or fewer. Position limits also apply only to an expiring security futures contract during its last five trading days. A regulated exchange must establish position limits on security futures that are no greater than 13,500 (100 share) contracts, unless the underlying security meets certain volume and shares outstanding thresholds, in which case the limit may be increased to 22,500 (100 share) contracts.

For security futures contracts overlying a security or securities with an average trading volume of more than 20 million shares, regulated exchanges may adopt position accountability rules. Under position accountability rules, a trader holding a position in a security futures contract that exceeds 22,500 contracts (or such lower limit established by an exchange) must agree to provide information regarding the position and consent to halt increasing that position if requested by the exchange.

Brokerage firms must also report large open positions held by one person (or by several persons acting together) to the CFTC as well as to the exchange on which the positions are held. The CFTC's reporting requirements are 1,000 contracts for security futures positions on individual equity securities and 200 contracts for positions on a narrow-based index. However, individual exchanges may require the reporting of large open positions at levels less than the levels required by the CFTC. In addition, brokerage firms must submit identifying information on the account holding the reportable position (on a form referred to as either an "Identification of Special Accounts Form" or a "Form 102") to the CFTC and to the exchange on which the reportable position exists within three business days of when a reportable position is first established.

8.3. Transactions on Foreign Exchanges

U.S. customers may not trade security futures on foreign exchanges until authorized by U.S. regulatory authorities. U.S. regulatory authorities do not regulate the activities of foreign exchanges and may not, on their own, compel enforcement of the rules of a foreign exchange or the laws of a foreign country. While U.S. law governs transactions in security futures contracts that are effected in the U.S., regardless of the exchange on which the contracts are listed, the laws and rules governing transactions on foreign exchanges vary depending on the country in which the exchange is located.

8.4. Tax Consequences

For most taxpayers, security futures contracts are not treated like other futures contracts. Instead, the tax consequences of a security futures transaction depend on the status of the taxpayer and the type of position (e.g., long or short, covered or uncovered). Because of the importance of tax considerations to transactions in security futures, readers should consult their tax advisors as to the tax consequences of these transactions.

Section 9 – Glossary of Terms

This glossary is intended to assist customers in understanding specialized terms used in the futures and securities industries. It is not inclusive and is not intended to state or suggest the legal significance or meaning of any word or term.

Arbitrage – taking an economically opposite position in a security futures contract on another exchange, in an options contract, or in the underlying security.

Broad-based security index – a security index that does not fall within the statutory definition of a narrow-based security index (see Narrow-based security index). A future on a broad-based security index is not a security future. This risk disclosure statement applies solely to security futures and generally does not pertain to futures on a broad-based security index. Futures on a broad-based security index are under exclusive jurisdiction of the CFTC.

Cash settlement – a method of settling certain futures contracts by having the buyer (or long) pay the seller (or short) the cash value of the contract according to a procedure set by the exchange.

Clearing broker – a member of the clearing organization for the contract being traded. All trades, and the daily profits or losses from those trades, must go through a clearing broker.

Clearing organization – a regulated entity that is responsible for settling trades, collecting losses and distributing profits, and handling deliveries.

Contract – 1) the unit of trading for a particular futures contract (e.g., one contract may be 100 shares of the underlying security), 2) the type of future being traded (e.g., futures on ABC stock).

Contract month – the last month in which delivery is made against the futures contract or the contract is cash-settled. Sometimes referred to as the delivery month.

Day trading strategy – an overall trading strategy characterized by the regular transmission by a customer of intra-day orders to effect both purchase and sale transactions in the same security or securities.

EDGAR – the SEC's Electronic Data Gathering, Analysis, and Retrieval system maintains electronic copies of corporate information filed with the agency. EDGAR submissions may be accessed through the SEC's Web site, www.sec.gov.

Futures contract – a futures contract is (1) an agreement to purchase or sell a commodity for delivery in the future; (2) at a price determined at initiation of the contract; (3) that obligates each party to the contract to fulfill it at the specified price; (4) that is used to assume or shift risk; and (5) that may be satisfied by delivery or offset.

Hedging – the purchase or sale of a security future to reduce or offset the risk of a position in the underlying security or group of securities (or a close economic equivalent).

Illiquid market – a market (or contract) with few buyers and/or sellers. Illiquid markets have little trading activity and those trades that do occur may be done at large price increments.

Liquidation – entering into an offsetting transaction. Selling a contract that was previously purchased liquidates a futures position in exactly the same way that selling 100 shares of a particular stock liquidates an earlier purchase of the same stock. Similarly, a futures contract that was initially sold can be liquidated by an offsetting purchase.

Liquid market – a market (or contract) with numerous buyers and sellers trading at small price increments.

Long – 1) the buying side of an open futures contact, 2) a person who has bought futures contracts that are still open.

Margin – the amount of money that must be deposited by both buyers and sellers to ensure performance of the person's obligations under a futures contract. Margin on security futures contracts is a performance bond rather than a down payment for the underlying securities.

Mark-to-market – to debit or credit accounts daily to reflect that day's profits and losses.

Narrow-based security index – in general, and subject to certain exclusions, an index that has any one of the following four characteristics: (1) it has nine or fewer component securities; (2) any one of its component securities comprises more than 30% of its weighting; (3) the five highest weighted component securities together comprise more than 60% of its weighting; or (4) the lowest weighted component securities comprising, in the aggregate, 25% of the index's weighting have an aggregate dollar value of average daily trading volume of less than $50 million (or in the case of an index with 15 or more component securities, $30 million). A security index that is not narrow-based is a "broad based security index." (See Broad-based security index).

Nominal value – the face value of the futures contract, obtained by multiplying the contract price by the number of shares or units per contract. If XYZ stock index futures are trading at $50.25 and the contract is for 100 shares of XYZ stock, the nominal value of the futures contract would be $5025.00.

Offsetting – liquidating open positions by either selling fungible contracts in the same contract month as an open long position or buying fungible contracts in the same contract month as an open short position.

Open interest – the total number of open long (or short) contracts in a particular contract month.

Open position – a futures contract position that has neither been offset nor closed by cash settlement or physical delivery.

Performance bond – another way to describe margin payments for futures contracts, which are good faith deposits to ensure performance of a person's obligations under a futures contract rather than down payments for the underlying securities.

Physical delivery – the tender and receipt of the actual security underlying the security futures contract in exchange for payment of the final settlement price.

Position – a person's net long or short open contracts.

Regulated exchange – a registered national securities exchange, a national securities association registered under Section 15A(a) of the Securities Exchange Act of 1934, a designated contract market, a registered derivatives transaction execution facility, or an alternative trading system registered as a broker or dealer.

Security futures contract – a legally binding agreement between two parties to purchase or sell in the future a specific quantify of shares of a security (such as common stock, an exchange-traded fund, or ADR) or a narrow-based security index, at a specified price.

Settlement price – 1) the daily price that the clearing organization uses to mark open positions to market for determining profit and loss and margin calls, 2) the price at which open cash settlement contracts are settled on the last trading day and open physical delivery contracts are invoiced for delivery.

Short – 1) the selling side of an open futures contract, 2) a person who has sold futures contracts that are still open.

Speculating – buying and selling futures contracts with the hope of profiting from anticipated price movements.

Spread – 1) holding a long position in one futures contract and a short position in a related futures contract or contract month in order to profit from an anticipated change in the price relationship between the two, 2) the price difference between two contracts or contract months.

Stop limit order – an order that becomes a limit order when the market trades at a specified price. The order can only be filled at the stop limit price or better.

Stop loss order – an order that becomes a market order when the market trades at a specified price. The order will be filled at whatever price the market is trading at. Also called a stop order.

Tick – the smallest price change allowed in a particular contract.

Trader – a professional speculator who trades for his or her own account.

Underlying security – the instrument on which the security futures contract is based. This instrument can be an individual equity security (including common stock and certain exchange-traded funds and American Depositary Receipts) or a narrow-based index.

Volume – the number of contracts bought or sold during a specified period of time. This figure includes liquidating transactions.

April 2014

**INTERACTIVE BROKERS DISCLOSURE STATEMENT
FOR BOND TRADING**

THIS DISCLOSURE STATEMENT DISCUSSES THE CHARACTERISTICS AND RISKS OF TRADING BONDS THROUGH INTERACTIVE BROKERS. BEFORE TRADING BONDS YOU SHOULD CONSIDER CONSULTING A FINANCIAL ADVISOR, WHO CAN PROVIDE ADVICE ON WHETHER PARTICULAR INVESTMENTS SUIT YOUR FINANCIAL GOALS.

INTERACTIVE BROKERS MERELY PROVIDES EXECUTION AND CLEARING SERVICES AND DOES NOT PROVIDE SPECIFIC TRADING OR INVESTMENT ADVICE. INTERACTIVE BROKERS WILL NOT MONITOR YOUR TRADES AND INVESTMENTS TO DETERMINE IF THEY ARE APPROPRIATE FOR YOUR FINANCIAL NEEDS.

BEFORE TRADING ANY PARTICULAR BOND, YOU SHOULD UNDERSTAND THE EXACT TERMS AND CONDITIONS OF THE BOND, INCLUDING ITS CREDIT RATING, ITS MATURITY, ITS RATE, WHETHER IT IS CALLABLE, AND OTHER RELEVANT INFORMATION.

More information on bond trading can be found on the following website sponsored by the Bond Market Association: www.investinginbonds.com.

Section 1 – Characteristics of Bonds

1.1 – What is a bond?

A bond is a type of interest-bearing or discounted security usually issued by a government or corporation that obligates the issuer to pay the holder an amount (usually at set intervals) and to repay the entire amount of the loan at maturity. It is another way for the issuer to generate money as opposed to issuing stock.

1.2 – What are the types of bonds?

A. U.S. Government Bonds

Bonds issued by the U.S. government are called Treasuries. These are grouped into three categories: (1) Treasury bills; (2) Treasury notes; and (3) Treasury bonds. They each have a different length of time until maturity. Income earned on Treasuries is exempt from state and local taxes, but taxable by the federal government. Treasuries are considered to be the safest bond investments since the U.S. government backs them and it is highly unlikely that a situation of default will occur. However, Treasuries with long maturities have more potential for inflation and credit risk.

B. Municipal Bonds

Municipal bonds are debt obligations of state or local governments. The funds may be used to support general governmental needs or special projects. Municipal bonds are considered riskier investments than Treasuries, but they are exempt from taxing by the federal government and local governments often exempt their own citizens from taxes on its bonds. However, municipal bonds often have a lower coupon rate because of the tax break.

C. Corporate Bonds

Corporate bonds are debt instruments issued by private corporations. They usually have four distinguishing characteristics: (1) they are taxable; (2) they usually have a par value of $1000; (3) they have a term maturity (they become due all at once) and are paid for out of a sinking fund for that purpose; and (4) they are traded on major exchanges with prices published in newspapers. Corporate bonds come in various maturities. They are considered the riskiest of the bonds because there is much more of a credit risk with corporate bonds, but this usually means that the bondholder will be paid a higher interest rate. Corporations with low credit ratings issue bonds too, and these are speculative products called junk bonds.

Par value, or face amount, is usually $1000, but bond prices are quoted on $100. For example, a quote of 80 is a bond selling for $800. Amounts less than $10 are quoted in eighths ($1.25). Therefore, a quote of 80 $^{1}/8$ is equal to $801.25.

Convertible Bonds are bonds that may be converted into another form of corporate security, usually shares of common stock. Conversion only occurs at specific times at specific prices under specific conditions and this will all be detailed at the time the bond is issued.

C. Zero-Coupon Bonds

These are bonds that do not pay interest periodically, but instead pay a lump sum of the principal and interest at maturity. However, these are usually aggressively priced and are good for people who will need one lump sum of money at a particular time (e.g., those saving for college). Investors, however, must pay taxes on the interest as it accrues, not when they receive it.

1.3 – Bond Ratings

Standard & Poor's and Moody's Investors Service assign credit ratings to governments and corporations which help determine the amount of interest paid. The ratings for bonds are in the chart below. The ratings represent greater default risk as you read down the chart (see Section 2 for credit and other risks associated with bonds).

Quality	Moody's	Standard & Poor's
Best Quality	Aaa	AAA
High Quality	Aa	AA
Upper-medium grade	A	A
Medium grade	Baa	BBB
Junk Bonds/Speculative/High Yield	Ba, B, Caa, Ca	BB, B, CCC, CC
Default	-	D

It is a good idea to track a bond's rating as they are subject to change by factors that affect the company's credit.

The ratings that appear for the bonds Interactive Brokers LLC offers are from sources Interactive Brokers LLC believes to be reliable, however, Interactive Brokers LLC cannot guarantee accuracy.

Section 2 – General Risks of Bond Trading

Trading bonds may not be suitable for all investors. Although bonds are often thought to be conservative investments, there are numerous risks involved in bond trading. If you are uncomfortable with any of the risks involved, you should not trade bonds.

There is a credit risk involved with trading bonds. When you purchase a corporate bond, you are lending money to a company. There is always the risk that the issuer will go bankrupt. If this happens, you will not receive your investment back. This is a risk of which you must be aware. Credit risk is figured into the pricing of bonds.

There is a prepayment risk involved. Prepayment risk involves the scenario where an issuer "calls" a bond. If this happens, your investment will be paid back early. Certain bonds are callable and others are not, and this information is detailed in the prospectus. If a bond is callable, the prospectus will detail a "yield-to-call" figure. Corporations may call their bonds when interest rates fall below current bond rates.

A "put" provision allows a bondholder to redeem a bond at par value before it matures. Investors may do this when interest rates are rising and they can get higher rates elsewhere. The issuer will assign specific dates to take advantage of a put provision.

Prepayment risk is figured into the pricing of bonds.

There is a significant inflation risk when trading bonds. Inflation risk is the risk that the rate of the yield to call or maturity of the bond will not provide a positive return over the rate of inflation for the period of the investment. In other words, if the rate of inflation for the period of an investment is six percent and the yield to maturity of a bond is four percent, you will receive more money in interest and principal than you invested, but the value of that money returned is actually less than what was originally invested in the bond. As the inflation rate rises, so do interest rates. Although the yield on the bond increases, the price of the actual bond decreases. This is a risk of which you must be aware.

There is an interest rate risk associated with bonds. Changes in interest rates during the term of any bond may affect the market value of the bond prior to call or the maturity date.

Section 3 – Risks of Trading Bonds Electronically

Interactive Brokers is an online, direct access brokerage firm that executes virtually all trades on electronic market centers. Interactive Brokers will post bids and offers for bonds from various information sources and markets and will allow you to execute trades against those electronically-displayed bond quotes.

Unlike the practice of many other brokers, Interactive Brokers will not make telephone calls to various bond dealers in seeking to execute your bond orders. Rather, Interactive Brokers will provide you with direct access to electronic bond trading platforms.

Electronic trading has a number of inherent advantages (such as speed, low cost, and a clear audit trail) but it also has certain inherent disadvantages. ***You should be aware that electronic bond trading platforms may have less liquidity or less advantageous prices than could be offered telephonically by a bond dealer. In addition, electronic trading platforms are inherently vulnerable to technical errors and outages.***

Section 4 – Margin

When a broker-dealer lends a customer part of the funds needed to purchase a security such as a bond, the term "margin" refers to the amount of cash, or down payment, the customer is required to deposit. Bonds, like equity securities, may be traded on margin. Trading on margin is inherently more risky than trading in fully-paid-for securities. For risks associated with margin trading, please see Interactive Brokers LLC's "DISCLOSURE OF RISKS OF MARGIN TRADING."

Section 5 – Commissions and Mark-Ups

You will be charged a commission for bond trades executed through Interactive Brokers LLC. Interactive Brokers may execute your bond trade through or against an affiliate of Interactive Brokers (such as Timber Hill LLC or another affiliate), which may charge a markup on trades such affiliate executes as principal against your bond order.

Interactive Brokers LLC General Disclosure on Mutual Funds

Important Information Regarding Mutual Funds

1. Interactive Brokers offers customers the ability to invest in certain mutual funds. By making a mutual fund or mutual fund family available to customers, IB does not guarantee the appropriateness or suitability of any mutual fund investment nor do we make any recommendation of any kind.

2. A mutual fund's past performance is no indication of future results. A mutual fund's performance can change over time depending upon a variety of market conditions and share prices can fluctuate on a daily basis. Your investment may be worth more or less than your original cost when you redeem your shares.

3. IB recommends that customers carefully read the fund's prospectus prior to investing in the shares of a mutual fund. The prospectus contains important information about the fund's objectives, investment strategies, risks and expenses. Customers may obtain a copy of a fund's prospectus by contacting the fund or visiting the fund's website. Customers may also contact IB Customer Service at (877) 442-2757 to request a prospectus. Please note, IB cannot verify or otherwise guarantee the accuracy or completeness of any mutual fund prospectus, statement of additional information, report to shareholders or proxy solicitation materials.

4. Certain mutual funds made available through IB invest in international securities. Internationally invested mutual funds can carry certain risks, including, but not limited to, political and economic instability, fluctuations in currency exchange rates, foreign taxes, and differences in regulatory requirements and financial accounting standards. Prior to making an investment decision, customers are encouraged to carefully read the prospectus of any mutual fund that invests internationally.

5. Some funds may require a minimum holding period for their shares. Some funds charge an early redemption fee if they are sold before a stated holding period ends. Please refer to the fund's prospectus to see if these conditions apply.

6. As a mutual fund shareholder, you may receive taxable dividends and/or capital gains on your mutual fund investment. IB does not provide tax advice. Mutual fund investors should consult with their tax advisor in order to determine the impact of taxes on their mutual fund investment.

7. In addition to Interactive Broker's transaction fee for mutual fund transactions, some mutual funds impose marketing and shareholder servicing fees (e.g., 12b-1 fees). Interactive Brokers may receive a portion of these fees as compensation for shareholder and marketing services rendered. For information regarding a particular mutual fund's payment and compensation practices, please read the fund's prospectus and statement of additional information or visit the fund's website. IB may share a portion of the compensation received from fund companies with your financial advisor.

8. **Mutual Fund Order Deadline.** Please note that all mutual fund orders received prior to the close of the New York Stock Exchange (generally, 4:00 p.m. EST) will receive the mutual fund's NAV price for that day provided the order is received on a trading day. Any mutual fund orders received after the close of the New York Stock Exchange will receive the following trading day's NAV share price. Any mutual fund orders received on days when the New York Stock Exchange is closed (e.g., holidays) will receive the following trading day's NAV share price.

RISK DISCLOSURE REGARDING LEVERAGED AND INVERSE FUNDS

Interactive Brokers ("IB") is furnishing this disclosure to customers in order to provide additional information regarding the characteristics and risks associated with leveraged and inverse mutual funds and exchange traded funds ("ETFs"). In addition to providing this disclosure, IB strongly encourages customers to carefully review the fund's prospectus before investing in a specific fund.

LEVERAGED FUNDS

As the name implies, leveraged mutual funds and ETFs seek to provide leveraged returns at multiples of the underlying benchmark or index they track. Leveraged funds generally seek to provide a multiple (i.e., 200%, 300%) of the daily return of an index or other benchmark for a *single day* excluding fees and other expenses. In addition to using leverage, these funds often use derivative products such as swaps, options, and futures contracts to accomplish their objectives. The use of leverage as well as derivative instruments can cause leveraged funds to be more volatile and subject to extreme price movements.

INVERSE FUNDS

Inverse mutual funds and ETFs, which are sometimes referred to as "short" funds, seek to provide the opposite of the performance of the index or benchmark they track. Inverse funds are often marketed as a way to profit from, or hedge exposure to, downward moving markets. Some inverse funds also use leverage, such that they seek to achieve a return that is a multiple of the opposite performance of the underlying index or benchmark (i.e., -200%, -300%). In addition to leverage, these funds may also use derivative instruments to accomplish their objectives. As such, inverse funds are volatile and provide the potential for significant losses.

RISKS ASSOCIATED WITH LEVERAGED AND INVERSE FUNDS

Leveraged and inverse funds are complicated instruments that should only be used by sophisticated investors who fully understand the terms, investment strategy and risks associated with the funds. In particular, customers should be aware of certain specific risks involved in trading in leveraged and inverse funds. These risks include, but are not limited to:

Use of Leverage and Derivative Instruments: Many leveraged and inverse funds use leverage and derivative instruments to achieve their stated investment objectives. As such, these funds can be extremely volatile and carry a high risk of substantial losses. Such funds are considered speculative investments and should only be used by investors who fully understand the risks and are willing and able to absorb potentially significant losses.

Most Leveraged and Inverse Funds Seek Daily Target Returns: Most leveraged and inverse funds "reset" daily, meaning that they are designed to achieve their stated objectives on a daily basis. Due to the effect of compounding, the return for investors who invest for a period different than one trading day may vary significantly from the fund's stated goal as well as the target benchmark's performance. This is especially true in very volatile markets or if a leveraged fund is tracking a very volatile underlying index. Investments in leveraged and inverse funds must be actively monitored on a daily basis and are typically not appropriate for a buy-and-hold strategy.

Higher Operating Expenses and Fees: Investors should be aware that leveraged funds typically rebalance their portfolios on a daily basis in order to compensate for anticipated changes in overall market conditions. This rebalancing can result in frequent trading and increased portfolio turnover. Leveraged and inverse funds will therefore generally have higher operating expenses and investment management fees than other funds.

Tax Treatment of Leveraged and Inverse Funds May Vary: In some cases, leveraged and inverse funds may generate their returns through the use of derivative instruments. Because derivatives are taxed differently from equity or fixed-income securities, investors should be aware that these funds may not have the same tax efficiencies as other funds.

ISE Disclosure for Option Orders Over 500 Contracts

Interactive Brokers is required to provide to you the following disclosure regarding option orders of over 500 contracts that may be executed using the International Securities Exchange (ISE) Block Order Solicitation Mechanism:

When handling an order of 500 contracts or more on your behalf, Interactive Brokers may solicit other parties to execute against your order and may thereafter execute your order using the ISE's Solicited Order Mechanism. This functionality provides a single-price execution only, so that your entire order may receive a better price after being exposed to the Exchange's participants, but will not receive partial price improvement. For further details on the operation of this Mechanism, please refer to ISE Rule 716, which is available at www.iseoptions.com under "Regulation - Rules."

PLEASE READ THE FOLLOWING CAREFULLY. IT MAY SIGNIFICANTLY IMPACT THE SUCCESS OF YOUR TRADING ACTIVITY ON OPEN OUTCRY (PIT) MARKETS.

Certain exchanges to which you may route orders through Interactive Brokers (“IB”) are *non-electronic*, *open outcry* market places. On such exchanges, orders submitted via the TWS will be routed to the floor electronically but are thereafter delivered into the trading pits manually and are subject to time disadvantages inherent with such markets. Trades execute when 2 brokers meet in the trading pit and verbally agree on a trade price and other trade details.

Traders acting on these exchanges must be aware of the following:

- All order actions (new orders, modifications, cancellations) are subject to delays relating to the delivery process. The delays are usually 30-60 seconds but can last several/many minutes in busy conditions such as at the open or close of the trading session.

- Frequent order modifications (price or quantity) will often result in poor executions since a modification requires that the pre-existing order be cancelled and a new order instated. If modifications are submitted faster than they can be processed, there is a strong likelihood of poor or missed executions.

- There is no time or price priority for orders. It is possible that an order will not be executed even though trades are reported at, or better than, the expected price.

- Market orders may be executed at unfavorable prices. Use of market orders is permitted, but not recommended.

- Cancelled orders may be executed. It is not uncommon that the report of an executed order is delayed due to market volume. When the cancel request is sent, the pit broker is then forced to report the status which may be “filled, too late to cancel”.

IB recognizes the limitations of open outcry trading as compared to electronic trading and has designed the TWS system to remove as many of the problems as possible. Nevertheless, traders should not expect a similar performance from the IB brokerage system for floor-traded markets as for electronic markets.

I acknowledge the limitations of floor-traded markets and agree that IB will not be liable for delays and errors outside of its control relating to the manual open outcry trading process.

Interactive Brokers Order Routing and Payment for Order Flow Disclosure

1. **IB's Order Routing System:** IB does not sell its order flow to another broker to handle and route. Instead, IB has built a real-time, high-speed Best Execution Order Routing System (SmartRoutingSM), which is designed to optimize execution price, speed and total cost of execution for stocks and options. IB constantly changes and enhances the SmartRouting system to adapt to changes in markets, new exchanges, new trading rules, etc. IB's SmartRouting system continually scans competing market centers and automatically seeks to route orders to the best market, taking into account factors such as quote size, quote price, exchange or ATS transaction fees or rebates and the availability of price improvement (execution at a better price than the National Best Bid or Offer (NBBO). The IB SmartRouting system continually reevaluates market conditions and prices for pending IB customer orders and dynamically re-routes orders as necessary.

   For some products, IB customers may directly route their orders to a particular market of their choice, although IB recommends that our customers use the IB SmartRouting system.

   IB also operates an Alternative Trading System (ATS) in accordance with SEC Regulation ATS, on which it executes IB customer trades against each other or against one or more professional liquidity providers who send orders into the IB ATS. Order executions on IB's ATS are faster, eliminate exchange fees and may offer price improvement compared to the NBBO. Statistical information regarding the quality of executions for orders effected through IB's ATS (e.g., average execution speed, percentage of orders receiving price improvement, etc.) are available on the IB website at www.interactivebrokers.com or may be downloaded at: http://www.interactivebrokers.com/en/general/about/IBKR_ATS_605_Reports.php

2. **Compliance with Regulation NMS:** For U.S. stocks, IB's SmartRouting system is designed to comply with Reg NMS and with our duty as a broker-dealer to provide best execution for customer orders. IB's SmartRouting system connects to and receives market data feeds directly from most or all exchanges and public market centers. The IB SmartRouting system also has access to ATS's. Therefore IB can attempt to route an order directly to the most favorable overall market(s) taking into account relevant conditions. If an order is not executed immediately, IB's system then monitors the open order and in most cases will cancel and reroute it if market conditions or prices change and another market center becomes more favorable for the order. If an order is too large to be executed at the best price at a single exchange or market center, IB's SmartRouting system generally will split the order and send it to multiple destinations to attempt to get the fastest fill at the most favorable price.

3. **Intermarket Sweep Orders for U.S. National Market System Stocks:** Because IB's system monitors the available markets and is designed to send orders to the markets posting the best price, orders routed to exchanges by the IB SmartRouting system generally will be marked as "Intermarket Sweep Order" (ISO), meaning that an exchange that receives such an order will be able to execute the order in reliance that the IB system did not identify any better prices for the order, or that other orders sent at or around the same time by IB have already taken out any better quotes on other exchanges or market centers. IB has certain processes in place to monitor its connections to various exchanges and market centers, the quality of its market data feeds and the quality of its order executions. If an exchange system or the IB system is experiencing technical problems, or if IB is not connected to the market that is posting the best price, IB may route an order to an exchange without marking the order as ISO. This will allow the receiving market to re-route the order to a market offering a better price, if necessary.

4. **Orders Sent Near the Opening of Trading:** Please note that markets can be especially volatile near the opening of a trading session, with prices and available volume often changing rapidly and with data feeds from various markets potentially being slow or temporarily unavailable. IB cannot guarantee that orders sent near the opening of trading necessarily will receive the best posted price.

You may want to consider the use of limit orders at the open, although market orders should be used if you want a higher certainty of getting a fill.

5. **Order Conversion and Designation:** Interactive Brokers may convert certain order types or apply conditions to certain IB customer orders in order to facilitate an execution. For example, IB may simulate certain order types using order designations. Simulated order types may be used in cases where an exchange does not offer an order type or in cases where IB has decided not to offer a certain order type offered "natively" by an exchange. In addition, orders may be sent Immediate or Cancel, Fill-Or-Kill, All-Or-None, etc. in order to facilitate an immediate automatic execution, consistent with the objectives of the customer order. To protect customer orders from significant and rapidly changing prices, IB may simulate market orders on exchanges by establishing an execution cap at a percentage beyond the inside bid/ask. While this cap is set at a level intended to balance the objectives of execution certainty and minimized price risk, there exists a remote possibility that an execution will be delayed or may not take place. In addition, IB is required by exchanges and regulators to maintain "filters" in its systems that prevent executions at prices that might be deemed to be disruptive to an orderly market (or exchanges may have such filters in their systems). These filters may cause an otherwise marketable order not to be executed or to be delayed in execution, even if the customer might want the order to be executed at a certain price immediately.

6. **Payment for Orders, Dark Pools, Liquidity Provider and Affiliate Relationships:** Interactive Brokers does not sell its order flow to another broker to handle and route. Through its SmartRouting system, IB evaluates each individual order and determines the best execution venue(s), from the perspective of the customer, where that order may be executed.

   A. **Dark Pool and ATS Executions for Stock and ETF Orders:** IB maintains connections to "dark pool" ATS's (including the IB ATS) that execute a portion of IB customer stock orders. IB customers benefit from IB's access to dark pools. Dark pools provide a source of substantial additional liquidity. Dark pools charge no execution fees or lower execution fees than exchanges. Dark pools also provide fast executions and the possibility of executions at prices more favorable than the prevailing NBBO.

      IB receives rebate payments for routing certain IB customer orders to dark pools. IB shares the benefit with IB customers as follows: As of April 2016, for customers using the Fixed commission schedule, customers pay no venue transaction fee and IB reduces the IB commission to \$.004 per share from \$.005 per share (a 20% commission savings). For IB customers using the Tiered commission schedule, customers pay no venue transaction fee and IB passes roughly 50% of the average rebates received from all dark pools/ ATS's and liquidity providers to customers whose orders are routed to any such venue.

   B. **Liquidity Provider Relationships in the IB ATS:** IB has entered arrangements with certain institutions under which such institutions may send orders to the IB ATS at or near the NBBO. These orders are held within the IB system and are not displayed in the national market. If an IB customer order could be immediately executed against such an order held in the IB system (at the NBBO or at a better price than the NBBO), the orders may be crossed and the execution reported to the National Market System. This arrangement provides extra potential liquidity (size) for IB customer orders and leads to faster executions (since the orders do not have to be routed out to an exchange), as well as providing the possibility of price improvement (since the orders may be executed at a better price than available on an exchange).

      IB may receive payment in the form of commissions or commission equivalents from the liquidity providers for these executions in the IB ATS. IB shares the benefit with IB customers in the same manner as described above (Fixed commission schedule customers receive a commission reduction to \$.004 per share from \$.005 per share and Tiered commission schedule customers receive roughly 50% of any average payments received from all dark pools/ATS's and liquidity providers to customers whose orders are routed to the IB ATS).

   C. **Routing of Certain Non-Marketable Stock and ETF Orders:** When IB receives a non-marketable customer order, IB may route some portion of the order for display on a public market and may retain the remaining portion of the order on IB's ATS, where it may be matched against a conditional order of a liquidity provider that has committed to trade against the remaining portion of the customer order in the event that the portion of the customer order that was routed to a public market is executed. When a liquidity provider has been committed to trade against a portion of a customer order as described above, such liquidity provider cannot cancel its order (or the portion of its order that has been committed to trade against the customer order if the publicly-displayed portion of the customer order is executed). If the liquidity provider attempts to cancel some or all of the committed size, it will receive a message rejecting the cancellation (i.e., the liquidity provider will be told that there is an IB customer order that the liquidity provider is committed to trade against). The liquidity provider is not told the size or price of the customer order. This arrangement provides potential additional liquidity for IB customer orders. In addition, IB will share with the customer a portion of the commission or commission equivalent IB receives from the liquidity provider for these executions, reducing the total cost of execution to the customer.

D. **Tiered Commission Structure:** Under IB's Tiered commission model, IB passes to Tiered commission customers some or all of certain rebate payments IB receives for executing stock orders, although the Tiered commission model is not intended to be a direct pass-through of exchange and third-party fees and rebates. For example, IB may receive enhanced rebate payments for exceeding volume thresholds on particular markets, but typically will not directly pass these enhancements to customers. Likewise IB does not pass to customers all of the rebates IB may receive for orders executed in dark pools, or orders in pink or OTCBB stocks.

E. **Options:** Interactive Brokers does not sell its option orders to another broker to handle and route. Rather, IB employs its SmartRouting system to try to achieve the best execution for customer option orders. The SmartRouting system attempts to achieve an execution price at NBBO or better than the NBBO by utilizing relationships with affiliates and other liquidity providers, who may provide price improvement through the various auction and price improvement mechanisms offered under U.S. option exchange rules.

Interactive Brokers' affiliate Timber Hill LLC (Timber Hill) is a significant market maker on U.S. options exchanges. If Timber Hill is offering the best price in the national market or is willing to provide an execution at a better price for an IB customer than the NBBO, IB generally will route the order to an options exchange where Timber Hill is more likely to trade with the order. This will benefit the customer – who receives an execution at NBBO or better - and will also benefit Timber Hill, which increases its market share in options contracts, from which it attempts to earn a market making spread.

In cases where the customer is eligible for a rebate for the order under IB's Tiered commission schedule, if routing to an exchange where Timber Hill is active would reduce the rebate to be paid to the customer (or increase a fee paid by the customer) compared to a different exchange, IB generally will adjust the rebate paid to the customer (or the fee paid by the customer) to match the higher rebate (or lower fee), although IB does not guarantee this. As a specialist on various options exchanges, Timber Hill may be responsible for allocating payments for orders that are generated in its assigned options classes, depending on the design of the applicable exchange's SEC-approved payment plan. Consistent with these plans, Timber Hill pays such funds to Interactive Brokers.

IB also maintains relationships with other liquidity providers who may provide executions at the NBBO or a better price than the NBBO for IB customer option orders. These relationships benefit IB customers, who may receive price improvement for their options orders. IB may receive payment in the form of commissions or other payments from the liquidity providers for these executions.

Several options exchanges impose "maker-taker" fees and rebates, in which exchange members are charged for orders that take liquidity (i.e., marketable orders that trade against a posted quote or limit order) and receive a rebate for orders that add liquidity to the exchange (i.e., non-marketable limit orders that are posted and then trade against incoming marketable orders), or vice versa. The charges imposed or rebates offered by these exchanges affect the total cost of execution, and IB's SmartRouting System takes this into account in determining where to route option orders - trying to minimize the costs that customers incur. In addition, if multiple exchanges are quoting at the NBBO for an option order and IB has discretion as to where to send the order or a portion of it, IB generally will "break the tie" by sending the order to an exchange where it will receive the most payment for the order.

Under certain circumstances, IB may route a marketable option order to an exchange that is not currently posting the NBBO but which may be willing to execute the order at the NBBO. Generally, IB will do this in order to avoid or reduce the fee for executing the order, compared to routing to a different exchange. IB generally will share the economic benefit of routing orders in this manner with customers in the form of reduced execution fees, although IB does not guarantee that it will share such benefit. In addition, in the limited circumstances where IB routes orders in this manner, IB generally guarantees a fill at the NBBO at the time the order was routed.

Under IB's Tiered commission model, IB passes to Tiered commission customers some or all of certain rebate payments IB receives for executing option orders, although the Tiered commission model is not intended to be a direct pass-through of exchange and third-party fees and rebates. For example, IB may receive enhanced rebate payments for exceeding volume thresholds on particular markets, but typically will not directly pass these enhancements to customers. Likewise IB does not pass to customers all of the rebates IB may receive for liquidity taking orders, complex orders or orders executed in price improvement auctions. Traditional exchange payment for order flow programs result in payments to specialists or primary market makers, some portion of which may be paid on to IB. IB does not pass these payments directly to customers.

7. **Affiliate Investments in Exchanges:** An affiliate or affiliates of Interactive Brokers LLC own(s) minority interests in OneChicago (security futures exchange), ISE Stock Exchange, CBOE Stock Exchange and a substantial, minority investment in the Boston Options Exchange Group LLC, which operates the BOX Options Exchange.

8. **Quarterly Order Routing Reports and Other Order Routing Information Available upon Request:** U.S. Securities and Exchange Commission rules require all brokerage firms to make publicly available quarterly reports describing their order routing practices. IB's quarterly order routing reports are available on the IB website at www.interactivebrokers.com, or you can contact IB Customer Service.

   In addition to the basic quarterly reports, under Rule 606 of SEC Regulation NMS, a broker-dealer is required upon a customer request to provide information regarding the identity of the market center to which the customer's orders were routed in the six months prior to the request; whether the order was a directed or non-directed order, and the time of the transaction, if any, that resulted from such order. Please contact the IB Customer Service Desk in writing through the information on the IB website at interactivebrokers.com/help if you wish to receive the foregoing routing information for any order(s) within the past six months. Please type "Request for Order Routing Information" in the subject line of your request and please include your name, user id and account number as well as the date of the order, the security, the quantity, and any other information necessary to identify the order (e.g., the time of day if there were several similar orders that day.)

Interactive Brokers

Notice Regarding Pre-Arranged Trading On U.S. Futures Exchanges

Pre-arranged trading results when a discussion is held by market participants prior to trade execution to ensure that a contra party will take the opposite side of a particular order. U.S. futures exchanges, including, but not limited to, CME, CBOT, NYMEX, ICE-US, CFE, OneChicago and Nasdaq OMX Futures have regulations regarding the execution of pre-arranged trades. Interactive Brokers customers are responsible to know and abide by **ALL** exchange restrictions regarding pre-arranged trading. Interactive Brokers customers should not engage in pre-arranged trading unless such transactions are permitted by the relevant exchange. Customers should review the rules of each exchange to determine whether, and under what circumstances, such transactions are permitted. For your reference, various exchange rulebooks can be found at the following websites:

CME, CBOT, NYMEX
http://www.cmegroup.com/market-regulation/rulebook/

ICE Futures U.S.
https://www.theice.com/futures-us/regulation#Rulebook

CFE
http://cfe.cboe.com/aboutcfe/rules.aspx

OneChicago
http://www.onechicago.com/?page_id=4

Nasdaq OMX Futures
http://nasdaqomxphlx.cchwallstreet.com/nasdaqomxphlx/nqf/

FINANCIAL SERVICES GUIDE
Interactive Brokers LLC

This Financial Services Guide ("FSG") is dated 12 February 2014 and is issued by
Interactive Brokers LLC (ARBN 091 191 141; AFSL 245574) ("IB", "we", "our", "us")
IB has prepared this document pursuant to the requirements of the *Corporations Act 2001* (Cth).

Section 1: Purpose & Content of the FSG

This FSG contains information that has been prepared without taking into account your objectives, financial situation or needs. Accordingly you should consider the information provided having regard to your own particular circumstances.

This FSG is an important document. It provides you with information to assist you in deciding whether to use any of the financial services offered by IB. You should read it carefully and make sure you understand it.

This FSG contains information about:

- Our name and contact details;
- The financial services that we are authorised to provide;
- The cost of any financial services we offer;
- Any remuneration, commissions or other benefits that we or any other relevant person may be paid in relation to the financial services which we provide;
- Details of any associations or relationships between us and any related person and issuers of financial products that might reasonably be expected to be capable of influencing how we provide the financial services offered;
- Details of the complaint handling and dispute resolution procedures that we have in place;
- How to instruct us; and
- Details of the kind of compensation arrangements that we have in place.

Other documents you may receive from us

In addition to this FSG, we may be required to provide you with other documents.

We must provide you with a Product Disclosure Statement ("PDS") about a financial product when we recommend that you acquire, or offer to issue or arrange the issue of, a financial product.

A PDS contains important information about the features, benefits, risks, costs, and taxation implications of the relevant financial product that should assist you in deciding whether to acquire that financial product. We are not required to give you a PDS if you are dealing in certain financial products such as ASX-quoted equity securities and warrants.

IB does not solicit orders from customers and does not offer any personal advice or recommendations to customers. Accordingly we will not provide you with a Statement of Advice ("SOA").

Section 2: Overview of IB and its Services

1. Who are we?

IB is an affiliate of Interactive Brokers Group ("IBG"), which comprises of a number of automated global electronic market makers and brokers that specialise in routing orders and executing and processing trades in securities, futures and foreign exchange instruments. IBG affiliates conduct business on more than 60 electronic exchanges and trading venues around the world. IB, using its proprietary software, provides non-advisory brokerage services to professional traders and investors with direct access to stocks, options, futures, forex and bonds from a single IB

Universal AccountSM.
IB is a market participant of the ASX 24 market and the Chi-X Australia market. IB is not an ASX Market Participant, however it engages its proprietary trading affiliate, Timber Hill Australia Pty Limited (ABN 25 079 993 534) ("THA"), which is an ASX Market Participant, as its executing broker in respect of transactions to be executed on ASX.
IB is a wholesale client of THA and all IB client orders for ASX financial products routed through THA's connection to the ASX Integrated Trading System use an electronic communications process dedicated to the routing of only IB customer orders. THA receives a set fee per trade from IB for this service.
A full list of the products IB offers and the worldwide exchanges on which they are offered is available on the IB website at www.interactivebrokers.com.

2. Financial services and financial products we offer
IB holds an Australian Financial Services Licence, under which we are authorised to:

- deal in:
  - Securities;
  - Derivatives; and
  - Foreign exchange contracts; and
- provide custodial and depository services.

IB is authorised to provide the above financial services to retail and wholesale clients.

In relation to the custody of customer's securities, IB acts as custodian for these securities. In markets where IB does not have direct access to the settlement system for the relevant securities markets, IB may appoint a sub-custodian to hold these securities. For example, in relation to ASX quoted securities, IB has appointed a third party clearing and settlement participant's nominee to hold securities in the ASX Settlement system for the benefit of IB, which in turn holds them as custodian for the benefit of its customers who are entitled to those securities. Similar arrangements may apply in other jurisdictions outside Australia. In relation to customer's positions in exchange traded derivatives (such as futures and options), positions are held by IB for the benefit of its customers through clearing participants of the relevant exchanges, where IB is not itself a clearing participant.

3. How you can send IB instructions and contact information
IB's Customers may route orders to IB through their Trader Workstation ("TWS"), Computer to Computer Interface or an Application Programming Interface, by logging in through a secure username and password. As set forth in the IB Customer Agreement, IB does not know whether an unauthorised person is entering orders with a customer's user name/password. Customers are fully responsible for the confidentiality and use of their user name/password and remain responsible for all transactions entered using their user name/password.
Customers may also contact IB Customer Service using the details below:
IB Head Office - U.S.
One Pickwick Plaza
Greenwich, CT 06830, U.S.
Telephone Numbers: 1-877-442-2757 (from inside the U.S.); 312-542-6901 (from outside the U.S.)

IB Australian Office
Grosvenor Place
Level 42, 225 George Street,
Sydney, NSW 2000
Telephone number: +61 (2) 8093 7300

e-mail: help@interactivebrokers.com

Additional contact information, including issue-specific details, is available at www.interactivebrokers.com.

Section 3: Fees and Charges

1. Commission and Fees

IB charges commission and fees when you buy or sell or enter into or close out most financial products.
The amount of commission or fees payable to IB depends on the pricing structure selected and the product traded. For example, commission may be calculated as a percentage of the trade value with a set minimum charge per order, or as a dollar amount per contract. Current commission and fee information for each pricing structure and type of products is available on the IB website at www.interactivebrokers.com.
You may also request particulars of remuneration (including commission) or other benefits within a reasonable time after receiving this FSG and before any financial service is provided. No IB employee earns a commission for the trades that are self-directed by IB customers. All commissions are earned by the firm.

2. Other Fees and Charges

2.1 Interest Payable and Interest Charged

In certain circumstances, interest may be paid to you or charged to you.

Interest may be payable on credit balances. Factors which affect the amount of interest payable include the currency in which the account is denominated and the amounts held in excess of your margin requirements. No interest is payable on credit balances less than $10,000.00 USD or equivalent.

IB uses internationally recognised benchmarks on overnight deposits as a basis for determining interest rates. We then apply a spread around the benchmark interest rate in tiers, such that larger cash balances receive increasingly better rates, to determine an effective rate.

IB accrues interest on a daily basis and posts actual interest at the end of each month on the monthly statement. For detailed examples on how we calculate interest, and for further information on how to read interest on your statement, please go to the IB website at www.interactivebrokers.com.

Interest is charged when your account balance is in debit. The spreads and effective rates on credit balances, debit balances and short sale proceed balances are shown in the tables on the IB website at www.interactivebrokers.com. We also provide detailed examples on how we calculate interest and information on how to read interest on your statement on that website.

2.2 Market Data, Fundamentals and News

If you require live data then depending on the product you are trading and where that product is based may then you may be required to enter into a subscription agreement with the associated exchange. You are not required to enter into a data subscription to open an account with IB.

Customers can subscribe to paid, real-time market data on exchanges around the world through Account Management. The subscription fee for market data on each exchange offered through IB is listed on the IB website at www.interactivebrokers.com.

In addition, IB provides free delayed data as available, for any product listed on an exchange to which you do not subscribe. Delayed market data is managed in Trader Workstation ("TWS"), and ticker lines that use delayed data are highlighted in yellow for emphasis. For details on managing delayed market data, see the TWS Users' Guide.

We also provide real-time fundamentals and news via subscription-activated **Reuters Worldwide Fundamentals** and **Reuters News Feed**, along with various free RSS news feeds, all of which are seamlessly integrated into the TWS trading application. The subscription fee for each of these services are listed on the IB website at www.interactivebrokers.com.

There is no requirement to subscribe to market data in order to trade and customers are free to receive market data from another IB account or data vendor, or to use only delayed market data.
Many exchanges classify customers as non-professional or professional. Exchange rules require that trusts and organisations (e.g. corporations, partnerships, LLCs and unincorporated businesses) must be classified as professional. NYSE and Amex Professional Market Data require prior approval from the exchange information.

2.3 Product-specific fees and charges

There may be fees and charges payable by you in respect of specific financial product which we issued to you. Our PDS in respect of that financial product will contain information on any fees and charges relating to that financial product.

2.4 Required Minimums

To use our service, there are certain "required minimums".There is arequired minimum deposit on opening an account, a required minimum commission per month by way of an activity fee , and required minimum connection fees for certain services as applicable. Details of these "required minimums" are as set out on the IB website at www.interactivebrokers.com.

2.5 Advisor Client Markups

Advisors may charge their clients for services rendered either through automatic billing, electronic invoice or direct billing. The available billing methods including caps and limitations are described at the IB website at www.interactivebrokers.com.

Section 4: Associations/Relationships & Potential Conflicts of Interest

Neither IB nor any related bodies corporate have any relationships or associations with any product issuer that could reasonably be expected to be capable of influencing us in the provision of financial services. Similarly, IB does not act under any binder in providing any authorised services. Unless otherwise disclosed, IB generally acts on its own behalf when providing financial services to you. The relationship between IB and THA is as disclosed in Section 2 of this FSG.

Section 5: Dispute Resolution

If you have a complaint about the services provided to you by IB, you should take the following steps to ensure that your complaint is handled efficiently.
We encourage you to send your complaint via Account Management for the most expedient and efficient handling. This can be done by clicking on "Inquiry Ticket." Under "New Ticket" select the following:
Category: Other Regulatory
Sub-category: Submit a Complaint
Alternatively, customers may send their complaints to:

- help@interactivebrokers.com;
- by telephone to the customer service telephone numbers listed on the IB website at www.interactivebrokers.com; or
- by hard copy addressed to:

The Complaint Officer
Legal & Compliance Department-Asia
Interactive Brokers Group
Grosvenor Place
Level 42, 225 George Street, Sydney, NSW 2000
IB will attempt to resolve your complaint and will notify you of any proposed resolution.
If your complaint is not resolved to your satisfaction, you may lodge a written complaint to the Financial Ombudsman Service ("FOS") of which IB is a member. This service is provided to you free of charge and the FOS can be contacted as below:

Financial Ombudsman Services:
GPO Box 3, Melbourne, Victoria 3001
Telephone 1300 780 808
Facsimile 9613 6399
Internet: www.fos.org.au

You may also refer the matter to the Australian Securities and Investments Commission ("ASIC"). ASIC may be contacted on their Infoline on 1300 300 630.
Alternatively, customers who wish to file a complaint with, or initiate an arbitration or reparations proceeding

against, IB, may consult the website of, or contact, a Self-Regulatory Organisation ("SRO"), e.g., the Securities and Exchange Commission (www.sec.gov), the Financial Industry Regulatory Authority (www.finra.org), the National Futures Association (www.nfa.futures.org), the Commodity Futures Trading Commission (www.cftc.gov).

Section 6: Compensation Arrangements

IB is covered by a professional indemnity insurance policy ("Policy") which satisfies the requirements of section 912B of the Corporations Act.

Subject to its terms and conditions, this Policy may cover losses or damages suffered by retail clients as a result of breaches by IB of the relevant obligations of IB under its Australian Financial Services Licence.

FUTURES

PRODUCT DISCLOSURE STATEMENT

INTERACTIVE BROKERS LLC

ARBN 091 191 141

AFSL Number: 245 574

Date of Issue: 5 February 2015

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1. **INTRODUCTION**

1.1 **Important information**

The information in this Product Disclosure Statement (PDS) does not take into account your personal objectives, financial situation and needs. Before trading in the products referred to in this PDS you should read this PDS and be satisfied that any trading you undertake in relation to those products is appropriate in view of your objectives, financial situation and needs.

We recommend that you consult your financial adviser before trading in the products referred to in this PDS.

1.2 **Purpose of this PDS**

Under the *Corporations Act 2001* (Cth) (**Corporations Act**), a retail client must receive a Product Disclosure Statement (**PDS**) from a financial services licensee at or before the time the personal advice recommendation to acquire the financial product is made. Where no personal advice is given, the PDS should be given to the retail client before the offer to acquire the product is made.

This PDS has been prepared by Interactive Brokers LLC (**IB**) (when we use terms 'we', 'us' or 'our' in this PDS, the reference is to IB). This PDS sets out the significant features of a financial product, including its risks, benefits and cost. This document is the PDS for:

(a) Futures (and Future options)

Exchange traded derivatives known as futures (**Futures**), a type of financial product traded on a range of exchanges, including the market operated by the Australian Securities Exchange Limited (**ASX**). For details of the exchanges on which you can trade Futures through us (**Relevant Exchanges**), please see our website at https://www.interactivebrokers.com.hk/en/index.php?f=products&p=fut; and

Futures are "derivatives" under the Corporations Act. For the purpose of this PDS, Futures will be referred to as "**Exchange Traded Derivatives**". See sections 3 for more details regarding Futures.

Before you trade Exchange Traded Derivatives you should, in conjunction with your adviser, give consideration to your objectives, financial situation and needs. You should also be aware of the risks involved and be satisfied that trading in Exchange Traded Derivatives is suitable for you in view of your financial circumstances.

Note: Information in this PDS may be updated from time to time where that information is not materially adverse to clients. IB may provide updated information on its website at www.interactivebrokers.com. A copy of the updated information is also available upon request free of charge by contacting IB. IB may be required to issue a supplementary PDS as a result of certain changes, in particular where the changes are materially adverse to retail clients considering investing in Exchange Traded Derivatives.

2. **ABOUT INTERACTIVE BROKERS**

2.1 **The issuer – Interactive Brokers LLC**

IB is the issuer of the Exchange Traded Derivatives offered under this PDS.

IB holds an Australian financial services licence, number 245574, which authorises IB to deal in Exchange Traded Derivatives.

IB is also regulated in the USA (by the Securities and Exchange Commission, the Financial Industry Regulatory Authority and the New York Stock Exchange), in the United Kingdom (by the Financial Conduct Authority) and in Hong Kong (by the Securities and Futures Commission).

IB is a trading participant of the ASX 24 market operated by ASX (**ASX 24**). It is also a trading participant of the financial market operated by Chi-X Australia. For information on the execution, clearing and settlement arrangements which IB has in place for Exchange Traded Derivatives, see sections 3.

2.2 The Interactive Brokers Group

IB is an affiliate of the Interactive Brokers Group (**IBG**) which comprises of a number of automated global electronic market makers and brokers that specialise in routing orders and executing and processing trades in securities, futures and foreign exchange instruments. IBG affiliates conduct business on more than 60 electronic exchanges and trading venues around the world. IBG, using its proprietary software, provides non-advisory brokerage services to professional traders and investors with direct access to stocks, options, futures, foreign exchange contracts and bonds.

IBG's headquarter is in Greenwich Connecticut, and it has about 880 employees in its offices in the USA, Switzerland, Canada, Hong Kong, UK, Australia, Hungary, Russia, India, China and Estonia.

2.3 Contact details

Our contact details are below:

Interactive Brokers LLC Head Office
One Pickwick Plaza
Greenwich, CT 06830

Telephone Numbers:
1-877-442-2757 (from inside the U.S.)
+1-312-542-6901 (from outside the U.S.)

IB - Australian Contact

Grosvenor Place
Level 42, 225 George Street,
Sydney, NSW 2000

Telephone numbers:
+61 (2) 8093 7300
e-mail: help@interactivebrokers.com

Additional contact information, including issue-specific details, is available at http://individuals.interactivebrokers.com/en/p.php?f=customerService.

3. KEY FEATURES OF FUTURES

The risk of loss in trading in Exchange Traded Derivatives can be substantial. It is important that you carefully consider whether trading in Exchange Traded Derivatives is appropriate for you in light of your investment objectives and financial circumstances. Exchange Traded Derivatives are not suitable for some retail investors. You should only trade Exchange Traded Derivatives if you understand the nature of the products and the extent of your exposure to risks.

A description of the significant risks associated with trading in Exchange Traded Derivatives is set out in section 7 of this PDS.

3.1 What are Futures?

A Futures contract is an agreement to buy or sell something (the underlying asset) at a specified time in the future.

The underlying asset may be, for example:

(a) a specified amount of a security, such as shares in a company or government bond,

(b) a financial instrument, such as a bank bill,

(c) a stock index, such as the ASX24 SPI 200®, or

(d) a commodity of a given grade or quality, such as greasy wool.

The parties to a Futures contract may be required to deliver or take delivery of the underlying asset at the time specified in the contract, where the contract provides for this.

Alternatively, the contract may provide for a cash adjustment to be made, based on a change in the price of the underlying asset.

3.2 Deliverable and cash settled futures

There are two main types of Futures contracts.

- Deliverable contracts – where the seller agrees to deliver to the buyer, and the buyer agrees to take delivery of, the quantity of the commodity described in the contract.
- Cash settled contracts – where the two parties make a cash adjustment between them according to whether the price of a commodity, financial instrument or index has risen or fallen since the time the arrangement was made.

IB does not generally permit its customers to make or take delivery of the commodity underlying the Futures contract. It is therefore not advisable to enter into deliverable contracts in the last weeks before maturity. If you intend to make or take delivery, first check with IB. See section 3.18 for further information.

A Futures contract's terms are generally set out in the operating rules of the Relevant Exchange on which the contract was made, which might be in Australia or overseas. This document is intended to apply to any Futures contracts traded on a computer based exchange unless otherwise indicated. There may, however, be differences in procedure and regulation of markets from one country to another and one exchange to another.

3.3 Futures are an international product

As noted above, Futures contracts are traded on ASX 24 and a number of Relevant Exchanges overseas. Your obligations and requirements may differ according to the specific rules of the Relevant Exchange, and you will need to understand how this affects you. It is therefore important that you ask your broker for information about any Relevant Exchange on which you wish to trade. See also section 6 below for more information.

3.4 Duration of Futures

Futures contracts may be made for periods of up to several years in the future. Part of the standardisation of Futures contracts is that the contract maturity dates follow a pre-determined cycle (standardisation is discussed in the next section). For example, in the SPI-200® contract traded on the ASX 24, contracts can be made for settlement only in March, June, September or December, but for up to 18 months from the time of the trade.

3.5 Futures are standardised

Futures traded on an exchange are standardised and interchangeable, meaning that futures contracts of a particular class are perfect substitutes for each other.

A consequence of contract standardisation is that the price is the only factor that remains to be determined in the marketplace. For example, on ASX 24, Futures are quoted and traded on an electronic trading platform, which provides a system of continuous price discovery. This means that the price at which trades take place may continually change throughout a trading session. Most international Relevant Exchanges also provide electronic trading platforms for Futures trading.

Since all Futures contracts for a given future month in the same market are interchangeable, they can be closed out against an opposite position in the same contract. A trader who has bought a given Futures contract can cancel the position by selling the same contract. The net result is that the trader no longer holds a position. Similarly, a trader who has sold a given Futures contract can cancel the position by buying the same contract.

In each case there will be a profit or loss equal to the difference between the buying and selling prices multiplied by the standard contract amount – minus any transaction costs. In practice, the vast majority of Futures contracts are offset in this manner ahead of the contract maturity date, the remainder being fulfilled by delivery or cash settlement at maturity.

3.6 Execution arrangements for Futures

IB is a trading participant of ASX 24 and some, but not all, of the Relevant Exchanges. In relation to Relevant Exchanges where IB is a direct participant, IB executes your transactions in Futures directly on the Relevant Exchange. Where IB is not a direct participant, it arranges for the execution of your transactions in Futures by such a direct participant.

3.7 The role of the clearing house

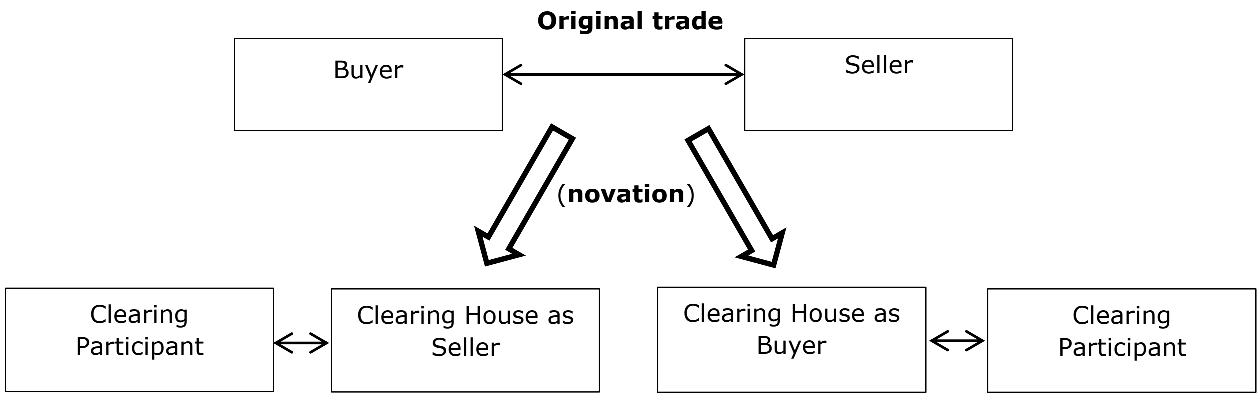
Relevant Exchanges will generally have a clearing house to clear and settle Futures contracts entered into on the Relevant Exchange (**Clearing House**). Clearing Houses clear and settle Futures contracts executed on the exchange. The primary role of the Clearing House is to guarantee the settlement of obligations arising under the Futures contracts registered with it. This means that when your broker buys or sells a Futures contract on your behalf, neither you nor your broker needs to be concerned with the credit worthiness of the broker taking the other side of the contract. See below for further discussion on the novation process that occurs at the Clearing House.

The Clearing House will never deal directly with you, rather the Clearing House will only ever deal with a Participant or member of a Clearing House (**Clearing Participant**). IB is not a Clearing Participant of all relevant Clearing Houses. Where it is not a Clearing Participant, it has an arrangement with a Clearing Participant of the relevant Clearing House to clear your Futures contracts. Clearing Participants are bound by the operating rules of the relevant Clearing House (**Clearing Rules**).

ASX 24's Clearing House is ASX Clear (Futures) Pty Ltd (**ASX Clear (Futures)**).

When a Futures contract is registered with the Clearing House, it is novated. This means that the contract between the two brokers who made the trade is replaced by one contract between the buying broker (or its Clearing Participant) and the Clearing House as seller; and one contract between the selling broker (or its Clearing Participant) and the Clearing House as buyer.

In simple terms, the Clearing House becomes the buyer to the selling broker, and the seller to the buying broker (**see diagram below**).



The Clearing House ensures that it is able to meet its obligation to Clearing Participants by calling a deposit known as the "**Initial Margin**" and additional deposits known as "**Variation Margin**" to cover any unrealised losses in the market. See sections 3.10 to 3.15 for further information on margins.

Generally your Futures contracts (and those of other clients) will be held separately from Futures contracts entered into by your broker on its own account. If your broker were to default on its obligations to the Clearing House in respect of its own futures contracts, your futures contracts will not be used to meet the broker's default. Rather the Clearing House will either close out your contracts or attempt to transfer them to another broker.

In Australia, IB has arranged for ABN AMRO Clearing Sydney Pty Limited ABN 36 081 279 889 (**AACS**) to be the Clearing Participant for your Futures contracts. AACS holds an Australian financial services licence, number 225136 which authorises it to clear Futures. In accordance with the arrangements described above, AACS is the party to ASX 24 Futures contracts registered with ASX Clear (Futures). AACS regards IB as its customer in respect of these positions, and IB in turn holds the benefit of these positions for you, in accordance with the terms of your customer agreement with IB. In other jurisdictions where IB is not the Clearing Participant of the relevant Clearing House, similar arrangements are in place for IB to hold the benefit of your positions for you.

3.8 Closing out

Because of the system of registration and novation referred to above, closing out can be achieved without going back to the original party with whom the Futures contract was traded.

When an existing buyer sells to close out their position, the sale transaction is registered with the Clearing House in the manner described above.

Example

First trade	A sells to B at $100 per unit
Novation	Clearing House is now buyer to A and seller to B
Second trade	B sells to C at $120 per unit
Novation	Clearing House is now buyer to B and seller to C
Resulting Positions	A has an open sold position C has an open bought position B no longer has a position and has realised a profit of $20 per unit (ignoring transaction costs)

The contracts which B held (one to buy and one to sell) have been settled in cash between B and the Clearing House; B simply receives the net profit. Any profit due to B is paid out by the Clearing House in cash, even though the original seller (A) remains in the market.

3.9 Futures Options & Options over the Underlying

What is an option?

Option contracts traded over Futures contracts are commonly known as Futures options. These are the most common type of option traded on a Relevant Exchange. Options over the underlying are less common with the ASX 24 traded Cash Settled Intraday Options over the ASX 24 SPI 200® and Eurex DAX® options being examples.

Following is an explanation of the nature of an option contract and of the obligations assumed by option traders. Several concepts referred to previously are applicable to options (for example, the concept of closing out). These facts will not be repeated, but only the facts particular to Futures options are discussed.

(a) The buyer of a Futures option has the right, but not the obligation, to enter into a Futures contract[1] at the exercise price of the Futures option. For this right, the buyer pays the option seller an option premium.

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[1] A bought position in the case of a call option, and a sold position in the case of a put option.

(b) The seller of a Futures option assumes the obligation to enter into a Futures contract[2] at the exercise price of the Futures option if the option is validly exercised. For taking on this obligation, the seller receives an option premium.

Like Futures contracts, options are standardised and interchangeable, so that having bought or sold an option it is possible to close it out before its expiry or exercise.

You must distinguish between Futures options and options over the underlying. If a Futures option is exercised it results in the establishment of a Futures contract. If an option over the underlying is exercised, it results in the transfer of the actual commodity underlying the option (in the case of deliverable contracts), or a cash adjustment (in the case of cash settled contracts).

The following matters can apply both to Futures options and to options over the underlying. However the discussion will centre on Futures options.

European options & American options

An option will be expressed to be either a European style option or an American style option.

(a) European options can be exercised only on the date on which the option expires (**Expiry Date**), not before.

(b) American options can be exercised at any time up to and including the Expiry Date.

The majority of options traded on ASX 24 are American options. Because American options can be exercised at any time before the Expiry Date, the seller of an option must be prepared for that option to be exercised at any time. The decision to exercise is in the option buyer's hands.

Call Options & Put Options

A call option gives the buyer the right to buy a Futures contract at a designated price at or before the Expiry Date of the option (**Call Option**). The seller of a Call Option has the obligation to sell a Futures contract if the Futures option is exercised by the buyer.

A put option gives the buyer the right to sell a Futures contract at the exercise price (**Put Option**). The seller of a Put Option has the obligation to purchase the Futures contract if the Put Option is exercised by the buyer.

Exercising Call Options & Put Options

The table below sets out the results from the buyer's and seller's viewpoint when the buyer exercises a Futures Call Option or Put Option:

Example

Buyer Exercises		Effect on Seller	
Bought Call Option ->	Bought Futures (at the exercise price of the option)	Sold Call Option ->	Sold Futures (at the exercise price of the option)

2 A sold position in the case of a call option, and a bought position in the case of a put option.

Buyer Exercises		Effect on Seller	
Bought Put Option ->	Sold Futures (at the exercise price of the option)	Sold Put Option ->	Bought Futures (at the exercise price of the option)

More information

Information concerning international Relevant Exchanges and the types of Futures contracts traded on those exchanges can be found by visiting the relevant exchange's website. Please contact us if you require any international Futures information. For further information concerning Futures contracts traded on the ASX 24 you are referred to the ASX website at "www.asx.com.au", where brochures regarding the various Futures contracts can be downloaded.

3.10 Clearing House Margin

Sections 3.11 to 3.17 below contain a description of the basis upon which a Clearing House calls margin from its Clearing Participants. The operating rules of Relevant Exchange and Clearing Houses generally require Trading Participants and Clearing Participants respectively to call margin from their clients. The margins which the Clearing House calls from the Clearing Participant, or which the Clearing Participant calls from us, may or may not correspond with the margin we call from you. For a description of our margin requirements and arrangements, see section 4.

3.11 Initial Margin

To protect the financial security of the Clearing House until Variation Margins (discussed below) are paid, each Clearing Participant is required to pay Initial Margin.

(a) Minimum Initial Margins are set by the Clearing House or the Relevant Exchange or both, and may vary from time to time according to the volatility of the market. This means that an Initial Margin may change after a position has been opened, requiring a further payment (or refund).

(b) Initial Margins are calculated to cover the maximum expected movement in the market from one day to the next. A broker is entitled to call a higher Initial Margin than the minimum set. Liability for Initial Margin occurs at the time of the trade and your broker may require you to pay it before any trading is conducted on your behalf.

(c) Trading Participants such as IB are generally required under the operating rules of the Relevant Exchange to call an Initial Margin on each trade equal to at least the minimum Initial Margin set by the Clearing House.

3.12 Variation Margin

Variation Margin must be paid in respect of a Futures contract showing a loss; i.e. if the market falls after a purchase or rises after a sale. Losses can be incurred before a contract is closed out, if the market moves against the position. Futures positions are re-valued on a daily basis, and any deterioration in the position will result in Variation Margin being called.

Variation Margin is also paid by the Clearing House if the Futures contract shows a profit.

Example

The Initial Margin payable per ASX 24 SPI 200® Index Futures contracts is $10,000. The contracts are valued at $25 per index point.

In the **below example**, the Initial Margin amount is $10,000 (this is set by the Clearing House). On day 1, the market moves against the position and there is a requirement to pay $3,175 in Variation Margin call. On day 2, the market moves in favour of the position and a Variation Margin amount of $5,625 is receivable. On day 3 you decide to close out your contract, as the market is moving against you again. You close out at 3,550 which means that you are required to pay a further Variation Margin of $1,250.

Once the position has been closed out, the Initial Margin of $10,000 is returned and a net Variation Margin profit of $1,200 has been realised.

	Trade	Market Closing Price	Initial Margin	Variation Margin
Day One	Buy 1 contract at 3,500	3,375 points	$10,000 payable	-125 points x $25 = $3,175 payable
Day Two		3,600 points		+225 points x $25 = $5,625 receivable
Day Three	Sell 1 contract at 3,550		$10,000 receivable	-50 points x $25 = $1,250 payable

3.13 **Liability**

Given the above margin requirements, the liability under a Futures contract is not limited to the Initial Margin.

(a) If, after paying the Initial Margin, the price moves against the position, further margin (eg. Variation Margin) will be required.

(b) Initial Margin (unless eroded by losses) can be returned on settlement of the contract.

(c) Variation Margins that become realised losses when the position is closed out or settled are not refundable.

(d) Variation Margins covering unrealised losses are not refundable unless there is a favourable change of direction in market prices before settlement or closing out of the Futures contract.

3.14 **Profit &loss when trading Futures**

The **table below** sets out profit and loss situations when trading Futures contracts.

Profitable Trades	Losing Trades
Buy low – Sell high	Buy high – Sell low

Profitable Trades	Losing Trades
Sell high – Buy low	Sell low – Buy high

3.15 **Margins & liability on Futures option contracts**

For a bought Futures option, the loss is limited to the option premium which was paid, which is non-refundable.

For a bought option, if the full premium is paid at the time the option is traded, margins will not be called. If only an initial deposit is paid, your margins may be called up to the full value of the option premium (but no more).

For a sold Futures option, there is a similar liability to a holder of the underlying Futures contract – that is, potentially unlimited. However, there is limited profit potential, as a seller cannot earn more than the premium for which the option is sold.

For further information on our margin requirements, see section 4 below.

3.16 **Profit & loss when trading Futures options**

The table below sets out profit and loss situations when trading Call Options and Put Options. It sets out the levels of the underlying Futures contract at the time of opening and closing the option trade that will be favourable and unfavourable for the four basic option strategies.

Option trading is a complex area, and an option trader can suffer losses even if the price of the underlying asset (in this case a Futures contract) moves favourably.

Strategy	Profitable trades		Unprofitable trades	
	Futures price - opening trade	Futures price - closing trade	Futures price - opening trade	Futures price - closing trade
Bought call	Low	High	High	Same or lower
Bought put	High	Low	Low	Same or higher
Sold call	High	Same or lower	Low	High
Sold put	Low	Same or higher	High	Low

3.17 **Out of the money Futures options**

This is a term used to describe an option that cannot be exercised at a profit. An out-of-the-money option is a Call Option whose exercise price is higher than the current market level or a Put Option whose exercise price is below market.

If you are contemplating purchasing a Futures option that is significantly out-of-the-money, you should be aware that the chance of such an option becoming profitable at expiry is remote.

3.18 **Settlement**

If you have a deliverable Futures contract open at the close of trading on the last day of trading you will be under an obligation to deliver, or take delivery of and pay for, the commodities described in the specifications. It is IB's policy not to permit its clients to make or take delivery under a deliverable Futures contract (except where required by the Clearing House). If you wish us to vary our policy, and you specifically wish to make or take delivery you must obtain our prior written consent. It is your responsibility to monitor your open positions as the deliverable Futures contract approaches settlement date and to close out any open position at least two weeks prior to the settlement date. IB reserves the right, in its absolute discretion, to close out any open position you hold in a deliverable Futures contract if you have not closed out that Futures contract.

If you have a cash settled Futures contract open at the close of trading on the last day of trading you will be under an obligation to pay or have a right to receive an amount of money depending on the price movement.

The settlement of Futures options is more complex. For example, on the ASX 24 all in-the-money[3] or at-the-money[4] options are automatically exercised by the Clearing House. The resulting position is settled as a Futures position. Not all exchanges automatically exercise at-the-money or in-the-money options at expiry, particularly US exchanges. Check with your broker before the Expiry Date, or the option may lapse with the result it will be worthless.

The settlement procedures for options over the underlying are different again. Because these instruments can be traded on Relevant Exchanges and stock exchanges the procedures can vary widely.

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3 A put option with an exercise price above the price of the underlying asset or a call option with an exercise price below the price of the underlying asset.

4 Is a put or call option with an exercise price equal to the price of the subject matter of the option.

4. IB'S MARGIN REQUIREMENTS

We have discussed above the margin requirements which are imposed by Relevant Exchanges and Clearing Houses on Clearing Participants respectively. Where IB is the Clearing Participant, it must meet these requirements directly to the Clearing House. Where IB is not the Clearing Participant, the Clearing Participant imposes margin requirements on IB. In any event IB imposes its own margin requirements on you under its customer agreement with you. We discuss these in this section.

(a) Single universal account

When you open an Account with IB, you open a single account through which you can trade not only Exchange Traded Derivatives, but other products such as shares, exchange traded options and FX contracts. When we calculate your margin requirement, we have regard to the assets and liabilities in your account as a whole.

(a) Risk based portfolio analysis

We determine the margin requirement for your Account by risk based portfolio analysis models, also having regard to the margin called by Relevant Exchanges and Clearing Houses. A summary with examples on how IB calculates Futures margins is available via the following link to IB's website: https://www.interactivebrokers.com/en/index.php?f=marginnew&p=opt.

(b) Regulatory requirements

IB is regulated by the US regulators and is subject to strict regulation regarding the amount of leverage it can extend to its customer and the amount of margin it is required to call from its customers.

(c) Real-time margining and real-time monitoring

The value of assets and positions held in your Account is marked to market by IB's real-time credit management system. IB uses a real-time risk management system to allow you to see your trading risk at any moment of the day. Our real-time margin system calculates margin requirements throughout the day for new trades and trades already on the books and enforces initial margin requirements at the end of the day, with real-time liquidation of positions instead of delayed margin calls. Your margin requirement and current equity is monitored by IB and displayed online in real time to you via the various trading interfaces, as well as the online client portal. For more information about real-time margin monitoring, please visit our margin information page at https://www.interactivebrokers.com/en/index.php?f=margin&p=overview2.

It is your responsibility to actively monitor and manage your open positions and ensuring that you meet your margin obligations. It is also your responsibility to ensure that you are aware of any changes in margin obligations. All margin requirements must be met immediately. This means that sufficient cleared funds must be on deposit in your account to enable you to meet margin requirements immediately.

(d) New positions must be covered in advance

IB's real-time margining means that you will not be able to execute a transaction if to do so would cause your Account to go into margin deficit. For example, if your margin requirement would increase as a result of an initial margin obligation under a Futures contract, and there were insufficient assets in the Account to cover the initial margin obligation, IB's system would reject an order to execute the transaction concerned.

(e) Consequences of a margin deficit

Pursuant to your customer agreement, if your Account goes into margin call (that is, if there are insufficient assets in your Account to cover the margin requirement), IB is authorised to liquidate all, or part of, the assets held in your account, or otherwise close your open positions to eliminate the shortfall. IB WILL NOTIFY YOU WHEN A MARGIN DEFICIENCY ARISES, BUT IS NOT OBLIGED TO GIVE YOU AN OPPORTUNITY TO PROVIDE FURTHER FUNDS. IB WILL INSTEAD GENERALLY LIQUIDATE POSITIONS IN YOUR ACCOUNT IN ORDER TO SATISFY MARGIN REQUIREMENTS. Any losses resulting from IB closing out your positions will be debited to your account and you may be required to provide additional funds to IB to cover any shortfall.

(f) Clients' Segregated Monies

Funds deposited by you with us are required to be deposited into a clients' segregated account in accordance with the requirements of the Corporations Act. Unless otherwise agreed with us, you waive the right to any interest on funds deposited with us. Money or property deposited with us may only be invested according to the Corporations Act, and such investments are at your sole risk.

For money deposited in a clients' segregated account, you acknowledge that:

(i) individual client accounts are not separated from each other;

(ii) all clients' funds may be deposited into one or more clients' segregated account;

(iii) clients' segregated account provisions may not insulate any individual client's funds from a default in the clients' segregated account. Such a default may arise from any client's trading;

(iv) assets in the clients' segregated account belonging to non-defaulting clients are potentially at risk, even though they did not cause the default;

(v) we have the right to apply all clients' monies held in our clients' segregated account to meet the default in that account; and

(vi) the Clearing House (in the case of the ASX 24 market) has the right to apply all monies in the client clearing account (or house clearing account) to meet any liabilities in the client clearing account.

Clients who trade on foreign Relevant Exchanges may not have the benefit of protective measures provided by the Corporations Act and the operating rules of Australian exchanges. In particular, your funds may not have the same protection as funds deposited in Australia in a clients’ segregated account. As a regulated financial services provider in the US, IB is also subject to strict US client money rules.

5. SIGNIFICANT BENEFITS EXPLAINED

There are a number of benefits in trading Exchange Traded Derivatives, including the following:

(a) (**Standardisation**) As discussed in sections 3, because Exchange Traded Derivatives are standardised and therefore interchangeable, you may through the Relevant Exchange or Clearing House open and close positions, depending on the liquidity of the market in the relevant contract.

(b) (**Risk Management**) Through the processes of novation and margining, the Clearing House assumes and manages the risk of Exchange Traded Derivatives entered into on the Relevant Exchange. This reduces counterparty risk in a way which is not available in over-the-counter (**OTC**) derivatives transactions. IB has certainty that the other side of the Exchange Traded Derivatives will be honoured, and we (and therefore you) will not be subject to risk that the counterparty to the original Exchange Traded Derivatives contract may default in their obligations under the contract.

(c) (**Hedging**) You can use Exchange Traded Derivatives to hedge exposure in the underlying commodity, instrument or security.

(d) (**Speculation**) You can use Exchange Traded Derivatives to speculate on market movements. Exchange Traded Derivatives allow you to gain exposure to a particular underlying commodity, instrument or security without the need to buy or sell the underlying itself.

(e) (**Range of market positions and strategies**) You can potentially profit both from rising and from falling markets depending on the strategy you have employed. Through the use of Exchange Traded Derivatives, strategies can be tailored to suit almost any market view.

(f) (**Leverage**) Exchange Traded Derivatives generally involve a high degree of leverage. Exchange Traded Derivatives enable you to outlay a relatively small amount of money (in the form of Initial Margin) to secure an exposure to the underlying commodity, instrument or security.

For example, assume you have a positive view about the prospects of XYZ Ltd. You can either buy 1,000 XYZ Ltd shares at $10.00 and pay your broker $10,000 (plus costs) or you could buy a Futures contract over 1,000 XYZ Ltd shares, and pay an Initial Margin at the time the Exchange Traded Derivative is entered (which is likely to be a small percentage of the contract value (plus costs)).

The same amount of exposure to the underlying shares has been achieved, but for a much smaller outlay. Given a movement in the price of XYZ shares, the percentage returns (positive or negative) from the Exchange Traded Derivatives strategy are likely to be much higher.

Assume, for example, the Futures contract price is $10.10, and the Initial Margin payable on the above Futures position is 10%. Each contract covers 1000 shares. The following table compares the returns, assuming that the XYZ share price rises to $11.00 by maturity (transaction costs are ignored).

[**Note: the example provided is for illustrative purposes only and does not necessarily reflect the outcome of any actual trading in Futures in similar circumstances.**]

This leverage can work against you as well as for you. The use of leverage can lead to large losses as well as large gains. See section 6 for further information on risks.

	Shares	Futures
Opening trade	Share price $10.00 Buy 1,000 shares @ $10.00 = $10,000	Futures price $10.10 Buy 1 Futures contract @ $10.10 Pay 10% Initial Margin = $1,010
Maturity	Share price $11.00 Sell 1,000 shares @ $11.00 = $11,000	Futures price $11.00 Sell 1 Futures contract @ $11.00
Profit	$1.00 x 1,000 = $1,000	$0.90 x 1,000 = $900
Percentage return	10%	89%

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6. SIGNIFICANT RISKS EXPLAINED

The risk of loss in trading in Exchange Traded Derivatives can be substantial. It is important that you carefully consider whether trading in Exchange Traded Derivatives is appropriate for you in light of your investment objectives and financial circumstances. Exchange Traded Derivatives are not suitable for some retail investors. You should only trade Exchange Traded Derivatives if you understand the nature of the products and the extent of your exposure to risks.

You should be aware of the following matters:

(a) (**Loss of Initial Margin**) You could sustain a total loss of the Initial Margin that you deposit with your broker to establish or maintain an Exchange Traded Derivative.

(b) (**Payment of Variation Margin**) If the Exchange Traded Derivative moves against your position, you may be required, at short notice, to deposit with your broker Variation Margin in order to maintain your position. Those additional funds may be substantial. If you fail to provide those additional funds within the required time, your position may be liquidated at a loss and you will be liable for any shortfall in your account resulting from that failure.

(c) (**Losses beyond margin lodged**) You may sustain a total loss of the funds (Initial Margin and Variation Margin amounts) that you deposit with us to establish or maintain an Exchange Traded Derivative position. You may incur losses beyond the amounts that you lodge with us. You should not risk more funds than you can afford to lose. A good general rule is never to speculate with money which, if lost, would alter your standard of living.

(d) (**Leverage**) The high degree of leverage that is obtainable in trading Exchange Traded Derivatives can work against you as well as for you. The use of leverage can lead to large losses as well as large gains.

Returning to the example of a Futures contract over XYZ shares used previously, consider the result if the share price, instead of rising to $11.00, fell to $8.00 at maturity. The **following table** shows the results (transaction costs are ignored).

	Shares	Futures
Opening trade	Share price $10.00 Buy 1,000 shares @ $10.00 = $10,000	Futures price $10.10 Buy 1 Futures contract @ $10.10 Pay 10% Initial Margin = $1,010
Maturity	Share price $8.00 Sell 1,000 shares @ $8.00 = $8,000	Futures price $8.00 Sell 1 Futures contract @ $8.00
Loss	$2.00 x 1,000 = $2,000	$2.10 x 1,000 = $2,100
Percentage return	-20%	-208%

Leverage has served to multiply the loss suffered in percentage terms.

(e) (**Liquidity**) Under certain market conditions, it could become difficult or impossible for you to close out a position, and the relationship between the prices of the Exchange Traded Derivative and the underlying market may be distorted or affected. Examples of when this may happen are:

(i) if there is a significant change in the price of the underlying commodity, instrument or security over a short period of time;

(ii) if there are insufficient willing buyers and sellers in either the Exchange Traded Derivative market or the underlying market;

(iii) if the Exchange Traded Derivative market is suspended or disrupted for any reason.

Similarly, events such as these in relation to the market for the underlying asset may make it difficult for you to hedge or maintain your exposure under an Exchange Traded Derivative.

(f) (**Deliverable contracts and physical delivery**) Where you have a position in a deliverable Futures contract and you hold this open position to maturity, you must be prepared to make or take physical delivery of the underlying asset if your position is matched. See section 3.18 for further information on the position regarding open positions at and approaching maturity.

(g) (**Placing orders in a moving market**) The placing of contingent orders (such as a 'stop-loss' order)[5] may not always limit your losses to the amounts that you may want. Market conditions may make it impossible to execute such orders. For example, if the price of the underlying asset moves suddenly, your order may not be filled, or may be filled at a different price to that specified by you, and you may suffer losses as a result.

(h) (**Strategies**) A "spread" position (which involves the simultaneous purchase and sale of Exchange Traded Derivatives is not necessarily less risky than a simple "Long" or "Short" position.[6]

(i) (**Options risk profile**) If you propose to trade in Futures options, the maximum loss in buying an option is the premium paid, but the risks in selling an option are essentially unlimited.

(j) (**System failures**) You may experience losses due to Relevant Exchange or Clearing House system failures which may affect systems used by participants. Participant systems may also fail which means your trades may not be executed.

(k) (**Market emergencies**) You may incur losses that are caused by matters outside the broker's control. For example, a regulatory authority exercising its powers during a market emergency may result in losses. A regulatory authority can, in extreme situations, suspend trading or alter the price at which a position is settled. This could also result in a loss.

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5 Is an order that becomes a market order (and hence executed) when the derivatives market reaches the designated price.

6 A spread is the holding of bought Futures contract for one delivery month and a sold Futures contract for another delivery month in the same contract.

(l) (**Market disruption**) A market disruption may mean that you are unable to deal in an Exchange Traded Derivative when desired, and you may suffer a loss as a result. Common examples of disruption include the “crash” of the exchange electronic trading system, fire or other exchange or Clearing House emergency.

(m) (**Discretionary powers of Exchange and Clearing House**) The Relevant Exchange or Clearing House could exercise discretionary powers under their operating rules in relation to the market. They have powers to declare an undesirable situation has developed in a particular Exchange Traded Derivative and suspend trading.

(n) (**Disputes and trade cancellations**) When a trade is subject to dispute, the Relevant Exchange may have powers to request that participants amend or cancel a trade, which will in turn result in the Exchange Traded Derivative with the investor being amended or cancelled. Exchanges may also exercise discretionary powers to cancel transactions under their operating rules. These actions can affect your Exchange Traded Derivative positions.

In additional to the above, if you intend to deal in Exchange Traded Derivatives on any foreign Relevant Exchanges, you should also be aware of the following matters:

(o) (**Differing exchange rules**) You should be aware that when we place an order for you on any overseas Relevant Exchange, or clear a trade for you at an overseas clearing house, that trade will be subject to that exchange's or clearing house's rules. These rules may differ significantly from the rules of Australian exchanges or clearing houses.

(p) **(Australian regulators may not have any jurisdiction)** Neither the Australian Securities and Investments Commission nor Australian exchanges regulate activities of oversea Relevant Exchanges, nor do they have the power to compel enforcement of the operating rules of an overseas Relevant Exchange or any applicable foreign laws. Generally, the foreign transaction will be governed by applicable foreign law. This is true even if the Relevant Exchange is formally linked with an exchange in Australia.

(q) **(Foreign exchange movements)** If you trade on a foreign Relevant Exchange, the Exchange Traded Derivatives will be denominated in foreign currencies (i.e. non-AUD) and you will be subject to market and volatility risk of the foreign exchange market. Foreign exchange markets can be highly volatile and are subject to many influences including unforeseen events or changes in political, economic and financial conditions which may result in rapid currency fluctuations leading to substantial losses. These losses may be in addition to any losses on the Exchange Traded Derivative itself.

7. FEES AND CHARGES

The following is a summary of the fees and charges associated with trading in Exchange Traded Derivatives.

The fees and charges differ depending on the Relevant Exchange and Clearing House concerned. We set out below references to various links on our website which provide more detailed information on these fees and charges.

7.1 Commissions

We charge commission, at set flat rates, for the execution and close out of Exchange Traded Derivatives.

See https://www.interactivebrokers.com.au/en/index.php?f=commission&p=futures for further information in relation to Futures commissions.

7.2 Referral mark ups and billings

Advisers and/or brokers may charge their clients for services rendered either through automatic billing, electronic invoice or direct billing. Your advisor/broker determines the referral mark-up at the time of the registration, and this mark-up can be modified from time to time. At the time of your Account registration, you will be given a notice with the details of your referrer as well as the details of any mark ups charged. The available billing methods including caps and limitations are described at the IB website at www.interactivebrokers.com.

7.3 Interest

If you have a debit balance on your Account after all fees and costs have been deducted (in other words, you owe money to meet the margin requirement and other amounts) you must pay interest on the debit balance. Interest is calculated daily based on your positions, margin requirement and balances on your daily statement for that date. Interest is usually posted once a month on your Account. This generally occurs within five business days following the end of the month.

See https://www.interactivebrokers.com/en/index.php?f=interest&p=schedule2 for further information and examples.

7.4 Administrative fees and charges

IB charges certain administrative fees for matters such as order cancellation and modifications, trade busts (cancellations) and adjustments, prime broker take-ups, deposits and withdrawals, exercise and assignments, American Depository Receipts ("ADRs") and fees for bounced checks, stop payments etc). The list of administrative fees and charges is available on the IB website at https://www.interactivebrokers.com/en/index.php?f=1580.

7.5 Taxes

Transaction taxes, such as value added taxes may apply in some jurisdictions. The taxation implications of trading in Exchange Traded Derivatives will depend on your particular circumstances and it is recommended that you obtain your own independent taxation advice. See section 9 for more details regarding taxation implications.

7.6 Market data, fundamentals and news

If you access market data, fundamentals or news through IB, there may be a cost to you to subscribe for this information.

See https://www.interactivebrokers.com.au/en/index.php?f=marketData&p=overview for further information on the costs of accessing such data through IB.

8. DISPUTE RESOLUTION

If you have any concerns or comments about the financial service or financial products provided to you, you should send your complaint in writing to:

Legal & Compliance Department
Interactive Brokers LLC
One Pickwick Plaza
Greenwich, CT 06830

If you have not received a satisfactory response or 45 days have elapsed you may refer the matter to the Financial Ombudsman Service (**FOS**). IB is a member of FOS. FOS can be contacted on 1300 08 08 or GPO Box 3, Melbourne, Victoria, 3001. This service is provided to you free of charge.

If you require further information on how we handle complaints, please visit our website www.interactivebrokers.com or refer to our Financial Services Guide.

9. TAXATION IMPLICATIONS

It is important to note that a client's tax position when trading Exchange Traded Derivatives will depend on their individual circumstances. The taxation consequences of dealing in Exchange Traded Derivatives depend upon whether the taxpayer trades in derivatives, is merely speculating in derivatives or is using derivatives to hedge against a particular exposure. Care must be taken, as a particular derivative transaction may have elements of more than one of the categories of trading, speculating or hedging or there may be other considerations which are relevant in determining the taxation consequences of dealing in a particular derivatives contract. Relevant factors include the purpose of the taxpayer in entering into the derivative contract transaction, whether the taxpayer is involved in business or commerce, the taxpayer's overall activities and the place the particular futures contract has in relation to those activities and the economic nature of the transactions.

Please note that IB does not provide taxation advice and that investors must consult their own taxation adviser in relation to the tax consequences of trading in Exchange Traded Derivatives.

10. COOLING-OFF ARRANGEMENTS

There are no cooling-off arrangements for Exchange Traded Derivatives.

11. ACCOUNT OPENING

11.1 Required Minimums

Required balance, activity and commission minimums for retail and introducing broker accounts and for customers using a dedicated line FIX connection are as set out on the IB website at www.interactivebrokers.com.

The following minimums are required to open an account:

Category	Required Deposit
All Individuals not listed below	USD$10,000 (or non-USD equivalent)
Advisor and broker Clients	USD$5,000 (or non-USD equivalent)

EXCHANGE TRADED OPTIONS

PRODUCT DISCLOSURE STATEMENT

INTERACTIVE BROKERS LLC

ARBN 091 191 141

AFSL 245 574

Date of Issue: 12 February 2014

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1. GENERAL INTRODUCTION

1.1 Important Information

The information in this Product Disclosure Statement (PDS) does not take into account your personal objectives, financial situation and needs. Before trading in the products referred to in this PDS you should read this PDS and be satisfied that any trading you undertake in relation to those products is appropriate in view of your objectives, financial situation and needs.

We recommend that you consult your financial adviser before trading in exchange traded options.

1.2 Purpose of this PDS

This Product Disclosure Statement (**PDS**) has been prepared by Interactive Brokers LLC (**IB**) the issuer of the exchange traded options. This PDS is designed to assist you in deciding whether exchange traded options are appropriate for your needs and to assist you in comparing it with other financial products you may be considering. This PDS is an important document and we recommend you contact us should you have any questions. Our contact details are set out at section 1.3 below.

Although the information in this PDS is up to date as at the date of publication, it is subject to change from time to time. Where such information is not materially adverse, we may provide updates on our website at www.interactivebrokers.com. A paper copy is also available on request at no charge to you.

We may also be required to issue a new PDS or a supplementary PDS as a result of certain changes, in particular where the changes are materially adverse to retail clients. Any supplementary PDS will be posted on our website at www.interactivebrokers.com. A paper copy will also available on request at no charge to you.

When we use terms ‘we’, ‘us’ or ‘our’ in this PDS, the reference is to IB.

1.3 About Interactive Brokers

(a) **The issuer – Interactive Brokers LLC**

IB is the issuer of exchange traded options offered under this PDS.

IB holds an Australian financial services licence, number 245574, which authorises IB to deal in exchange traded options.

IB is also regulated in the USA (by the Securities and Exchange Commission, the Commodities and Futures Trading Commission, the Financial Industry Regulatory Authority and the New York Stock Exchange), in the United Kingdom (by the Financial Conduct Authority) and in Hong Kong (by the Securities and Futures Commission).

IB is a trading participant of ASX 24 market operated by ASX and of the financial market operated by Chi-X Australia. IB is not a trading participant of ASX. For information on the execution, clearing and settlement arrangement which IB has in place for exchange traded options, see section 4.

(b) **The Interactive Brokers Group**

IB is an affiliate of the Interactive Brokers Group (**IBG**) which comprises of a number of automated global electronic market makers and brokers that specialise in routing orders and executing and processing trades in securities, futures and foreign exchange instruments. IBG affiliates conduct business on more than 60 electronic exchanges and trading venues around the world. IBG, using its proprietary software, provides non-advisory brokerage services to professional traders and investors with direct access to stocks, options, futures, foreign exchange contracts and bonds.

IBG's headquarter is in Greenwich Connecticut, and it has about 880 employees in its offices in the USA, Switzerland, Canada, Hong Kong, UK, Australia, Hungary, Russia, India, China and Estonia.

(c) **Contact details**

Our contact details are below:

Interactive Brokers LLC Head Office
One Pickwick Plaza
Greenwich, CT 06830

Telephone Numbers:
1-877-442-2757 (from inside the U.S.)
+1-312-542-6901 (from outside the U.S.)

IB - Australian Contact
Grosvenor Place
Level 42, 225 George Street,
Sydney, NSW 2000

Telephone numbers:
+61 (2) 8093 7300

e-mail: help@interactivebrokers.com

Additional contact information, including issue-specific details, is available at http://individuals.interactivebrokers.com/en/p.php?f=customerService.

1.4 What Products does this PDS cover?

This PDS relates to exchange traded options traded on a range of exchanges, including the market operated by Australian Securities Exchange Limited (**ASX**). For details of the exchanges on which you can trade exchange traded options through us (**Relevant Exchanges**), please see our website at https://www.interactivebrokers.com.hk/en/index.php?f=products&p=opt.

Exchange traded options offered under this PDS include:

- **equity options**: options over quoted shares or interests in managed investment schemes of a range of different companies and managed investment schemes quoted on ASX and other Relevant Exchanges[1].
- **index options**: options over an index (for example, in the case of ASX, the S&P™/ASX 200™ Index or the S&P™/ASX 200™ Property Trust Index).

In this PDS, equity options and index options are collectively referred to as **Exchange Traded Options** or **ETOs**.

If you received this document electronically or if you received any updated or new information other than in writing, we will provide a paper copy free on request.

[1] Note that ASX makes available for trading equity options over various financial products, including shares in companies and interests in managed investment schemes. For ease of reference, we will refer in this PDS to underlying shares, but investors should be aware that the underlying financial product may be another financial product in some cases.

2. WHAT ARE EXCHANGE TRADED OPTIONS?

The risk of loss in trading in Exchange Traded Options can be substantial. It is important that you carefully consider whether trading Exchange Traded Options is appropriate for you in light of your investment objectives and financial circumstances. Exchange Traded Options are not suitable for some retail investors. You should only trade Exchange Traded Options if you understand the nature of the products and the extent of your exposure to risks.

A description of the significant risks associated with trading in Exchange Traded Options is set out in section 6 of this PDS.

2.1 Types of Exchange Traded Options

The types of Exchange Traded Options traded on Relevant Exchanges offered under this PDS are equity options and index options. These are each discussed briefly below:

(a) **Equity options**

Equity options are options over financial products quoted on a Relevant Exchange, for example shares of listed companies. On ASX, equity options are "deliverable" options in the sense that, on exercise, one party must take "delivery" of the underlying financial product.

(b) **Index options**

Index options are options over an index such as the S&P™/ASX 200™ Index or the S&P™/ASX 200™ Property Trust Index. Index options are "cash settled" options in the sense that, on exercise of an option, the buyer of the option will have the right to receive an amount of money and the writer will have a corresponding obligation to pay that amount (provided the option is "in-the-money"). The amount of money will be determined by the difference between the exercise level (set by the Relevant Exchange) and the settlement mechanism determined by the Relevant Exchange or the clearing house of the Relevant Exchange responsible for the clearing and settlement of Exchange Traded Options (**Clearing House**).

2.2 Uses of Exchange Traded Options

Exchange Traded Options are a versatile financial product which can allow investors to:

- hedge against fluctuations in their underlying share portfolio;
- increase the income earned from their portfolio (through the earning of premium income); and

- profit from speculation.

Their flexibility stems from the ability to both buy (take) and sell (write) an Exchange Traded Option contract and undertake multiple positions targeting specific movements in the overall market and individual underlying shares. Index options can be used to trade a view on the market as whole, or on the sector of the market that is covered by the particular index.

The use of Exchange Traded Options within an investor's overall investment strategy can provide flexibility to take advantage of rising, falling and neutral markets. However, both the purchase and sale of Exchange Traded Options involves risks which are discussed in more detail in section 6.

2.3 Understanding some concepts

Concepts which should be understood before trading in Exchange Traded Options are:

- The effect that time has on a position/strategy;
- How volatility changes, both up and down, may affect the price or value of an option and the potential outcome;
- How to calculate margins and worst-case scenarios for any position;
- The likelihood of early exercise and the most probable timing of such an event;
- The effect of dividends and capital reconstructions on an options position;
- The liquidity of an option, the role of market makers, and the effect this may have on your ability to enter and exit a position.

Whilst this PDS provides product information including information about the risks, characteristics and benefits of Exchange Traded Options, investors should inform themselves and if necessary obtain advice about the specific risks, characteristics and benefits of the Exchange Traded Option they intend to trade and rules of the Relevant Exchange.

2.4 Educational booklets for ASX Exchange Traded Options

In Australia, Exchange Traded Options have been traded in Australia since 1976 on the ASX. ASX has prepared a number of educational booklets relating to Exchange Traded Options. Their current booklets are available free of charge to you via their website at http://www.asx.com.au/education/download-brochures.htm as set out below.

This PDS refers to a number of ASX booklets, including:

- "**Understanding Options Trading**"- this booklet discusses the features and contract specifications of Exchange Traded Options, risks and advantages in trading options and gives examples of how Exchange Traded Options work and basic option trading strategies. You can view this booklet online by using the following link:

  http://www.asx.com.au/documents/resources/UnderstandingOptions.pdf

- "**Understanding Option Strategies**" – this booklet describes in more detail how Exchange Traded Options may be used in various trading strategies. You can view this booklet online by using the following link:

  http://www.asx.com.au/documents/resources/UnderstandingStrategies.pdf

- **"Margins" –** this booklet explains what margins are, how they are calculated by the Clearing House and how a Clearing Participant may meet its margin obligations to the Clearing House. You can view this booklet online by using the following link:

  http://www.asx.com.au/documents/resources/UnderstandingMargins.pdf

If you cannot access the ASX booklets via the ASX website, you should contact the ASX. If you would like a hard copy of the "**Understanding Options Trading**" booklet, please contact us and we will arrange to forward a copy of that booklet to you at no charge.

If you have any questions on any aspect of the booklets you should consult us before making any investment decisions.

3. BASIC FEATURES OF EXCHANGE TRADED OPTIONS

The following discussion is not intended to be a detailed discussion of the features of the Exchange Traded Options, but rather to identify some of the key features of Exchange Traded Options. For a more detailed description in relation to Exchange Traded Options traded on ASX, you should refer to the ASX explanatory booklets referred to in the previous section.

3.1 Standardised Contracts

The terms and specifications of Exchange Traded Options (other than the premium, which is negotiated between the buyer and seller) are determined by the Relevant Exchange in accordance with operating rules of the Relevant Exchange.

In relation to Exchange Traded Options traded on ASX, details of contract specifications for Exchange Traded Options are published by the ASX on their website at http://www.asx.com.au/products/equity-options/options-contract-specifications.htm. The contract specifications detail the key standardised features of Exchange Traded Options traded on ASX.

The Relevant Exchange determines the key contract specifications for each series of Exchange Traded Options traded on the exchange.

For example, in the context of equity options the Relevant Exchange sets the following:

- the underlying share (eg. BHP);
- whether the option is a call option or a put option;
- the contract size (that is, the number of units of the underlying share to which the option relates) – when an exchange traded equity option series is first opened by ASX for trading, the contract size is usually 100 (eg. 100 BHP shares);
- exercise style – that is American style or European style;
- the exercise price (or strike price) – is the specified price at which the taker (buyer) of an equity option can, if they exercise the option, buy (in the case of a call option) or sell (in the case of a put option) the underlying shares; and
- the expiry date.

Similarly, for index options, the relevant parameters will also be set by the Relevant Exchange, including the underlying index, the index multiplier, the exercise style (European), the exercise level of the option and the expiry date.

Some of the concepts referred to above, such as contract size, exercise style, exercise price and expiry date are discussed in more detail below.

3.2 Sellers (writers) and Buyers (takers)

Every Exchange Traded Option contract has both a Seller (writer) and a Buyer (taker) .

Buyers are referred to as "takers" of an Exchange Traded Option as they take up the right to exercise the option (for example, the right to exercise the option and either buy or sell the underlying shares at the exercise price, in the case of an equity option).

Sellers of Exchange Traded Options are referred to as "writers" because they underwrite (or willingly accept) the obligations which are required to be performed on exercise of the option (for example, to buy or sell the underlying shares at the exercise price, in the case of an equity option).

3.3 Call options and put options

Exchange Traded Options may be call options or put options. The nature of call options and put options will depend on whether the options are equity options or index options.

(a) Equity options

Call options give the buyer (taker) the right, but not the obligation, to buy a standard quantity of underlying shares at a predetermined price on or before a predetermined date. If the taker exercises their right to buy, the seller (writer) to which the exercise notice is assigned by the Clearing House is required to sell the standard quantity of shares at the predetermined exercise price.

Put options give the buyer (taker) the right, but not the obligation to sell a standard quantity of underlying shares at a predetermined price on or before a predetermined date. If the taker exercises their right to sell, the seller (writer) to which the exercise notice is assigned by the Clearing House is required to buy the standard quantity of shares at the predetermined exercise price.

(b) Index options

Call options (in the case of index options) give the buyer (taker) the right, but not the obligation to exercise the option. If the closing level of the index exceeds the exercise level of the index option, the taker will, on exercise of the option, have the right to receive an amount of money which is determined by multiplying the difference between the closing level and the exercise level by the index multiplier specified by the Relevant Exchange. If the taker exercises the option, the seller (writer) to which the exercise notice is assigned by the Clearing House is required to pay the corresponding amount.

Put options (in the case of index options) give the buyer (taker) the right, but not the obligation to exercise the option. If the closing level of the index is less than the exercise level of the index option, the taker will, on exercise of the option, have the right to receive an amount of money which is determined by multiplying the difference between the closing level and the exercise level by the index multiplier specified by the Relevant Exchange. If the taker exercises the option, the seller (writer) to which the exercise notice is assigned by the Clearing House is required to pay the corresponding amount.

3.4 Exercise style – American or European

Exchange Traded Options may be American or European exercise style. *American style* options can be exercised at any time prior to and including the expiry day. *European style* options can only be exercised on the expiry day and not before. Most ASX exchange traded equity options are American style options. ASX exchange traded index options are European style.

3.5 Premium

As noted above, the only term of an option contract an investor trades on a Relevant Exchange which is not set and pre-determined by the Relevant Exchange is the price of the contract. The price, known as the "Premium" is negotiated between the buyer and seller of the Exchange Traded Option through the market.

The premium for an equity option is quoted on a cents per underlying share basis so the dollar value payment is calculated by multiplying the premium amount by the number of underlying shares. As discussed above, for ASX Exchange Traded Options this is usually 100 at the time the option series is opened, but may be adjusted by ASX. For example, if you buy a call option with a premium quoted at 25c per share and the contract size is 100, the total premium is $25.00 (being $0.25 x 100).

The premium for an index option is calculated by multiplying the premium (specified in terms of the number of points of the index) by the index multiplier. For example, a premium of 30 points, with an index multiplier of $10, represents a total premium cost of $300 per contract.

The value of an option will fluctuate during the option's life depending on a range of factors including the exercise price or, the price of the underlying share or the level of the underlying index, the volatility of the underlying share or the underlying index, the time remaining to expiry date, interest rates, dividends and general risks applicable to markets.

Most option pricing involves the use of a mathematical formula which includes calculating the intrinsic and time value of the particular option. You should refer to the section entitled "Option pricing fundamentals" in the ASX Booklet "**Understanding Options Trading**" available at the link provided in section 2 above for more information regarding the fundamentals of pricing options. ASX also provides a pricing calculator on the ASX website at

http://www.asx.com.au/prices/calculators.htm.

You can obtain current price information from your adviser at IB.

For further information on trading index options and examples on how trading index options can work for you, refer to the ASX booklet **Understanding Options Trading** available at the link provided in section 2 above.

3.6 Adjustments

A Relevant Exchange or Clearing House may in accordance with its operating rules make an adjustment to any of the specifications of an option to reflect corporate actions in respect of the underlying shares, for example if the issuer makes a bonus issue, rights issue, special dividend, capital reduction or other similar event. If a Relevant Exchange does make an adjustment it will generally endeavour to do so in a way which puts the writer and taker in substantially the same economic position they would have been in had the adjustment event not occurred, so as to preserve the value of open positions of takers and writers at the time of the adjustment. In some cases, a Relevant Exchange may decide not to make an adjustment for a corporate action and, instead, direct that open positions be terminated or closed out. When a Relevant Exchange makes an adjustment to the terms of an option series, the Clearing House will make a corresponding adjustment to the terms of contracts which are already open.

ASX has issued an **Explanatory Note for Option Adjustments** which can be found at http://www.asx.com.au/documents/resources/explanatory_note_option_adjustments.pdf which provides further information regarding ASX option adjustments.

3.7 No Dividends or Entitlements

The parties to an equity option do not, under the terms of the option, have any entitlement to dividends, franking credits or other entitlements paid or made by the issuer of the underlying shares. Of course, the seller of a call option or the buyer of a put option who holds the underlying shares will have an entitlement to dividends, franking credits and other entitlements, but these are entitlements of the holders of the shares, not through the option contract.

If the buyer (taker) of a call option wants to participate in a prospective dividend or entitlement, the buyer will need to first exercise the option, allowing sufficient time to become the registered holder prior to the Ex Dividend or Ex Entitlement date. The resulting sale and purchase of underlying shares on the exercise of an equity option will settle on the third business day following the exercise of the option (see the discussion below under the heading *"Settlement following exercise of Exchange Traded Option"*).

3.8 Expiry

Exchange Traded Options have a limited life span. For example, for ASX Exchange Traded Options, all Exchange Traded Options have an expiry month, which generally follow one of three cycles, namely:

(i) January/April/July/October;

(ii) February/May/August/November; and

(iii) March/June/September/December.

The options expire on a specified day in the expiry month, as determined by ASX. For equity options, the option expires on the Thursday preceding the last Friday in the expiry month, as long as both the Thursday and Friday are full business days. Therefore if the last day of the month is a Thursday the option will expire on the Thursday prior. Index Options expire on the third Thursday of the contract month provided that day is a business day. For ASX Exchange Traded Options, ASX's Clearing House, ASX Clear Pty Ltd (**ASX Clear**) has the right to change these expiry dates should the need arise. Expiry day information is available on the ASX website at http://www.asx.com.au/about/expiry-calendar.htm.

3.9 Exercise by the Buyer (taker) and assignment to the Seller (writer)

The taker of an Exchange Traded Option has the right (but not the obligation) to exercise the option contract. This means that the writer of an Exchange Traded Option may be exercised against at any time prior to expiry (American style only). When the taker exercises an option, the Clearing House will randomly assign that exercise to an open position held by a writer in the relevant option series.

3.10 Automatic exercise

We will automatically exercise your taken exchange traded option contract if your contract is one cent in the money or one point for indexes. For call options the option will be in the money where the exercise price is below the price of the underlying shares. For put options the option will be in the money where the exercise price is higher than the price of the underlying shares. All unexercised option contracts will expire on the expiry date.

3.11 Deliverable or cash settled

Exchange Traded Options are either deliverable or cash settled.

Options are described as *deliverable* where the obligations of the buyer and seller are settled by the "delivery" of the underlying share. Equity options are deliverable, because on exercise, one party is required to transfer the underlying shares to the other at the exercise price.

Options are described as *cash settled* where the obligations of the buyer and seller are settled by the buyer and seller settling their obligations by the payment and receipt of a cash amount. Index options are cash settled.

3.12 Settlement following exercise of Exchange Traded Option

When an equity option is exercised by a Buyer, and the exercise is assigned by the Clearing House to an open position of a Seller, a contract for the sale and purchase of the underlying shares at the exercise price will arise between the Seller and the Buyer.

Payment for, and the delivery of underlying shares occurs via the Relevant Clearing House. For example, in relation to ASX Exchange Traded Options, settlement occurs through ASX Settlement, the settlement facility for ASX transactions and settlement will occur in accordance with the operating rules of ASX Settlement. Your obligations in relation to settlement are set out in IB's terms and conditions.

Index options are cash settled. When an index option is exercised by a taker, and the exercise is assigned by the Clearing House to an open position of a Seller, the Seller of the option must pay the cash settlement amount to the Clearing House. For example, in relation to ASX Exchange Traded Options, that amount will be determined by the difference between the exercise level (set by ASX) and the Opening Index Price Calculation (OPIC) as calculated by ASX on the expiry date. Cash settlement occurs in accordance with the rules of the Clearing House. For more information on settlement of ASX index options see the section entitled "Trading index options" in the ASX Booklet "**Understanding Options Trading**" available at the link provided in section 2 above.

3.13 Margin requirements

Exchange Traded Options are subject to margin requirements. For a discussion of our margin requirements, see section 4.

3.14 Cooling off period

There are no cooling-off arrangements for Exchange Traded Options.

3.15 Option contracts which are open for trading

Details of Exchange Traded Options available on the Relevant Exchanges are commonly available on the websites of the Relevant Exchanges.

For example, details of Exchange Traded Options listed on ASX and expiry date information can be found on the ASX website at http://www.asx.com.au/products/equity-options.htm or alternatively through information vendors or newspapers. A list of current option codes and delayed price information is available on the ASX website at http://www.asx.com.au/products/equity-options/options-data.htm.

Details of the previous day's trading for ASX Exchange Traded Options are published in summary form in the Australian Financial Review and more comprehensively in The Australian. If you cannot access the above information, please contact us and we will arrange to provide you with the information.

3.16 Opening an Exchange Traded Option position

Unlike shares, Exchange Traded Options are not instruments which a person buys or sells in the ordinary sense. The Relevant Exchange sets the terms of the Exchange Traded Options and, if we enter into a contract for you as Buyer (taker) or Seller (writer) , we are regarded as having "opened" the contract for you.

If you have opened a position as the taker of an Exchange Traded Option, you have three alternatives:

- You can exercise the option.
- You can hold the option to expiry and allow it to lapse.
- You can close out the position by selling (writing) an option in the same series and instructing us to "close out" the open position.

Similarly, if you have opened a position as the writer of an Exchange Traded Option, you have two alternatives:

- You can let the option go to expiry and risk being exercised against (if it is not exercised against, it will expire without any further obligation or liability on the writer).

- You can close out the option by buying (taking) an option in the same series (provided it has not been exercised against).

3.17 Closing out an Exchange Traded Option position

An Exchange Traded Option may be "closed out" by entering into an option in the same series, but in the opposite position. In other words, if you have an open position in an option as a Buyer (taker) , you can close out that position by entering into an option in the same series as a Seller (writer) . This effectively cancels out the open position. For example, an investor might close out an open option contract in the following scenarios:

- The Seller (writer) of an option may want to close out the option (by taking an option in the same series) to avoid the risk of having a Buyer's (taker's) exercise notice allocated to the Seller's (writer's) option.

- The investor may want to take a profit. For example, the buyer of a call option may have paid a premium of $1.00 per option, and the same option series may now be able to be sold for a premium of $1.20, because the price of the underlying shares has increased. The buyer may therefore close out his or her position by selling an option in the same series, profiting from the difference of $0.20 per underling share.

- The investor may want to limit a loss. For example, the buyer of a call option may have paid a premium of $1.00 per option, and the same option series may now be able to be sold for only $0.80, because the price of the underlying shares has decreased or because the time to expiry has reduced. The buyer may therefore close out his or her position by selling an option in the same series, crystallising a loss of the difference of $0.20 per underling share.

It is important that you advise us if you are seeking to "close out" an existing position when placing your order.

3.18 Information on trading strategies

For information and examples regarding trading strategies using Exchange Traded Options, refer to the "Pay-off" section on page 24 of "**Understanding Options Trading**" available at the link provided in section 2 above.

4. EXECUTION, CLEARING AND SETTLEMENT ARRANGEMENTS

4.1 Execution arrangements for Exchange Traded Options

IB is a trading participant of some, but not all, of the Relevant Exchanges. In relation to Relevant Exchanges where IB is a direct participant, IB executes your transactions in Exchange Traded Options directly on the Relevant Exchange. Where IB is not a direct participant, it arranges for the execution of your transactions in Exchange Traded Options.

In Australia, IB is not a participant of ASX which operates the Exchange Traded Options market. IB therefore has an arrangement with its affiliated company, Timber Hill Australia Pty Limited (ABN 25 079 993 534) (**THA**), through which IB executes Exchange Traded Options on ASX for you. THA is a trading participant of ASX.

4.2 Clearing arrangements and the role of the Clearing House

Transactions in Exchange Traded Options on a market operated by a Relevant Exchange are cleared through the Clearing House responsible for clearing those transactions. For example, Exchange Traded Options traded on ASX are cleared through ASX Clear, a wholly owned subsidiary of ASX and a licensed clearing and settlement facility under the *Corporations Act 2001* (Cth) (**Corporations Act**).

Interactive Brokers is not a participant (**Clearing Participant**) of all Relevant Clearing Houses. Where it is not a Clearing Participant, it has an arrangement with a Clearing Participant of the relevant Clearing House to clear your Exchange Traded Options transactions. Clearing Participants are bound by the operating rules of the relevant Clearing House (**Clearing Rules**).

When we arrange, or enter into an Exchange Traded Option for you, the transaction is reported to the Clearing House for registration. On registration of a contract by the Clearing House, the original traded contract is in most markets, such as ASX, terminated and replaced by two contracts. One of those is between the Clearing Participant who clears the contract for the taker of the option contract and the Clearing House. The other is between the Clearing Participant who clears the contract for the writer of the option contract and the Clearing House. This process of registration and creation of two new contracts is known as "novation" and is described briefly in the section entitled "You and your broker" in the ASX booklet, "**Understanding Options Trading**" available at the link provided in section 2 above.

You, as the client, are not party to either of those contracts actually registered with the Clearing House. Although we may act on your instructions or for your benefit, upon registration of the Exchange Traded Option with the Clearing House in the name of the

Clearing Participant, the Clearing Participant incurs obligations to the Clearing House as principal, even though the Exchange Traded Option may have been entered into on your instructions.

In Australia, IB has arranged for ABN AMRO Clearing Sydney Pty Limited ABN 36 081 279 889 (**AACS**) to be the Clearing Participant for your ASX Exchange Traded Options Transactions. AACS holds an Australian financial services licence, number 225136 which authorises it to clear Exchange Traded Options. In accordance with the arrangements described above, AACS is the party to all ASX Exchange Traded Options Transactions registered with ASX Clear. AACS regards IB as its customer in respect of these positions, and IB in turn holds the benefit of these positions for you, in accordance with the terms of your customer agreement with IB. In other jurisdictions where IB is not the Clearing Participant of the Relevant Clearing House, similar arrangements are in place for IB to hold the benefit of your positions for you.

4.3 Clearing House Margin

This section contains a description of the basis upon which a Clearing House calls margin from its Clearing Participants. These margins may or may not correspond with the margin we call from you. For a description of our margin requirements and arrangements, see section 4.5.

As the Clearing House contracts with Clearing Participants as principals, where a Clearing Participant has an exposure under an Exchange Traded Option contract to the Clearing House, the Clearing House will call amounts of money known as "Margin" from the Clearing Participant as cover. Margins are generally a feature of all exchange traded derivative products and are designed to protect the Clearing House against default. A margin is the amount calculated by the Clearing House as necessary to cover the risk of financial loss on an Exchange Traded Option contract due to an adverse market movement.

The writer of an Exchange Traded Option will ordinarily be required to pay margin in respect of that contract or provide collateral acceptable to the Clearing House. That is because the Clearing House is exposed to the risk that the writer will not perform its obligations if and when the option is exercised. The taker of an Exchange Traded Option will not be required to pay margin in respect of that contract, because they are not "at risk" – they must pay the premium up front and that is the maximum amount the taker of the option can lose in respect of that contract (plus transaction costs).

The total margin called by the Clearing House for Exchange Traded Options is generally made up of two components, in each case, determined by the Clearing House:

- Variation margin (also known as premium margin) – this is determined by reference to the market value of the underlying share at the close of business each day.

- Initial margin (also known as risk margin) – this is the potential change in the price of the option contract assuming a maximum probable inter-day price move in the price of the underlying security or index.

Amounts of margin are determined daily by the Clearing House, following the close of trading each day. In times of extreme volatility an intra day margin call may be made by the Clearing House.

4.4 Collateral and the holding of securities

Clearing House margin obligations may be met by paying cash or by providing certain types of eligible collateral (eg. shares). For example, in relation to ASX Exchange Traded Options, shares (held by you) which are acceptable to the Clearing House may be lodged with the Clearing House as collateral for margin obligations relating to Exchange Traded Option positions. When shares are lodged with the Clearing House, the shares are held by the Clearing House as 'third party security' in the sense that they represent collateral provided by you to secure the obligations of the Clearing Participant to the Clearing House. The lodged shares cannot be used by us or the Clearing Participant in relation to our dealings or for our other clients in relation to their dealings unless authorised by you.

As a risk management tool, the Clearing House may apply a 'haircut' in relation to the value of collateral lodged. For example, if you lodge $10,000 worth of collateral and the Clearing House applies a 30% haircut, only $7,000 will be considered as collateral cover for any margin obligations.

The margining process used by Clearing House is explained in detail in the ASX booklet "**Margins**" which is available on the ASX website or by following the link below:

http://www.asx.com.au/documents/resources/UnderstandingMargins.pdf

Where you hold securities through us, we act as your custodian in relation to those securities. In markets where IB does not have direct access to the settlement system for the relevant securities markets, IB may appoint a sub-custodian to hold these securities. For example, in relation to ASX quoted securities, IB has appointed a third party clearing and settlement participant's nominee to hold securities in the ASX Settlement system for the benefit of IB, which in turn holds them as custodian for the benefit of its customers who are entitled to those securities. Similar arrangements may apply in other jurisdictions outside Australia.

4.5 IB's margin requirements

We have discussed above the margin requirements which are imposed by Clearing Houses on Clearing Participants. Where IB is the Clearing Participant, it must meet these requirements directly. Where IB is not the Clearing Participant, the Clearing Participant imposes margin requirements to IB. In any event IB imposes its own margin requirements under its customer agreement with you. We discuss these in this section.

(a) Single universal account

When you open an Account with IB, you open a single account through which you can trade not only Exchange Traded Options, but other products such as shares, futures and foreign exchange contracts. When we calculate your margin requirement, we have regard to the assets and liabilities in your Account as a whole.

(b) Risk based portfolio analysis

We determine the margin requirement for your Account by risk based portfolio analysis models, also having regard to the margin called by Relevant Exchanges and Clearing Houses. A summary with examples on how IB calculates ETO margins is available via the following link to IB's website: https://www.interactivebrokers.com/en/index.php?f=marginnew&p=opt.

(c) Regulatory requirements

IB is regulated by the US regulators and is subject to strict regulation regarding the amount of leverage it can extend to its customer and the amount of margin it is required to call from its customers.

(d) Real-time margining and real-time monitoring

The value of assets and positions held in your Account is marked to market by IB's real-time credit management system. IB uses a real-time risk management system to allow you to see your trading risk at any moment of the day. Our real-time margin system calculates margin requirements throughout the day for new trades and trades already on the books and enforces initial margin requirements at the end of the day, with real-time liquidation of positions instead of delayed margin calls. Your margin requirement and current equity is monitored by IB and displayed online in real time to the customer via the various trading interfaces, as well as the online client portal. For more information about real-time margin monitoring, please visit our margin information page at https://www.interactivebrokers.com/en/index.php?f=margin&p=overview2.

It is your responsibility to actively monitor and manage your open positions and ensuring that you meet your margin obligations. It is also your responsibility to ensure that you are aware of any changes in margin obligations. All margin requirements must be met immediately. This means that sufficient cleared funds must be on deposit in your account to enable you to meet margin requirements immediately.

(e) **New positions must be covered in advance**

IB's real-time margining means that you will not be able to execute a transaction if to do so would cause your Account to go into margin deficit. For example, if your margin requirement would increase as a result of an initial margin obligation under an Exchange Traded Option, and there were insufficient assets in the Account to cover the initial margin obligation, IB's system would reject an order to execute the transaction concerned.

(f) **Consequences of a margin deficit**

Pursuant to your customer agreement, if your Account goes into margin call (that is, if there are insufficient assets in your Account to cover the margin requirement), IB is authorised to liquidate all, or part of, the assets held in your Account, or otherwise close your open positions to eliminate the shortfall. IB WILL NOTIFY YOU WHEN A MARGIN DEFICIENCY ARISES, BUT IS NOT OBLIGED TO GIVE YOU AN OPPORTUNITY TO PROVIDE FURTHER FUNDS. IB WILL INSTEAD GENERALLY LIQUIDATE POSITIONS IN YOUR ACCOUNT IN ORDER TO SATISFY MARGIN REQUIREMENTS. Any losses resulting from IB closing out your positions will be debited to your Account and you may be required to provide additional funds to IB to cover any shortfall.

4.6 Use of monies to meet other obligations in connection with derivatives

The Corporations Act provides that client money which you pay to us in connection with derivatives (such as Exchange Traded Options) can be used by us for the purposes of meeting margin obligations, guaranteeing, securing, transferring, adjusting or settling dealings in derivatives (including dealings on behalf of our other clients).

4.7 Compensation schemes

Various Relevant Exchanges and Clearing Houses have compensation schemes in place to compensate clients of Interactive Brokers and Clearing Members.

For example, in relation to ASX, the National Guarantee Fund (**NGF**) provides investors with various protections. For example, if an equity option is exercised, the NGF guarantees completion of the resulting trades in certain circumstances. Also, if property is entrusted to a member of ASX (such as our designated Clearing Participant), and it later becomes insolvent, you may, through us, have claim on the NGF. Interactive Brokers is not a participant of ASX, and therefore does not itself have NGF coverage. There are limits on claims to the NGF for property entrusted. For more information on the possible protections offered by the NGF see http://www.segc.com.au./

IB is also regulated by the US Securities and Exchange Commission and Financial Industry Regulatory Authority. IB is a member of the Securities Investor Protection Corporation (**SIPC**), SIPC protects cash and securities held with IB as specified in the Securities Investor Protection Act of the US. SIPC protects cash and securities held in your Account for up to US$500,000 (US$100,000 for cash). Funds that are deposited in your options trading account are not covered by SIPC.

5. SIGNIFICANT BENEFITS OF EXCHANGE TRADED OPTIONS

Exchange Traded Options have a number of advantages. These include the following:

(a) **Hedging.** Investors can **hedge** (protect) their share portfolio against a drop in value by, for example, buying equity put options over particular shares.

(b) **Income.** Shareholders can **earn income** by writing call options over an underlying shares they already hold. As a writer of options, the investor will receive the premium amount up front, when the option is entered into. The risk is that the writer will need to maintain margin obligations throughout the life of the position and may be exercised against. This exercise will result in the writer being required to deliver the underlying shares to the taker at the exercise price.

(c) **Time to decide.** By taking a call option, the purchase price for the underlying shares is locked in. This gives the call option holder **time to decide** whether or not to exercise the option and buy the shares. The holder has until the expiry date to make his/her decision. Likewise the taker of a put option has time to decide whether or not to sell the shares.

(d) **Reduce risk.** Exchange Traded Options benefit from standardisation and registration with a clearing and settlement facility which reduces **counterparty default risk**. The Clearing Participant's risk is to the Clearing House, not to a third party. This process also provides the benefit that an open position can be closed out without having to deal with the original counterparty.

(e) **Speculation.** Exchange Traded Options can be used for **speculation** where the flexibility of entering and exiting the market prior to expiry (subject to liquidity) permits an investor to take a view on market movements and trade accordingly. In addition the variety of option combinations allows investors to develop strategies regardless of the direction of the market.

(f) **Profit in rising or falling market.** Investors can **profit from both rising and falling** markets depending on the strategy they have employed. Strategies may be complex and strategies will have different levels of risk associated with each strategy.

(g) **Leverage.** The initial outlay for an options contract is not as much as investing directly in the underlying shares. Trading in options can allow investors to benefit from a change in the price of the share without having to pay the full price of the share. An investor can therefore purchase an option (representing a larger number of underlying shares) for less outlay and still benefit from a price move in the underlying shares. The ability to make a higher return for a smaller initial outlay is called **leverage**. Investors however, need to understand that leverage can also produce increased risks (see below).

(h) **Diversify portfolios.** Given the lower initial outlay attaching to options, investors can **diversify their portfolios and gain a broad market exposure** over a range of shares or the index itself.

6. SIGNIFICANT RISKS OF EXCHANGE TRADED OPTIONS

The risk of loss in trading in Exchange Traded Options can be substantial. It is important that you carefully consider whether trading Exchange Traded Options is appropriate for you in light of your investment objectives and financial circumstances. Exchange Traded Options are not suitable for some retail investors. You should only trade Exchange Traded Options if you understand the nature of the products and the extent of your exposure to risks. The risks attached to investing in Exchange Traded Options will vary in degree depending on the option traded – see the risks outlined below.

This PDS does not cover every aspect of risk associated with Exchange Traded Options. For further information concerning risks associated with Exchange Traded Option trading you are referred to the ASX booklet "**Understanding Options Trading**" and in particular the section entitled "Risks of options trading". This booklet is available at the link provided in section 2 above.

(a) **Price sensitive announcements**. As a general rule, price movements in the underlying share can significantly affect the value of Exchange Traded Options. The value of the underlying share is affected by information that is announced to the Relevant Exchange in relation to the share. Accordingly, it is advisable that an investor in Exchange Traded Options regularly reviews information announced to the exchange in relation to relevant underlying shares. Price sensitive announcements in relation to shares are available on the ASX website at: http://www.asx.com.au/asx/statistics/todayAnns.do.

(b) **High leverage.** the **high level of leverage** that is obtainable in trading Exchange Traded Options (due to the low level of initial capital outlay) can work against an investor as well as for the investor. Depending on the market movement, the use of leverage may lead to large losses as well as large gains.

(c) **Limited life span.** Exchange Traded Options have a **limited life span** as their value erodes as the option reaches its expiry date. It is therefore important to ensure that the option selected meets the investors investment objectives.

(d) **Market movements.** Exchange Traded Options are subject to movements in the **underlying market**. Options may fall in price or become worthless at or before expiry.

(e) **Loss of premium for Buyers.** The **maximum loss in taking** (buying) an Exchange Traded Option is the amount of premium paid plus transaction costs. If the option expires worthless, the taker will lose the total value paid for the option (the premium) plus transaction costs.

(f) **Unlimited loss for Sellers**. Whilst Sellers (writers) of Exchange Traded Options earn premium income, they may also incur **unlimited losses** if the market moves against the option position. The premium received by the writer is a fixed amount; however the writer may incur losses greater than that amount. For example, the writer of a call option has increased risk where the market rises and the writer does not own the underlying shares. If the option is exercised, the writer of the option is forced to buy the underlying shares at the current (higher) market price in order to deliver them to the taker at the exercise price. Similarly where the market falls, the writer of a put option that is exercised is forced to buy the underlying shares from the taker at a price above the current market price.

(g) **Loss of margin for Sellers. Sellers** of options could sustain a total **loss of margin funds** deposited with their broker where the market moves against the option position. In addition, the writer may be obligated to pay additional margin funds (which may be substantial) to maintain the option position or upon settlement of the contract. Our margining requirements are discussed at 4.5 above.

(h) **Close-out difficulties.** Under certain conditions, it could become difficult or impossible to **close out** a position and the relationship between the price of Exchange Traded Options contracts and the underlying share may be distorted. Examples of when this may happen are:

(i) if there is a significant change in the price of the underlying share over a short period of time;

(ii) if there is an absence or reduction in the number of willing buyers and sellers in either the Exchange Traded Options market or the underlying market;

(iii) if the market is suspended or disrupted for any reason.

(i) **Underlying market.** Similarly, events such as these in relation to the **underlying market** for the share may make it difficult for you to hedge or maintain your exposure under an open Exchange Traded Option contract;

(j) **Contingent orders difficult.** The placing of contingent orders (such as a 'stop-loss' order)[2] may not always limit your losses to the amounts that you may want. **Market conditions may make it impossible to execute such orders**. For example, if the price of the underlying share moves suddenly, your order may not

[2] Is an order that becomes a market order (and hence executed) when the derivatives market reaches the designated price.

be filled, or may be filled at a different price to that specified by you, and you may suffer losses as a result.

(k) **Exchange and Clearing House powers**. Relevant Exchanges and Clearing Houses commonly have **discretionary powers** in relation to the market and the operation of the clearing facility. They have power to suspend the market operation, or lift market suspension in options while the underlying securities are in trading halt if the circumstances are appropriate, restrict exercise, terminate an option position or substitute another underlying security (or securities), impose position limits or exercise limits or terminate contracts - all to ensure fair and orderly markets are maintained as far as practicable. These actions can affect an investor's option positions.

(l) **Trading disputes**. Trades effected on a Relevant Exchange may be subject to **dispute**. When a trade is subject to a dispute the Relevant Exchange or Clearing House commonly has powers, in accordance with its rules, to request that a broker amend or cancel a trade, which will in turn result in the contract with the client being amended or cancelled. In some situations, the Relevant Exchange or Clearing House may also exercise powers to cancel or vary, or direct the cancellation or variation, of transactions.

(m) **Trade amendments and cancellations.** Under our terms and conditions, we have the ability to **amend or cancel the trade**. This could cause you to suffer loss or increase your loss. A trade executed on your behalf can also be amended or cancelled even where the trade has been confirmed to the client;

(n) **System outages**. Trades effected on a Relevant Exchange are traded on an electronic trading platform and cleared through the Clearing House, which also relies on electronic systems. As with all such electronic platforms and systems, they are subject to failure or **temporary disruption**. If the system fails or is interrupted we will have difficulties in executing all or part of your order according to your instructions. An investor's ability to recover certain losses in these circumstances will be limited given the limits of liability commonly imposed by the Relevant Exchange and the Clearing House. Any market disruption may mean a client is unable to deal in Exchange Traded Options when desired, a client may suffer a loss as a result. Common examples of disruption include a fire or other exchange emergency. The exchange could, for example, declare an undesirable situation has developed in a particular Exchange Traded Option contract and suspend trading. Exchanges or participants may also be able to cancel transactions under their operating rules.

(o) **Capital loss.** By trading in Exchange Traded Options, you are exposed to the **risk of losing capital**. Speculators should not risk more capital than they can afford to lose. A good general rule is never to speculate with money which, if lost, would alter your standard of living.

(p) **Default**. If you fail to meet your obligations to us under your customer agreement with you, we may, in addition to any other rights which we may have against you, and without giving prior notice to you, take any action, or refrain from taking action, which we consider reasonable in the circumstances in connection with the open positions in your Account with us and you must account to us as if those actions were taken on your instructions and you are, without limitation, liable for any deficiency and are entitled to any surplus which may result

(q) **Automatic liquidation on margin shortfall**. As discussed in section 4.5 above, IB will generally liquidate positions automatically upon a margin deficit arising. Whilst IB will notify you if a deficit arises, IB is not obliged to give you any opportunity to deposit further funds to meet a shortfall.

(r) **Dealing on markets outside Australia**. The execution and clearing of Exchange Traded Options on Relevant Exchanges outside of Australia are subject to the rules of the Relevant Exchange and Clearing Houses, which may differ from the rules of ASX and ASX Clear. Similarly, such execution and trading is subject to then laws of the relevant jurisdictions, which may differ from Australian laws and to the supervision and regulation by overseas regulators, whose functions and powers may differ from those of Australian regulators such as the Australian Securities and Investments Commission.

(s) **Exchange rate risk**. If you trade in Exchange Traded Options on Relevant Exchanges outside of Australia, the positions are likely to be denominated in a currency other than Australian dollars. The holding of positions denominated in a foreign currency exposes you to the potential risk (and potential benefit) of exchange rate fluctuations.

7. COSTS ASSOCIATED WITH EXCHANGE TRADED OPTIONS

7.1 Premium

If you are the taker of an Exchange Traded Option, you will be required to pay a premium in connection with the purchase of the Exchange Traded Option contract.

If you are the writer of an Exchange Traded Option, you will be entitled to receive a premium in the connection with the sale of the Exchange Traded Option contract.

For further detailed information on the premium in respect of an Exchange Traded Options contract, refer to "Option pricing fundamentals" on page 9 of the "**Understanding Options**" booklet available following the link provided in section 2 above and also the ASX's "Options Calculator" available by following the link below:

http://www.asx.com.au/prices/calculators.htm.

7.2 Margin requirements

If you the writer of an Exchange Traded Options contract, you will be required to meet our margin requirements all times. See section 4.5 for a more detailed discussion of our margining requirements.

7.3 Fees and charges

The following is a summary of the fees and charges associated with trading in Exchange Traded Options.

The fees and charges differ depending on the Relevant Exchange and Clearing House concerned. We set out below references to various links on our website which provide more detailed information on these fees and charges.

(a) **Commissions**

We charge commission, at set flat rates, for the execution and close out of Exchange Traded Option positions. See https://www.interactivebrokers.com.au/en/index.php?f=commission&p=options for further information.

(b) **Referral mark ups and billings**

Advisers and/or brokers may charge their clients for services rendered either through automatic billing, electronic invoice or direct billing. Your advisor/broker determines the referral mark-up at the time of the registration, and this mark-up can be modified from time to time. At the time of your Account registration, you will be given a notice with the details of your referrer as well as the details of any mark ups charged. The available billing methods including caps and limitations are described at the IB website at www.interactivebrokers.com.

(c) **Interest**

If you have a debit balance on your Account after all fees and costs have been deducted (in other words, you owe money to meet the margin requirement and other amounts) you must pay interest on the debit balance. Interest is calculated daily based on your positions, margin requirement and balances on your daily statement for that date. Interest is usually posted once a month on your Account. This generally occurs within five business days following the end of the month. See https://www.interactivebrokers.com/en/index.php?f=interest&p=schedule2 for further information and examples.

(d) **Administrative fees and charges**

IB charges certain administrative fees for matters such as order cancellation and modifications, trade busts (cancellations) and adjustments, prime broker take-ups, deposits and withdrawals, exercise and assignments, American Depository Receipts (**ADRs**) and fees for bounced checks, stop payments. The list of administrative fees and charges is available on the IB website at https://www.interactivebrokers.com/en/index.php?f=1580.

(e) **Taxes**

Transaction taxes, such as value added taxes may apply in some jurisdictions. The taxation implications of trading in Exchange Traded Options will depend on your particular circumstances and it is recommended that you obtain your own independent taxation advice. See section 9 for a more detailed discussion of significant taxation implications.

(f) **Market data, fundamentals and news**

If you access market data, fundamentals or news through IB, there may be a cost to you to subscribe for this information. See https://www.interactivebrokers.com/en/index.php?f=1576 for further information on the costs of accessing such data through IB.

Relevant fees and charges associated with a transaction will be disclosed on the confirmation for the transaction.

8. DISPUTE RESOLUTION SYSTEM

If you have any concerns or comments about the financial service or financial products provided to you, you should send your complaint in writing to:

Legal & Compliance Department
Interactive Brokers LLC
One Pickwick Plaza
Greenwich, CT 06830

If you have not received a satisfactory response or 45 days have elapsed you may refer the matter to the Financial Ombudsman Service (**FOS**). IB is a member of FOS. FOS can be contacted on 1300 08 08 or GPO Box 3, Melbourne, Victoria, 3001. This service is provided to you free of charge.

If you require further information on how we handle complaints, please visit our website www.interactivebrokers.com or refer to our Financial Services Guide.

9. SIGNIFICANT TAXATION IMPLICATIONS

The information below is based on existing tax law and established interpretations as at the date of this PDS.

The taxation information provided below is intended as a brief guide only and does not cover every aspect of taxation related with the use of Exchange Traded Options. The information applies to Australian resident investors only. It is important to note that your tax position when trading Exchange Traded Options will depend on your individual circumstances, in particular whether you are trading on revenue or capital account (refer below for further discussion).

The taxation of options can be complex and may change over time. Accordingly, you are recommended to seek professional tax advice before entering in to or disposing of an Exchange Traded Option.

9.1 Implications for Australian resident investors

(a) **Revenue account**

(i) Writer of the option

Where a writer of an option writes an option in the ordinary course of business or the option has been written over an underlying revenue asset, the option will be treated as being on revenue account.

The premium received by the writer of the option will be assessable on a due and receivable basis. Where any premium is credited to the writer's Clearing House account the amount will still be assessable on this basis.

Any subsequent margin calls are not deductible when they are deposited by the writer into their Clearing House account. These margins will merely reduce any net position of the writer upon the close-out, settlement or exercise of the option by the taker.

Where interest is received by the writer on the margins held in their Clearing House account, this is required to be included in the writer's assessable income.

(ii) Taker of the option

A taker will generally hold an option on revenue account when it is held or traded in the ordinary course of business, or the option is used to hedge an underlying revenue asset.

Where this is the case, any premium paid by the taker is generally regarded as being deductible on a due and payable basis. This will generally be at the time the option is entered into.

Where an option on revenue account lapses, there are no further tax implications. However, where an option on revenue account is exercised, the option strike price will form part of the acquisition cost or disposal proceeds for the underlying asset in question.

Alternatively, where the option is closed-out prior to its expiration, any gain or loss on the option position will be treated as assessable or deductible as the case may be.

(b) **Capital account**

(i) Writer of the option

Where a writer writes an option over an underlying capital transaction, the option will be held on capital account. Consequently, any income tax implications will be determined in accordance with the Capital Gains Tax (CGT) provisions.

The premium received by the writer of the option will give rise to an assessable capital gain on a received or a receivable basis. Where any premium is credited to the writer's Clearing House account the amount will still be assessable on this basis.

Any subsequent margin calls will merely reduce any net position of the writer upon the close-out, settlement or exercise of the option by the taker.

Where interest is received by the writer on the margins held in their Clearing House account, this is required to be included in the writer's assessable income.

Exercise of a call option

Where a call option is exercised, the option premium and the proceeds on the sale of the underlying asset should be treated as a single transaction. Accordingly, both the premium and the proceeds received will form part of the writer's capital proceeds for CGT purposes.

This may have practical implications for writers of options where the premium and sale proceeds are received in different financial years.

Exercise of a put option

Where a put option is exercised, the option premium paid and exercise price will form part of the cost base of the underlying asset for the investor. Accordingly, both the premium and the strike price paid will form part of the writer's cost base of the underlying asset for CGT purposes.

This may have practical implications for writers of options where the premium is received in a different financial year to the payment of the strike price and acquisition of the underlying capital asset.

(ii) Taker of the option

A taker will generally hold an option on capital account where an underlying capital transaction is being hedged. Consequently, any income tax implications will be determined in accordance with the CGT provisions.

At the time the premium is paid, there are no taxation consequences for the taker in respect of any premium paid for options which are held on capital account.

Where an option on capital account lapses, the taker will realise a capital loss at this time, equal to the amount of the premium paid.

When an option is settled or closed-out, the taker will realise a capital gain or loss depending on the amount paid (being the premium plus any incidental costs) for the option and the amount received on settlement.

<u>Exercising a call option</u>

Where a call option is exercised, the option premium and exercise price will form part of the cost base of the underlying asset for the taker.

<u>Exercising a put option</u>

Where a put option is exercised, the taker will generally deduct the option price from the proceeds received on the disposal of the underlying asset.

(c) **Goods and Services Tax**

The purchase and disposal by investors of Exchange Traded Options over financial products and indices is not subject to GST.

9.2 Rules for the Taxation of Financial Arrangement

The taxation of financial arrangements will change with the introduction of the new Taxation of Financial Arrangements (**TOFA**) rules. ETOs covered by this PDS are expected to qualify as financial arrangements and therefore the TOFA rules are likely to have a significant impact on the taxation of ETOs. Briefly, the rules:

- will generally deem gains and losses from financial arrangements to be on revenue account;
- are likely to impact on the timing of the recognition of the gains and losses; and
- may cause unrealised gains and losses to become subject to tax.

Below is a brief summary of the rules. The TOFA rules are complex and it is strongly recommended that you seek specific tax advice on the application of the rules to your dealings.

(a) **Who will the TOFA rules apply to?**

Generally, the TOFA rules will not apply to individuals, small superannuation funds and small securitisation vehicles. However, the rules will apply to these taxpayers if the financial arrangement involves substantial tax deferral.

The TOFA rules do apply to most corporate taxpayers provided certain turnover and other tests are met.

(b) **When will the TOFA rules commence?**

Generally, the TOFA rules apply from 1 July 2010. However, taxpayers may elect for the rules to start applying from 1 July 2009.

If the taxpayer has a substituted accounting period for tax purposes, a later date may apply, e.g. if the taxpayer has a 31 December year end, the new rules will apply from 1 July 2011 (or from 1 January 2010 by election).

(c) **How will the TOFA rules impact on the taxation of ETOs?**

The TOFA rules allow taxpayers to make a number of elections that determine how gains and losses from financial arrangements will be taxed. The elections are generally irrevocable.

If you did not make any elections (other than the election to enter into the TOFA regime early), the rules should treat most of the gains and losses from ETOs on a realisation basis. Gains from exercising ETOs will not contribute to the cost base of the assets received upon the exercise. However, the accruals method may apply in some cases to spread the recognition of some gains and losses over the life of the ETO.

The fair value and financial report elections include in the tax calculation gains and losses from financial arrangements that are reflected in the profit and loss statement (for example, financial arrangements that, for accounting purposes, are classified as held for trading or designated as valued at fair value through profit and loss). This means that unrealised gains and losses may be subject to tax. If you made a valid fair value or financial reports election and it did not cease to apply to you, the gains and losses from ETOs for tax will be aligned to the gains and losses recognised in the profit and loss for accounts.

The hedging election allows tax matching of the gains and losses from the underlying hedged item. The matching is both timing (i.e. over the time the underlying item is held) and character (i.e. will take on tax character, revenue or capital, of the underlying item). The Arrangement subject to the hedging election will not be subject to the fair value or financial reports elections, even if those are made.

If you made a valid hedging election and an ETO qualifies for the hedging election treatment, the gains and losses from the ETO will be matched to the gains and losses from the underlying hedged item. The conditions for the hedging election are complex and include documentation and hedge effectiveness requirements.

FOREIGN EXCHANGE

PRODUCT DISCLOSURE STATEMENT

INTERACTIVE BROKERS LLC

ARBN 091 191 141

AFSL 245 574

Date of Issue: 19 February 2014

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1. GENERAL INTRODUCTION

1.1 Important Information

The information in this Product Disclosure Statement (PDS) does not take into account your personal objectives, financial situation and needs. Before trading in the products referred to in this PDS you should read this PDS and be satisfied that any trading you undertake in relation to those products is appropriate in view of your objectives, financial situation and needs.

We recommend that you consult your financial adviser before trading in foreign exchange.

The risk of loss in trading in FX contracts can be substantial. It is important that you carefully consider whether trading FX contracts is appropriate for you in light of your investment objectives and financial circumstances. FX contracts are not suitable for some retail investors. You should only trade FX contracts if you understand the nature of the products and the extent of your exposure to risks.

A description of the significant risks associated with trading in FX contracts is set out in section 3 of this PDS.

1.2 Purpose of this PDS

This PDS has been prepared by Interactive Brokers LLC (**IB**) the issuer of the foreign exchange (**FX**) contracts offered under this PDS. This PDS is designed to assist you in deciding whether the FX contracts offered under this PDS are appropriate for your needs and to assist you in comparing it with other financial products you may be considering. This PDS is an important document and we recommend you contact us should you have any questions. Our contact details are set out at section 1.3 below.

Although the information in this PDS is up to date as at the date of publication, it is subject to change from time to time. Where such information is not materially adverse, we may provide updates on our website at www.interactivebrokers.com. A paper copy is also available on request at no charge to you.

We may also be required to issue a new PDS or a supplementary PDS as a result of certain changes, in particular where the changes are materially adverse to retail clients. Any supplementary PDS will be posted on our website at www.interactivebrokers.com. A paper copy will also available on request at no charge to you.

When we use terms 'we', 'us' or 'our' in this PDS, the reference is to IB.

1.3 About Interactive Brokers

(a) The issuer – Interactive Brokers LLC

IB is the issuer of the FX contracts offered under this PDS.

IB holds an Australian financial services licence, number 245574, which authorises IB to deal in FX contracts.

IB is also regulated in the USA (by the Securities and Exchange Commission, the Commodities and Futures Trading Commission, the Financial Industry Regulatory Authority and the New York Stock Exchange), in the United Kingdom (by the Financial Conduct Authority) and in Hong Kong (by the Securities and Futures Commission).

(b) The Interactive Brokers Group

IB is an affiliate of the Interactive Brokers Group (**IBG**) which comprises of a number of automated global electronic market makers and brokers that specialise in routing orders and executing and processing trades in securities, futures and foreign exchange instruments. IBG affiliates conduct business on more than 60 electronic exchanges and trading venues around the world. IBG, using its proprietary software, provides non-advisory brokerage services to professional traders and investors with direct access to stocks, options, futures, foreign exchange contracts and bonds.

IBG's headquarter is in Greenwich Connecticut, and it has about 880 employees in its offices in the USA, Switzerland, Canada, Hong Kong, UK, Australia, Hungary, Russia, Japan, India, China and Estonia.

(c) Contact details

Our contact details are below:

Interactive Brokers LLC Head Office
One Pickwick Plaza
Greenwich, CT 06830

Telephone Numbers:
1-877-442-2757 (from inside the U.S.)
+1-312-542-6901 (from outside the U.S.)

IB - Australian Contact
Grosvenor Place

Level 42, 225 George Street,
Sydney, NSW 2000

Telephone numbers:
+61 (2) 8093 7300

e-mail: help@interactivebrokers.com

Additional contact information, including issue-specific details, is available at http://individuals.interactivebrokers.com/en/p.php?f=customerService.

2. KEY FEATURES OF FOREIGN EXCHANGE

2.1 What is an FX contract?

An FX contract allows you to exchange one currency for another at an agreed exchange rate with a specific settlement date. In the simplest form, we can consider standard settlement ("spot exchange rate"), abbreviated settlement ("value today exchange rate" or "value tomorrow exchange rate") and prolonged settlement ("forward exchange rate") Exchange rates may be quoted as value today exchange rates, value tomorrow exchange rates, spot exchange rates or forward exchange rates.

A spot exchange rate applies to an FX contract with a settlement date that is 2 business days after the trade date. This type of FX transaction is commonly referred to as Spot.

IB only offers spot foreign exchange contracts; that is, FX transactions which typically has a settlement date 2 business days after trade date (ie T+2), for certain currency the standard settlement cycle is 1 business day. This type of FX transaction will be referred to in this PDS as an "FX Contract". For informational purposes, the below is the description for abbreviated and prolonged settlement cycles.A value today exchange rate applies to an FX contract with a settlement date that is on the same date as the trade date. This type of FX transaction is commonly referred to as Value Today;

A value tomorrow exchange rate applies to an FX contract with a settlement date that is 1 business day after the trade date. This type of FX transaction is commonly referred to as Value Tomorrow.

A forward exchange rate applies to an FX contract with a settlement date that is more than 2 business days after the trade date. This type of FX transaction is commonly referred to as Forward.

2.2 What currencies are offered

FX Contracts are available in many currencies, including but not limited to the following:

Currencies	Code
AUSTRALIAN DOLLARS	AUD
EURO	EUR
GREAT BRITISH POUNDS	GBP
HONG KONG DOLLARS	HKD

JAPANESE YEN	JPY
NEW ZEALAND DOLLARS	NZD
SINGAPORE DOLLARS	SGD
UNITED STATES DOLLARS	USD

For a complete list of available currencies, currency pairs and their codes, please refer to IB's website at https://www.interactivebrokers.com.au/en/index.php?f=products&p=fx.

2.3 Uses of FX Contracts

Activities for which FX Contracts may be useful include:

(a) foreign currency investing;

(b) foreign currency borrowing;

(c) repatriation of overseas profit or interest in foreign currencies back to Australia; and

(d) general funding requirements in other currencies for a variety of purposes.

2.4 Spot exchange rates

IB determines the spot exchange rates it quotes to you by consolidating the pool of indicative and firm quotes received from many of the world's largest banks and liquidity providers to display the best bid and the best offer from those banks and liquidity providers. For large transactions greater than 7 million USD, the prices received might be wider than the best quotes shown on the IB's platform as banks and liquidity providers compensate for their increased risk.

2.5 How does an FX Contract work

For example, you need to pay USD$1,000,000.00 to an offshore recipient in 2 business days. You need to convert your AUD into USD to make this payment.

You wish to enter into an FX Contract with IB today to fix a spot exchange rate where you buy USD$1,000,000.00 and sell AUD settling in 2 business days.

You log onto the IB's TWS platform to review the spot exchange rate. IB quotes you a spot exchange rate of AUD/USD0.9560. If you accept this quote, an FX Contract is entered into between you and IB.

The AUD equivalent is calculated by dividing the USD amount by the agreed AUD/USD spot exchange rate quoted by IB:

USD$1,000,000.00 ÷ AUD/USD0.9560 = AUD$1,046,025.10

By entering into the FX Contract with IB, on T+2 you must buy USD$1,000,000.00 from IB in exchange for AUD$1,046,025.10.

Examples are used for illustrative purposes only. The actual spot exchange rate will depend on the actual market rates and on the date of calculation. The above example does not include transaction costs. For a discussion on transaction costs see section 6 of this PDS.

2.6 Margin requirements

FX Contracts with IB are subject to margin requirements (which are subject to change as market conditions warrant). For a discussion of our margin requirements, see section 5.6 below.

3. SIGNIFICANT RISKS OF FX CONTRACTS

Starting from the time at which you enter an FX Contract with IB, risk factors may lead to changes in financial outcomes that are unfavourable to you.

Monitoring of any risks associated with this product is your responsibility (subject to the responsibility of IB for its own operational systems under "Operational risk" – see section 3.4).

Prior to entering into FX Contracts, you should carefully consider the following risk factors as well as other information either contained in this PDS or of which you are otherwise aware and consider whether entering into FX Contract is suitable for you, given your individual objective and circumstances. We recommend that you obtain independent advice on the suitability of trading FX Contract for you.

3.1 Opportunity loss

You will forgo any benefit of a favourable FX movement between the time you enter into an FX Contract and the settlement date.

The rate achieved with an FX Contract may not be as favourable as the rate you could have achieved if you had not entered into an FX Contract at all.

3.2 Market risk

Markets can be volatile and are subject to a host of factors, including economic conditions, government regulations, legislations, market sentiment, local and international political events and environmental and technological issues.

Market risk is the risk that the value of your FX transaction will change as a result of a movement in the underlying market price. Exchange rates between foreign currencies can change rapidly due to a wide range of economic, political and other conditions, exposing you to risk of exchange rate losses in addition to the inherent risk of loss from trading the underlying financial product. If you deposit funds in a currency to trade products denominated in a different currency, your gain or loss on the underlying investment therefore may be affected by changes in the exchange rate between the currencies.

3.3 Credit risk

Credit risk (also known as counterparty risk) is common to all financial markets products that you may hold with IB. You are reliant on IB's ability to meet its obligations to you under the terms of each FX transaction.

3.4 Operational risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, systems or external events.

You are reliant on the ability of IB to price and settle your transaction in a timely and accurate manner. IB in turn is dependent on the reliability of its own operational processes that include communications, computers and computer networks. Disruptions in IB's processes may lead to delay in the execution and settlement of your transaction. Such disruptions may result in contractual outcomes that are less favourable to you.

However, once you have entered into a transaction, the management of risks associated with its own operational processes is the responsibility of IB.

3.5 Legal, tax and regulatory risks

Legal, tax and regulatory changes could occur during the term of an FX Contract, which may adversely affect the FX transaction. You should seek independent tax advice before entering into an FX transaction.

3.6 Price slippage, order cancellation and adjustment risk

Prices quoted on IB's system generally reflect the prices at which IB's FX Providers are willing to trade. Prices quoted on IB's system reflect changing market conditions and therefore quotes can and do change rapidly. As such, when your order is received and processed by IB's system, the quote on IB's platform may be different from the quote displayed when the order was sent by you. This change in price is commonly referred to as “slippage". IB generally will not execute your order at a certain price unless IB is able to trade at that price against one of IB's FX Providers. If you send an order for an FX transaction to IB's system but your requested price is no longer available and therefore the order is non-marketable, IB will not execute the order, but will place it in IB's limit order book in accordance with your time-in-force instructions. IB may execute the order if it becomes marketable based on prices received from IB's FX Providers. If you send an order for an FX Contract to IB's system and the current price is more favourable for you than what you have requested in the order, the order will generally be executed at the available better price.

Although IB attempts to obtain the best price for your orders on FX Contracts, because of the inherent possibility of transmission delays between and among yourself, IB and FX Providers, or other technical issues, execution prices may be worse than the quotes displayed on the IB platform.

To execute your order, IB engages in back-to-back transactions with one or more counterparties. These counterparties on occasion may cancel or adjust FX trades with us in the event of market or technical problems. In these cases we may have to cancel or adjust FX Contracts that you have executed.

3.7 Cooling off period

There are no cooling-off arrangements for FX Contracts.

3.8 Other risks

There are other risks that relate to trading in FX, foreign securities, options and futures transactions which involve exposure to a combination of the following risk factors: market risk, credit risk, settlement risk, liquidity risk, operational risk and legal risk. For example, there can be serious market disruptions if economic or political or other unforeseen events locally or overseas affect the market. Also, the settlement date of FX trades can vary due to time zone differences and bank holidays. When trading across FX markets, this may necessitate borrowing funds to settle FX trades. The interest rate on borrowed funds must be considered when computing the cost of trades across multiple markets. In addition to these types of risk there may be other factors such as accounting and tax treatment issues that you should consider.

4. SIGNIFICANT BENEFITS OF FX CONTRACTS

The benefits of entering into FX Contracts will depend on how it satisfies your risk management strategy and financial circumstances. Various uses of FX Contracts were discussed at section 2.3 of this PDS.

The benefits of an FX Contract include:

(a) **Provides cash flow certainty** – FX Contracts allow you to lock in an exchange rate for the purchase or sale of foreign currency amounts on a certain date, eliminating exchange rate uncertainty.

(b) **Provides exchange rate protection** – FX Contracts can help provide you with protection against unfavourable FX movements between the time you enter into an FX Contract and settlement date.

(c) **Diversity** – FX transactions can be executed in respect of a wide range of currencies.

5. TRADING FX WITH IB

5.1 How to trade FX Contracts with IB

You can trade with IB through one of the trading platforms that IB provides, including Trader Workstation (**TWS**), WebTrader and mobileTWS. IB recommends that prior to engaging in trading you open a paper trading account to conduct simulated trading to become familiar with the platform. When trading you should keep aware of all risks and benefits of trading FX Contracts (refer to sections 3 and 4 above).

IB customers may route orders to IB through one of the trading platforms that IB provides by logging in through a secure username and password. As set out in IB's customer agreement:

> "IB does not know whether an unauthorized person is entering orders with a customer's user name/password. Customers are fully responsible for the confidentiality and use of their user name/password and remain responsible for all transactions entered using their user name/password. Customers may also contact IB Customer Service using the details below should they experience technical difficulties."

5.2 Execution and settlement of FX Contract

Through the TWS, you may ask IB for a spot exchange rate for a currency pair for a specified transaction amount.

If IB offers you a spot exchange rate and if you accept the offer, provided that you have sufficient equity in your account, an FX Contract is entered between you and IB.

IB will send you a confirmation document setting out the terms of your FX Contract.

Subject to the terms and conditions of the FX Contract, on the settlement date (ie T+2) the currencies in the currency pair are exchanged. You must ensure that you have sufficient funds in your account to settle the FX Contract. See further information regarding IB's margin requirements in section 5.6 below.

5.3 Nature of your account with IB and potential SIPC cover

Trading in FX Contracts at IB takes place in a securities account. IB is regulated by the Australian Securities and Investments Commission, the US Securities and Exchange Commission and Financial Industry Regulatory Authority. In addition, IB observes the rules of the National Futures Association in connection with trading in FX Contracts.

IB is a member of the Securities Investor Protection Corporation (**SIPC**). SIPC protects cash and securities held with IB as specified in the *Securities Investor Protection Act*. SIPC protects cash, including US dollars and foreign currencies, to the extent that the cash was deposited with IB for the purpose of purchasing securities. Whether foreign currencies in your IB account would be protected by SIPC would depend in part on whether the cash was considered to be deposited with IB for the purpose of purchasing securities. IB expects that at least one factor in deciding this would be whether and the extent to which you engage in securities trading in addition to or in conjunction with FX trading.

5.4 Nature of Foreign Exchange Transaction between Customer and IB

When you enter into an FX Contract on IB’s platform, IB, as the counterparty to your trade, may effectuate that transaction by entering into an offsetting transaction with one of IB's affiliates, with another customer that enters quotes into IB's system, or with a third party bank (IB's "**FX Providers**"). In such transactions, the FX Provider is not acting in the capacity of a financial adviser or fiduciary to you or to IB, but rather, is taking the other side of IB's offsetting trade in an arm's length contractual transaction. You should be aware that the FX Provider may from time to time have substantial positions in, and may make a market or otherwise buy or sell instruments similar or economically related to, the FX Contracts entered into by you. IB's FX Providers may also undertake proprietary trading activities, including hedging transactions related to the initiation or termination of FX Contracts with IB, which may adversely affect the market price or other factors underlying the FX Contract entered into by you and consequently, the value of such transaction.

5.5 Prices quoted on the IB FX Platform

The prices quoted by IB to you for FX Contracts on IB's platform will be determined based on FX Provider quotes and are not determined by a competitive auction as on an exchange market. Prices quoted by IB for FX Contracts therefore may not be the most competitive prices available. For purposes of maintaining adequate scale and competitive spreads, a minimum size is imposed on FX orders (USD$25,000 as of March 2013 but this is subject to change from time to time). Orders below the minimum size are considered odd lots and limit prices for these odd lot-sized orders are not displayed. While odd lot marketable orders are not likely to be executed at the interbank spreads, they will generally be executed at prices only slightly inferior (1-3 ticks). IB will charge transaction fees as specified by IB for FX Contracts. IB's FX Providers will try to earn a spread profit on transactions with IB (differential between the bid and ask prices quoted for various currencies).

Further information regarding how IB quote prices for FX Contracts is available via the following link to IB’s website: https://individuals.interactivebrokers.com/en/?f=%2Fen%2Ftrading%2Fexchanges.php%3Fexch%3Dibfxpro%26amp%3Bshowcategories%3DFX%26amp%3Bib_entity%3Dllc.

5.6 IB's margin requirements

If margin is enabled in you Account, IB may impose margin requirements under its customer agreement with you in relation to your FX Contracts with IB. We discuss these in this section.

(a) Single universal account

When you open an account (**Account**) with IB, you open a single account through which you can trade not only FX Contracts, but other products such as shares, futures and options. When we calculate your margin requirement, we have regard to the assets and liabilities in your Account as a whole.

(b) Real-time margining and real-time monitoring

The value of assets and positions held in your Account is marked to market by IB's real-time credit management system. IB uses a real-time risk management system to allow you to see your trading risk at any moment of the day. Our real-time margin system calculates margin requirements throughout the day for new trades and trades already on the books and enforces initial margin requirements at the end of the day, with real-time liquidation of positions instead of delayed margin calls. Your margin requirement and current equity is monitored by IB and displayed online in real time to you via the various trading interfaces, as well as the online client portal. For more information about real-time margin monitoring, please visit our margin information page at https://www.interactivebrokers.com/en/index.php?f=margin&p=overview2

It is your responsibility to actively monitor and manage your Account and ensure that you meet your margin obligations. It is also your responsibility to ensure that you are aware of any changes in margin obligations. All margin requirements must be met immediately. This means that sufficient cleared funds must be on deposit in your account to enable you to meet margin requirements immediately.

(c) New FX Contracts must be covered in advance

IB's real-time margining means that you will not be able to execute a transaction, if doing so would cause your Account to go into margin deficit. For example, if your margin requirement would increase as a result of entering into an FX Contract, and there were insufficient assets in the Account to cover the margin obligation, IB would not enter into the FX transaction concerned.

(d) **Consequences of a margin deficit**

Pursuant to your customer agreement, if your Account goes into margin call (that is, if there are insufficient assets in your Account to cover the margin requirement), IB is authorised to liquidate all, or part of, the assets held in your account, or otherwise close your open positions to eliminate the shortfall. IB will notify you when a margin deficiency arises, but is **not obliged to give you an opportunity to provide further funds**. IB will instead generally liquidate positions in your account in order to satisfy margin requirements. Any losses resulting from IB closing out your positions will be debited to your account and you may be required to provide additional funds to IB to cover any shortfall.

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6. FEES AND CHARGES

The following is a summary of the fees and charges associated with FX transactions with IB.

6.1 Commissions

We charge commission for entering into FX Contracts with you. See https://individuals.interactivebrokers.com/en/index.php?f=commission&p=fx1 for further information.

If your account is opened via an intermediary such as an adviser or broker, there could be additional fees charged by the intermediary which is above what IB charges

The available billing methods including caps and limitations are described at the IB website at www.interactivebrokers.com.

6.2 Interest

If you have a debit balance on your Account after all fees and costs have been deducted (in other words, you owe money to meet the margin requirement and other amounts) you must pay interest on the debit balance. Interest is calculated daily based on your positions, margin requirement and balances on your daily statement for that date. Interest is usually posted once a month on your Account. This generally occurs within five business days following the end of the month. See https://www.interactivebrokers.com/en/index.php?f=interest&p=schedule2 for further information and examples.

6.3 Administrative fees and charges

IB charges certain administrative fees for matters such as order cancellation and modifications, trade busts (cancellations) and adjustments, deposits and withdrawals. The list of administrative fees and charges is available on the IB website at https://www.interactivebrokers.com/en/index.php?f=1580.

6.4 Market data, fundamentals and news

If you access market data, fundamentals or news through IB, there may be a cost to you to subscribe for this information. See https://individuals.interactivebrokers.com/en/index.php?f=marketData&p=overview for further information on the costs of accessing such data through IB.

7. DISPUTE RESOLUTION SYSTEM

If you have any concerns or comments about the financial service or financial products provided to you, you should send your complaint in writing to:

Legal & Compliance Department
Interactive Brokers LLC
One Pickwick Plaza
Greenwich, CT 06830

If you have not received a satisfactory response or 45 days have elapsed you may refer the matter to the Financial Ombudsman Service (**FOS**). IB is a member of FOS. FOS can be contacted on 1300 08 08 or GPO Box 3, Melbourne, Victoria, 3001. This service is provided to you free of charge.

If you require further information on how we handle complaints, please visit our website www.interactivebrokers.com or refer to our Financial Services Guide.

8. ACCOUNT OPENING

8.1 Required Minimums

Required balance, activity and commission minimums for retail and introducing broker accounts and for customers using a dedicated line FIX connection are as set out on the IB website at www.interactivebrokers.com.

9. SIGNIFICANT TAXATION IMPLICATIONS

Taxation law is complex and its application to this product will depend on your particular circumstances. We make no claim that this product will provide a beneficial or appropriate tax outcome for you. When determining whether this product is suitable for your circumstances, you should consider the impact it will have on your own taxation position and seek professional advice on the tax implication it may have.

The summary below is general in nature and does not take into account specific circumstances of each individual customer.

9.1 Foreign exchange gains and losses

FX Contracts may give rise to taxable gains or deductible losses. The treatment of these transactions for taxation purposes is complex and will depend on your individual circumstances. Accordingly, you should seek appropriate tax advice.

There are particular provisions in Division 775 of the *Income Tax Assessment Act 1997* (Cth) that can bring to account for tax purposes, foreign currency gains and losses when realised and the Division sets forth a number of "realisation events" in this regard. The Taxation of Financial Arrangements provisions can also have application to foreign exchange gains and losses and may have an impact on the time foreign exchange transaction gains and losses are brought to tax and the measurement of the foreign exchange gains and losses for income tax purposes.

The impact of the foreign exchange rules, subject to some exceptions, in general terms is:

(a) if you make a gain from a foreign currency arrangement and part of that gain is attributable to a currency exchange rate fluctuation, that part of the gain is included in your assessable income as an FX realisation gain;

(b) if you make a loss from a foreign currency arrangement and part of that loss is attributable to a currency exchange rate fluctuation, that part of the loss is deducted from your assessable income as an FX realisation loss.

Trading on ASX 24

Customer Agreement

Minimum Terms

This Agreement is made between Customer and Interactive Brokers LLC:

A) Customer to provide information

In relation to the Customer's Trading on the ASX 24 Market, the Customer will upon Interactive Brokers LLC's request, provide all information and documentation relevant to that Trading, to Interactive Brokers LLC and the Interactive Brokers LLC is authorised by the Customer to provide the information and documentation to ASIC

(b) Margins

The Customer acknowledges that

(i) Interactive Brokers LLC may Call for payment of Margin such money or property (or Call for the lodgement of Approved Securities in lieu thereof) as the Interactive Brokers LLC, in its absolute discretion, feels is necessary to protect itself from the personal obligation incurred by Dealing in Contracts on behalf of the Customer .

(ii) should the Customer fail to meet the Call (or lodge Approved Securities) then Interactive Brokers LLC may (without prejudice to any other rights or powers under the agreement) and without creating an obligation to do so, Close Out, without notice, all or some of the Customer's Contracts.

(iii) the time for payment of Margins is of the essence and if no other time is stipulated by Interactive Brokers LLC prior to Calling a Margin then the Customer is required to comply within twenty-four (24) hours.

(iv) liability to pay the Initial Margin accrues at the time the Trade is executed regardless of when a Call is made.

(v) liability to pay Margin accrues at the time the Margin comes into existence regardless of when a Call is made.

(vi) the Customer is responsible to pay in cash any deficit owing to Interactive Brokers LLC after closure and that if the Customer defaults in payment of such deficit, the Interactive Brokers LLC may realise any securities held by the Interactive Brokers LLC and apply the proceeds against that deficiency.

(c) Tape recordings

An acknowledgment by the Customer that the Customer's telephone conversations with the Interactive Brokers LLC can be recorded by Interactive Brokers LLC. The Customer is to be given the right to listen to any recording in the event of a dispute or anticipated dispute.

(d) Right to refuse to Deal

An acknowledgment by the Customer that Interactive Brokers LLC reserves the right to refuse to Deal on behalf of the Customer in relation to any Dealings in Contracts (other than Closing Out existing Open Positions held in the Interactive Brokers LLC's account on behalf of the Customer) or limit the number of Open Positions held on behalf of the Customer or both. Interactive Brokers LLC will inform the Customer of any refusal at or before the time of the Customer placing the Order or as soon as possible thereafter.

(e) Termination and Closing Out

An acknowledgment that:

(i) without affecting any existing obligations or liabilities, either the Customer or Interactive Brokers LLC may terminate the agreement at any time by giving the other notice In Writing to that effect;

(ii) upon termination of the Customer agreement that unless otherwise agreed In Writing Interactive Brokers LLC will Close Out all the Customer's Futures Contracts and Close Out, abandon or exercise any Options not yet exercised.

This Agreement is Signed electronically by Customer

INTERACTIVE BROKERS LLC SUPPLEMENTAL AGREEMENT & DISCLOSURES FOR TRADING ON THE AUSTRALIAN STOCK EXCHANGE LIMITED

Effect of the Supplemental Agreement & Disclosures

This Supplemental Agreement & Disclosures for Trading on the Australian Stock Exchange Limited ("ASX") ("the Agreement") is in addition to the Interactive Brokers (ARBN 091191141; AFSL 245574) ("IB") Customer Agreement and forms part of the contract between IB and Customer (hereinafter, "Customer" or "Client") regarding transactions on ASX.

Market Transactions on ASX are entered into subject to the Rules, directions, decisions and requirements of ASX, and the Australian Clearing House Pty Limited ("ACH") Clearing Rules, and, where relevant, the ASX Settlement and Transfer Corporation Pty Limited ("ASTC") Settlement Rules; the customs and usages of the Market; and the correction of errors and omissions. Confirmations regarding Customer's transactions are issued subject to these terms.

ASX Authority Regarding Market Transactions

Customer understands and agrees that ASX has the power under the Rules to cancel or amend Market Transactions or Crossings.

Disclosures Regarding the Execution and Clearing of ASX Transactions

Pursuant to ASX Market Rule 7.1.1, IB provides you with the following information:

IB is not a participant on the ASX. IB's proprietary trading affiliate, Timber Hill Australia Pty Limited (ABN 25079993534) ("THA") is a participant on the ASX. IB shall route customers' ASX orders through THA's connection to the ASX dedicated to the routing of only IB customer orders.

The business address and phone number for THA is:

Level 25
56 Pitt Street
Sydney
NSW, 2000, Australia
61 2 9240 5145

Orders executed for IB clients shall be cleared by Fortis Clearing Sydney Pty Ltd ("Fortis"), an ACH Clearing Participant. With respect to clients' orders executed on ASX and cleared by Fortis, Fortis carries the Clearing Obligations and any settlement obligations for all Market Transactions of THA and IB (including those of Customer). As the Clearing Participant, Fortis must settle such transactions as principal with ACH or the relevant counter-party, even though the Market Transaction may have been entered into on Customer's behalf. The Clearing Obligations and any settlement obligations of Customer are therefore owed directly to Fortis, as the Clearing Participant.

If Customer fails to pay the amounts due in respect of a Market Transaction; or if Customer fails to fulfill its settlement obligations in respect of a Market Transaction, Fortis has direct rights against Customer, including the rights of sale under the Market Rules. As such, an agreement is deemed to have been entered into between Fortis and Customer upon the terms included herein. Such deemed agreement comes into existence immediately upon the receipt by IB of an order by Customer to enter into a Cash Market Transaction.

The business address and phone number for Fortis are below:

Level 8
50 Bridge Street
Sydney
NSW, 2000, Australia
61 2 8221 3000

National Guarantee Fund Coverage of ASX Market Transactions

IB is not a participant on the ASX and Customer's market transactions are not covered by the National Guarantee Fund ("NGF").

Contact

Customer may contact IB's Customer Service Department with any questions regarding this document. The contact details to reach an IB Customer Service Representative are available on the IB website at: www.interactivebrokers.com. IB' s main customer service telephone numbers are as follows:

1-877-442-2757 (from inside the U.S.)
312-542-6901 (from outside the U.S.)

I have read, understand and agree to be bound by these terms.

IF YOUR INTERACTIVE BROKERS ACCOUNT CONFIGURATION WILL INCLUDE PERMISSIONS TO TRADE OPTIONS ON THE AUSTRALIAN STOCK EXCHANGE LIMITED, YOUR ACCOUNT WILL ALSO BE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS.

INTERACTIVE BROKERS LLC AGREEMENT FOR CUSTOMERS TRADING OPTIONS ON THE AUSTRALIAN STOCK EXCHANGE LIMITED

The following terms and conditions are required by Australian Stock Exchange Limited ("ASX") Market Rule 7.1.2 to be in place between Market Participants and their customers who trade options on ASX. Though Interactive Brokers (ARBN 091191141) ("IB") is not a participant on the ASX, IB has implemented the below terms and conditions in accordance with ASX Market Rule 7.1.2.

1 Application of Market Rules

The Client and IB are bound by the Market Rules of Australian Stock Exchange Limited ("ASX"), the Corporations Act and the Procedures, customs, usages and practices of ASX and its related entities, as amended from time to time, in so far as they apply to Options/derivative instruments traded on ASX for the Client. Client authorizes IB to route Client's orders for equity and index options to the ASX for execution.

2 Explanatory Booklet

The Client has received and read a copy of the current explanatory booklet published by ASX in respect of each ASX Derivative Market Contract.

3 Authority

The Client acknowledges that they are either:

(a) acting as principal; or

(b) acting as an intermediary on another's behalf and are specifically authorized to transact the ASX Derivative Market Contracts, by the terms of:-

(i) a licence held by the Client;

(ii) a trust deed (if the Client is a trustee); or

(iii) an agency contract.

4 Nature of IB's Obligations

Notwithstanding that IB may act in accordance with the instructions of, or for the benefit of, the Client, the Client acknowledges that any contract arising from any order submitted to the Market, is entered into by IB as principal.

5 Dealing as principal

The Client acknowledges that IB or its affiliates, including Timber Hill Australia Pty Limited (ABN 25079993534) ("THA"), may, in certain circumstances permitted under the Corporations Act and the Market Rules, take the opposite position in a transaction in the ASX Derivative Market Contracts, either acting for another client or on its own account.

6 Commissions and fees

The Client must pay to IB commissions, fees, taxes and charges in connection with dealings for the Client in ASX Derivative Market Contracts at the rates determined by IB from time to time and notified to the Client in writing.

7 Tape recording of conversations

The Client acknowledges that IB may record telephone conversations between the Client and IB. If there is a dispute between the Client and IB, the Client has the right to listen to any recording of those conversations.

8 Client to provide information

The Client will take all reasonable steps to deliver information or documentation to IB, or cause information or documentation to be delivered to IB concerning Option Transactions which are requested by a person having a right to request such information or documentation. IB is authorized to produce the information or documentation to the person making the request.

9 Right to refuse to deal

IB is not an ASX participant. IB's proprietary trading affiliate, THA, is an ASX participant. For clients wishing to execute trades on ASX, IB shall route such orders through THA's connection to the ASX Integrated Trading System ('ITS").

The Client acknowledges that IB may at any time refuse to deal in, or may limit dealings in, the ASX Derivative Market Contracts for the Client. Neither IB nor its affiliate, THA, the ASX Trading Participant, are required to act in accordance with the Client's instructions where to do so would constitute a breach of the Market Rules, the Clearing Rules, or the Corporations Act. IB will notify the Client of any refusal or limitation as soon as practicable.

10 Termination of Agreement

Either the Client or IB may terminate this Agreement by giving notice in writing to the other. Termination will be effective upon receipt of the notice by the other party.

11 Effect of termination

Termination does not affect the existing rights and obligations of the Client or IB at termination.

12 Revised terms prescribed by ASX

If ASX prescribes amended minimum terms for a Client Agreement for the ASX Derivative Market Contracts for the purposes of the Rules (the "New Terms"), to the extent of any inconsistency between these minimum terms and the New Terms, the New Terms will override the terms of this Agreement and apply as if the Client and IB had entered into an agreement containing the New Terms.

13 Market Participant to provide Client with copy of changes

IB will provide a copy of the New Terms to the Client as soon as practicable after ASX prescribes the New Terms.

14 Application of Clearing Rules

The Client acknowledges that each Option registered with an Approved Clearing Facility is subject to operating rules and the practices, directions, decisions and requirements of that Approved Clearing Facility.

15 Authority of ASX Regarding Market Transactions

Customer understands and agrees that ASX has the power under the Rules to cancel or amend Market Transactions or Crossings.

I have read, understand and agree to be bound by these terms.

___________________________________ _______________

Customer Signature Date

ASX
AUSTRALIAN SECURITIES EXCHANGE

Understanding Options Trading

ASX.
The Australian Sharemarket

Disclaimer of Liability

For these product/s the market is operated by ASX Limited ACN 008 624 691.

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Before you begin

The ASX options market has been operating since 1976. Since the market started, volumes have increased significantly. There are now over 60 different companies and the S&P ASX 200 share price index to choose from. A list of companies and indices over which Exchange Traded Options (options) are traded can be found on the ASX website, **www.asx.com.au/options**.

This booklet explains the concepts of options, how they work and what they can be used for. It should be noted that this booklet deals exclusively with Exchange Traded Options over listed shares and indices, and not company issued options. Information on other ASX products is available by calling 131 279 or visiting **www.asx.com.au**. To assist in your understanding there is a glossary of terms on page **37**.

Option sellers are referred to as 'writers' because they underwrite (or willingly accept) the obligation to deliver or accept the shares covered by an option. Similarly, buyers are referred to as the 'takers' of an option as they take up the right to buy or sell a parcel of shares.

Every option contract has both a taker (buyer) and a writer (seller). Options can provide protection for a share portfolio, additional income or trading profits. Both the purchase and sale of options, however, involve risk. Transactions should only be entered into by investors who understand the nature and extent of their rights, obligations and risks.

What is an option?

An option is a contract between two parties giving the taker (buyer) the right, but not the obligation, to buy or sell a security at a predetermined price on or before a predetermined date. To acquire this right the taker pays a premium to the writer (seller) of the contract.

For illustrative purposes, the term shares (or stock) is used throughout this booklet when referring to the underlying securities. When considering options over an index, the same concepts generally apply. From time to time options may be available over other types of securities.

The standard number of shares covered by one option contract on ASX is 100. However, this may change due to adjustment events such as a new issue or a reorganisation of capital in the underlying share.

All of the examples in this booklet assume 100 shares per contract and ignore brokerage and ASX fees. You will most definitely need to consider these when evaluating an option transaction. For options over an index, the contract value is based on a dollar value per point. Details can be checked in the contract specifications.

There are two types of options available: call options and put options.

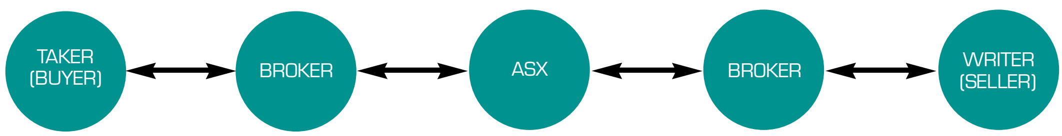
Call options

Call options give the taker the right, but not the obligation, to **buy the underlying shares** at a predetermined price, on or before a predetermined date.

Call option example

Santos Limited (STO) shares have a last sale price of $14.00. An available 3 month option would be an STO 3 month $14.00 call. A taker of this contract has the right, but not the obligation, to buy 100 STO shares for $14.00 per share at any time until the expiry*. For this right, the taker pays a premium (or purchase price) to the writer of the option. In order to take up this right to buy the STO shares at the specified price, the taker must exercise the option on or before expiry.

On the other hand, the writer of this call option is obliged to deliver 100 STO shares at $14.00 per share if the taker exercises the option. For accepting this obligation the writer receives and keeps the option premium whether the option is exercised or not.



It is important to note that the taker is not obligated to exercise the option.

* The expiry day for stock options is usually the Thursday before the last Friday in the expiry month unless ASX Clear determines another day. This may change for various reasons (eg. for public holidays), so please check with your broker. For index options, refer to the contract specifications.

Put options

Put options give the taker the right but not the obligation to **sell the underlying shares** at a predetermined price on or before a predetermined date. The taker of a put is only required to deliver the underlying shares if they exercise the option.

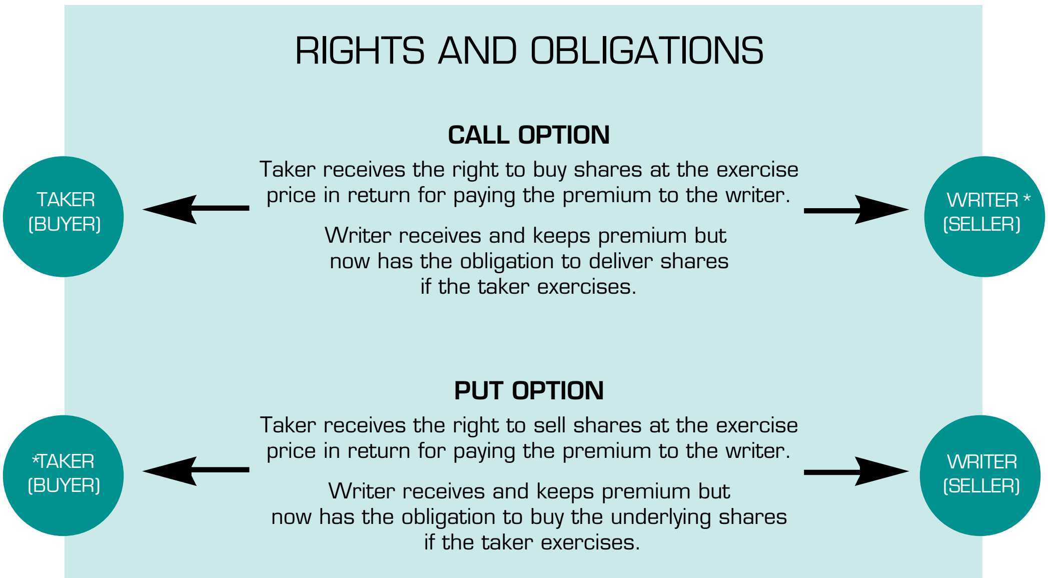
Put option example

An available option would be an STO 3 month $14.00 put. This gives the taker the right, but not the obligation, to sell 100 STO shares for $14.00 per share at any time until expiry. For this right, the taker pays a premium (or purchase price) to the writer of the put option. In order to take up this right to sell the STO shares at a specified price the taker must exercise the option on or before expiry. The writer of the put option is obliged to buy the STO shares for $14.00 per share if the option is exercised. As with call options, the writer of a put option receives and keeps the option premium whether the option is exercised or not.

It is important to note that the taker is not obligated to exercise the option.

If the call or put option is exercised, the shares are traded at the specified price. This price is called the exercise or strike price. The last date when an option can be exercised is called expiry day.

There are two different exercise styles: American style, which means the option can be exercised at any time prior to the expiry; and European style, which means the option can only be exercised on the expiry day. Most stock options traded on ASX are American style.



* The taker of a put and writer of a call option do not have to own the underlying shares.

Advantages of option trading

Risk management

Put options, when taken, allow you to hedge against a possible fall in the value of shares you hold.

Time to decide

By taking a call option, the purchase price for the shares is locked in. This gives the call option holder until the expiry day to decide whether or not to exercise the option and buy the shares. Likewise the taker of a put option has time to decide whether or not to sell the shares.

Speculation

The ease of trading in and out of an option position makes it possible to trade options with no intention of ever exercising them. If you expect the market to rise, you may decide to buy call options. If you expect a fall, you may decide to buy put options.

Either way you can sell the option prior to expiry to take a profit or limit a loss.

Leverage

Leverage provides the potential to make a higher return from a smaller initial outlay than investing directly. However, leverage usually involves more risks than a direct investment in the underlying shares. Trading in options can allow you to benefit from a change in the price of the share without having to pay the full price of the share. The following example helps illustrate how leverage can work for you.

The table below compares the purchase of 1 call option and 100 shares. The higher percentage return from the option demonstrates how leverage can work.

	OPTION	STOCK
Bought on October 15	$38	$400
Sold on December 15	$67	$450
Profit	$29	$50
Return on investment (not annualised)	76.3%	12.5%

Diversification

Options can allow you to build a diversified portfolio for a lower initial outlay than purchasing shares directly.

Income generation

You can earn extra income over and above dividends by writing call options against your shares, including shares bought using a margin lending facility. By writing an option you receive the option premium up front. While you get to keep the option premium, there is a possibility that you could be exercised against and have to deliver your shares at the exercise price.

It is important that you balance the advantages of trading options with the risks before making any decisions. Details of the risks of options trading are set out on page 27.

Option features

The ease of trading in and out of options on ASX's options market is assisted by the standardisation of the following option contract components:

1. Underlying securities
2. Contract size
3. Expiry day
4. Exercise prices

There is a fifth component, the option premium, which is not standardised but rather determined by market forces. ASX operates the options market, while ASX Clear Pty Limited (ASX Clear) operates the clearing facility for ASX's options market. Among ASX's responsibilities is the setting of the standardised option components.

1 option contract usually represents 100 underlying shares.

The 5 components of an option contract

1. Underlying securities/approved indices

Options traded on ASX's options market are only available for certain securities and approved indices. These securities are referred to as underlying securities or underlying shares. They must be listed on ASX and are selected by ASX Clear according to specific guidelines. The issuers of underlying securities do not participate in the selection of securities against which options may be listed.

Calls and puts over the same underlying security are termed classes of options. For example, all call and put options listed over Lend Lease Corporation (LLC) shares, regardless of exercise price and expiry day, form one class of option. A list of all the classes of options trading on ASX's options market can be found on the ASX website **www.asx.com.au/options** (in the "Trading Information" section on the 'Volatility parameters and ETO class rankings' page).

2. Contract size

On ASX's options market an option contract size is standardised at 100 underlying shares. That means, 1 option contract represents 100 underlying shares. As mentioned earlier, this may change if there is an adjustment such as a new issue or a reorganisation of capital in the underlying share. In the case of index options, contract value is fixed at a certain number of dollars per index point (for example, $10 per index point). The size of the contract is equal to the index level x the dollar value per index point (for example, for an index at 4,500 points, 1 contract would be 4,500 x $10 = $45,000).

3. Expiry day

Options have a limited life span and expire on standard expiry days set by ASX Clear. The expiry day is the day on which all unexercised options in a particular series expire and is the last day of trading for that particular series.

For options over shares this is usually the Thursday before the last Friday in the month.

For index options, expiry is usually the third Thursday of the contract month. However, ASX Clear has the right to change this date should the need arise.

As options expire new expiry months are added further out.

All option classes (stock or index) have expiries based on the financial quarters (March, June, September and December).

For example, a June expiry means that the option expires on the expiry day in June. If Thursday or Friday are not business days, the expiry day is brought forward.

A full list of all options series available for trading is available on the ASX website, **www.asx.com.au/options** in the csv file "Options code list" in the "Trading Information" section. This list is updated daily.

You can find a useful expiry calendar on the ASX website: **www.asx.com.au/options** under "Expiry calendar" in the "Trading Information" section.

For detail on option listing guidelines please view the "Option listing guidelines.pdf" on the ASX website: **www.asx.com.au/options** in the "Trading Information" section.

4. Exercise (or strike) prices

The exercise price is the predetermined buying or selling price for the underlying shares if the option is exercised.

ASX Clear sets the exercise prices for all options listed on ASX's options market with a range of exercise prices available for options on the same expiry. New exercise prices are listed as the underlying share price moves.

For example, if the underlying share is trading at \$3.50, it is likely that option contracts with the following strike prices would be listed: \$3.00, \$3.25, \$3.50, \$3.75 and \$4.00. A range of exercise prices allows you to more effectively match your expectations of the price movement in the underlying share to your option position. Exercise prices may also be adjusted during the life of the option if there is a new issue or a reorganisation of capital in the underlying shares.

5. Premium

The premium is the price of the option which is arrived at by the negotiation between the taker and the writer of the option. It is the only component of the five option components that is not set by ASX Clear.

Option premiums are quoted on a cents per share basis. To calculate the full premium payable for a standard size option contract, multiply the quoted premium by the number of shares per contract, usually 100.

For example, a quoted premium of 16 cents represents a total premium cost of \$16.00 (\$0.16 x 100) per contract. To calculate the full premium payable for an index option, you simply multiply the premium by the index multiplier. For example, a premium of 30 points, with an index multiplier of \$10, represents a total premium cost of \$300 per contract.

No eligibility for dividends and voting

The taker of the call option or the writer of a put option does not receive dividends on the underlying shares until the shares are transferred after exercise. Nor do they obtain any voting rights in relation to the shares until that time.

Option information is available on our website www.asx.com.au or in The Australian Financial Review newspaper.

Adjustments to option contracts

The specifications of option contracts listed on ASX's options market are standardised as much as possible.

However, ASX may make adjustments to options to preserve, as far as practicable, the value of positions in options held by takers and writers. Adjustments are made as a result of corporate events that affect the price of the underlying, such as a bonus issue, share split or rights issue.

Adjustments may be made to one or more of the components of an option, including exercise price, contract size, underlying securities, and number of contracts. With some events, ASX has adopted adjustments which are understood by the market to be conventions that will be applied when those circumstances arise. These are specific adjustments set out in the ASX Operating Rules.

The adjustment assumes that the corporate event giving rise to a need to make an adjustment has an ex-date or a deemed ex-date, and the event must affect the parcel of underlying securities. ASX considers that the value of the option to both the taker and the writer is best preserved over the ex-date by maintaining the total exercise value. The total exercise value is the product of three parameters:

- the quantity of option contracts
- the number of the underlying securities represented by the option contract
- the exercise price of option contracts in the series.

Corporate events that do not strictly affect shares in a pro-rata manner, that is proportionally, are generally excluded from an option adjustment. For instance, an entitlement issue of 50 shares for each shareholder, (irrespective of the number of shares held by a shareholder) is not a strictly pro-rata issue. But a bonus issue of 1 for 2 does result in an adjustment as it is a pro-rata issue of 50 new shares for each 100 old shares held.

The various adjustment circumstances and also a detailed treatment of option adjustments, titled Explanatory Guide for Option Adjustments can be found on the ASX website at **www.asx.com.au/options** (under "Corporate Actions and Notices").

This document covers:

- what an adjustment is
- why adjustments are made
- how adjustments are determined
- different types of adjustments
- examples of past adjustments.

Option pricing fundamentals

When considering an option it is important to understand how the premium is calculated. Option premiums change according to a range of factors including the price of the underlying share and the time left to expiry. An option premium can be separated into two parts – intrinsic value and time value. Different factors influence intrinsic and time value.

Intrinsic value

Intrinsic value is the difference between the exercise price of the option and the market price of the underlying shares at any given time. Here are some examples for call and put options.

Call options

For example, if CSL Limited (CSL) June $30.00 call options are trading at a premium of $1.50 and CSL shares are trading at $31.00 per share, the option has $1.00 intrinsic value. This is because the option taker has the right to buy the shares for $30.00 which is $1.00 lower than the market price. Options that have intrinsic value are said to be **'in-the-money'**.

CSL SHARE PRICE	OPTION PREMIUM		INTRINSIC VALUE (SHARE PRICE – EXERCISE PRICE)		TIME VALUE (OPTION PREMIUM – INTRINSIC VALUE)
$31.00	$1.50	=	$1.00	+	$0.50

CALL OPTION EXERCISE PRICE $30.00

In this example, the remaining 50 cents of the premium is time value.

However, if the shares were trading at $29.00 there would be no intrinsic value because the $30.00 call option contract would only enable the taker to buy the shares for $30.00 per share which is $1.00 higher than the market price. When the share price is less than the exercise price of the call option, the option is said to be **'out-of-the-money'**.

Remember, call options convey to the taker the right but not the obligation to buy the underlying shares. If the share price is below the exercise price it is better to buy the shares on the sharemarket and let the option lapse.

Put options

Put options work the opposite way to calls. If the exercise price is greater than the market price of the share the put option is in-the-money and has intrinsic value. Exercising the in-the-money put option allows the taker to sell the shares for a higher price than the current market price.

For example, a CSL July $31.00 put option allows the holder to sell CSL shares for $31.00 when the current market price for CSL is $30.00. The option has a premium of $1.20 which is made up of $1.00 of intrinsic value and 20 cents time value.

A put option is out-of-the-money when the share price is above the exercise price, as a taker will not exercise the put to sell the shares below the current share price.

CSL SHARE PRICE	OPTION PREMIUM		INTRINSIC VALUE (SHARE PRICE – EXERCISE PRICE)		TIME VALUE (OPTION PREMIUM – INTRINSIC VALUE)
$30.00	$1.20	=	$1.00	+	$0.20

PUT OPTION EXERCISE PRICE: $31.00

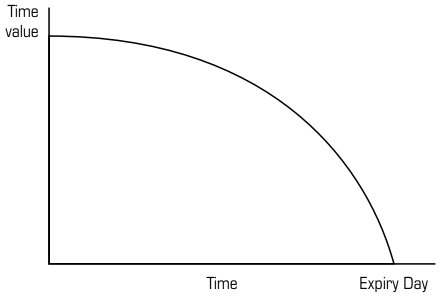
Once again, remember put options convey the right but not the obligation to sell the underlying shares. If the share price is above the exercise price it is better to sell the shares on the share market and let the option lapse.

When the share price equals the exercise price, the call and the put options are said to be **'at-the-money'**.

Time value

Time value represents the amount you are prepared to pay for the possibility that the market might move in your favour during the life of the option. Time value will vary with in-the-money, at-the-money and out-of-the-money options and is greatest for at-the-money options.

As time draws closer to expiry and the opportunities for the option to become profitable decline, the time value declines. This erosion of option value is called time decay. Time value does not decay at a constant rate, but becomes more rapid towards expiry.



Time value

The amount you are willing to pay for the possibility that you could make a profit from the option transaction. It is influenced by the following factors:

- time to expiry
- volatility
- interest rates
- dividend payments
- market expectations.

The role of dividends in pricing and early exercise

When a share goes "ex-dividend" its price usually falls by the amount of the dividend. As option contracts do not carry any right to dividends paid on the underlying shares it follows that option prices, both puts and calls need to take account of any dividend likely to be paid during the life of the option. Although companies usually follow a pattern as to the timing and the amount, these can change.

Options investors need to make an assessment of when and how much a dividend is likely to be and factor this into their assessment of the fair value of any particular option series. The ASX theoretical options price calculator can assist with this task.

Dividend payments can also influence the likelihood of an option being exercised early. ASX also has a calculator to assist with assessing this likelihood.

THE KEY FACTORS WHICH AFFECT THE TIME VALUE OF AN OPTION ARE:

Time to expiry	The longer the time to expiry, the greater the time value of the option.
Volatility	In general, the more volatile the price of the underlying share or index, the higher the premium will be. This is due to the wider range over which the stock can potentially move.
Interest rates	A rise in interest rates will push call option premiums up and put option premiums down.
Dividend payments	If a dividend is payable during the life of an option, the premium of a call option will be lower, and the premium of a put option higher, than if no dividend was payable. Holders of option contracts who do not own the underlying securities are not eligible for dividends payable on those shares.
Market expectations	Ultimately supply and demand determine the market value of all options. During times of strong demand, premiums will be higher.

Parties to an option contract

The option taker

An option taker is an investor or trader anticipating a significant move in a particular share price. Taking an option offers the opportunity to earn a leveraged profit with a known and limited risk.

Taking a call option gives you the right to buy the shares covered by the option at the exercise price at any time until expiry. In general, call option premiums rise as the underlying share price rises. For this reason the taker of a call option expects the underlying share price will rise.

Taking a put option gives you the right, but not the obligation, to sell the underlying shares. Put option premiums usually rise as the underlying share price falls. For this reason the taker of a put option expects the underlying share price to fall.

In taking this right to buy or sell shares, the taker pays the premium. This premium represents the maximum possible loss on the option for the taker.

It is important to remember that it is not necessary for the taker of a put option to own the underlying shares at the time of taking the put. Certainly, if the taker chooses to exercise the put option they will be required to deliver the underlying shares, at the exercise price, to a randomly selected writer of put options in that series. However, the taker also has the choice of closing out the position on ASX's options market prior to expiry. A full explanation of closing out can be found on page **17**.

If the taker chooses to close out the option, a loss will be incurred if the premium that the investor receives on closing out is lower than the premium paid by the investor for the original taken contract. A profit will occur if the reverse is true. Any time value in the premium for the option will be lost if the option is exercised.

On average 15% of options are exercised. However this does not mean 85% expire or worthless. Instead 60% of options are closed out whilst 25% expire worthless. These figures represent the average over recent times and may vary depending on current volatility and other features.

Assume AMP Limited (AMP) shares are trading at $4.24. Anticipating an increase in the share price, you take a 3 month AMP $4.25 call for 45 cents, or $45 total premium ($0.45 x 100 shares per contract).

Close to the expiry day, AMP shares are trading at $5.25 and the option premium is now $1.02 per share. You could exercise the option and buy 100 AMP shares at $4.25, which is $1.00 below the current market price, realising a gain of 55 cents per share: $1.00 – $0.45 = $0.55 (excluding brokerage and exchange fees).

Alternatively you can close out the call on ASX's option market by completing an equal and opposite transaction to your opening transaction. In this example you would write an AMP August $4.25 call for $1.02 (the current premium) and realise a gain of 57 cents per share (excluding brokerage and exchange fees).

The 2 cent profit difference between exercising and closing out the call is due to the option having some remaining time value (as explained on page **10**).

If AMP shares had declined over this period, the call premium would have also declined. Depending on the timing and magnitude of the share price decline, the option may have retained some value prior to expiry, allowing you to recoup a portion of the original premium by liquidating the position. The first table on the following page summarises the two alternatives.

EXERCISE VS CLOSEOUT

CURRENT HOLDING: ONE $4.25 AMP CALL
AMP SHARES TRADING AT $5.25

EXERCISE	CLOSEOUT
Exercise option / buy 100 AMP shares for $4.25*	Closeout / sell ONE AMP $4.25 call for $1.02**
Sell 100 AMP shares at market price of $5.25*	
Total profit $5.25 - $4.25 = $1.00 per share ($100)	Less initial cost $1.02 - $0.45 = $0.57 cents profit per share ($57)
Less initial cost $1.00 - $0.45 = $0.55 cents profit per share ($55)	

* Fees and Commission are payable on each of these steps

** Fees and Commission are paid on the sale of the option to close

Put buying example

Say AMP Limited (AMP) shares are trading at $5.48. Anticipating a fall in the share price, you take a 3 month AMP $5.25 put option for 15 cents per share.

Close to the expiry day, AMP shares are trading at $4.00 and the option premium is now $1.30 per share.

You could exercise the option and sell 100 AMP shares at $5.25 which is $1.25 above the current market price, realising a gain of $1.10 per share (excluding brokerage and exchange fees). If you don't own the shares you would need to purchase these before exercising the put option. Alternatively, you could close out the option by selling the 3 month AMP $5.25 put at $1.30 (the current market premium) and realise a gain of $1.15 per share (excluding brokerage and exchange fees). The 5 cent difference represents time value remaining in the option premium. If AMP shares had risen in price over this period, the option premium would have declined. As with the call option, the put option may have retained some value and you may have been able to close out the option to recover some of the initial premium. The second table summarises the two alternatives.

EXERCISE VS CLOSEOUT

CURRENT HOLDING: ONE $5.25 AMP PUT
AMP SHARES TRADING AT $4.00

EXERCISE	CLOSEOUT
Before exercising option, buy AMP shares at market price of $4.00*	Close out / sell ONE AMP $5.25 put for $1.30**
Exercise put and sell 100 AMP shares for $5.25* Total profit $5.25 - $4.00 = $1.25 per share ($1,25)	Less initial cost $1.30 - $0.15 = $1.15 cents profit per share ($115)
Less initial cost $1.25 - $0.15 = $1.10 profit per share ($110)	

* Fees and commission are payable on each of these steps

** Fees and commission are paid on the sale of the option to close

The option writer

Option writers earn premium for selling options. Both put and call option writers are generally looking for prices to remain steady.

Call writing example

Suppose you own 100 Australia and New Zealand Banking Group (ANZ) shares and write one ANZ June $20.00 call option. If you are exercised against, you must sell 100 ANZ shares for $20.00 per share. If you do not already own ANZ shares you will be obliged to buy 100 ANZ shares at the current market price. Writing uncovered call options therefore exposes the writer to substantial risk and should not be undertaken lightly.

Put writing example

The writer of a Computershare Limited (CPU) November $9.50 put option is obliged to buy 100 CPU shares at $9.50 as long as the position remains open. If CPU shares fall to $8.50 and the taker of the put option exercises the option, the writer is obliged to buy the shares at $9.50. On the other hand if the CPU shares rise to $10.00 it is unlikely that the taker of the put option will exercise and accordingly, the put writer will earn the option premium.

As the example shows, the writer of a put option has risk if the share price falls. In extreme cases the risk is that the price of the shares falls to zero.

The decision to exercise the option rests entirely with the option taker. An option writer may be exercised against at any time prior to expiry when trading an American style option. However, this is most likely to occur when the option is in-the-money and close to expiry, or when the underlying share is about to pay a dividend. Call option takers may exercise in order to receive the dividend. ASX Clear will require payment of margins to ensure the obligations of the option writer to the market are met unless the underlying stock is held as collateral.

Tracking positions and costs

When deciding whether to trade options, there a number of factors to be aware of:

- the costs of trading options
- how to track the value of your options or option positions
- the requirement to pay margins when selling options.

How to track options via the internet and in the newspapers

Option codes and prices are available in the options section of the ASX website. To access this go to **www.asx.com.au/options**. The ASX website also has pricing and other information about the underlying securities or indices. Details of the previous day's trading are published in summary form in The Australian Financial Review. Current option prices are also available from your broker.

Costs

Brokerage is payable at a flat rate or as a percentage based on the full premium. ASX Clear charges a fee per contract, and also an exercise fee, if you exercise an option. For more information contact your broker, or visit the ASX website, **www.asx.com.au/options** (under Costs In the "Trading Information" section).

Margins

Margins are designed to protect the financial security of the market. If you write an option contract, you have a potential obligation to the market because the taker of the option may exercise their position. A margin is an amount that is calculated by ASX Clear as necessary to ensure that you can meet that obligation on that trading day.

Note that ASX Clear's relationship is with your broker, and not directly with you. Once an option trade is registered with ASX Clear, the process of novation results in ASX Clear becoming the counterparty to both the buying and the selling broker. ASX Clear calls margins from your broker, who then calls margins from you.

References to margins and collateral in this document reflect the practices of ASX Clear in risk margining ASX Clearing Participants. It is important to note that individual clients may be risk managed differently by their ASX Clearing Participant or broker with respect to (for example) the type and quantity of margin applied, the type of collateral accepted and the interest paid on cash collateral. Individuals should contact their broker to establish their practices.

How margins are calculated

ASX Clear calculates margins using a system known as the ASX Derivatives Margining System (ADMS), which takes into account the volatility of the underlying security when calculating margin obligations.

The total margin for ETOs is made up of two components:

1. The **premium margin** is the market value of the position at the close of business each day. It represents the amount that would be required to close out your option position.

2. The **risk margin** covers the potential change in the price of the option contract assuming the maximum probable intra-day movement (daily volatility) in the price of the underlying security. The daily volatility figure, expressed as a percentage, is known as the **margin interval**.

Each week ASX Clear publishes the margin interval for all option classes. You can find this figure on the ASX website at **www.asx.com.au/options** (under Margins and Collateral in the "Trading Information" section). If you have a number of option positions open, ADMS will evaluate the risk associated with your entire options portfolio and calculate your total margin obligation accordingly. It is possible that some option positions may offset others, leading to a reduction in your overall obligation.

The ASX website has a tool available to help you to *estimate* your margin liability. It can be found at **www.asx.com.au/options** (under "Calculators and tools").

How margins are met

Your broker will require you to provide cash or collateral to cover your margin obligations. Note that minimum margin requirements are set by ASX Clear, but higher margin requirements may be imposed by brokers.

There is a range of collateral that is acceptable to ASX Clear. This includes certain shares and bank guarantees. ASX Clear applies a "haircut" in relation to the value of some collateral to protect against a sudden fall in the value of collateral held.

Details of eligible collateral are published on the ASX website at **www.asx.com.au/options** (under Margins and Collateral in the "Trading Information" section).

Payment of margins

Margins are recalculated on a daily basis to ensure an adequate level of margin cover is maintained. This means that you may have to pay more if the market moves against you. If the market moves in your favour, margins may fall.

Settlement requirements for trading options are strict. You must pay margin calls by the time stated in your Client Agreement. This is usually within 24 hours of being advised of the margin call by your broker. If you do not pay in time, your broker can take action to close out your positions without further reference to you.

Taxation

It is beyond the scope of this booklet to provide a detailed treatment of the taxation issues that are relevant to trading or investing in options. You should, however, take taxation into consideration when you are investing in options, just as you would when investing in shares.

Some of the issues that may be relevant include:

- Are you classified as a trader, as a speculator or as a hedger?
- Is an option trade on revenue account or on capital account?
- Are there timing issues, for example when an option is opened in one tax year and closed in the next tax year?
- Where an option strategy is in place around the time a stock goes ex-dividend, are you in danger of not satisfying the 45-day Holding Period Rule and therefore being disqualified from receiving the franking credits attached to the dividend?
- Could the exercise of an option position crystallise a taxation event for the underlying shareholding?

This is by no means a comprehensive list of the taxation issues of options trading. The information contained in this booklet is provided for educational purposes only and does not constitute investment, taxation or financial product advice. Taxation issues will vary from investor to investor. It is therefore important to discuss your taxation situation with your financial adviser or accountant, to ensure that any options trades you enter will not have adverse taxation implications.

For a paper discussing the taxation treatment of options, please refer to the ASX website, at **www.asx.com.au/options** (under Tax in the "Trading Information" section).

This document covers aspects of options trading such as:

- classification of the options trader as a trader, speculator, hedger or investor
- the treatment of realisation of profits or losses from options trading
- the use of options in superannuation funds
- franking credits – Holding Period Rule and Related Payments Rule.

Tradeability

As explained previously, an option is a contract between two parties – the taker and the writer. An option contract comes into existence when a writer and a taker agree on the option price and the contract is registered with ASX Clear. The establishment of a contract is referred to as an open position.

Once the taker has an open position they have three alternatives:

1. The taker can close out their position by writing an option in the same series as originally taken and instructing their broker to 'close out' the position.

   For example, if you take a call option as an opening transaction, you may liquidate or close out your right to exercise by writing an identical call option to another party.

2. The taker can exercise the option and trade the underlying shares. In the case of index options it is impractical to take delivery of the many shares contained in the index, so index options are only exercisable at expiry into a cash payment. Index options are further explained on page **20**.

3. The taker can hold the option to expiry and allow it to lapse.

The writer of an option has two alternatives:

1. Close out the option prior to the expiry. For example, if you write a put option as an opening transaction, you may liquidate or close out your obligations by taking an identical put option contract with another party; or

2. Let the option go to the expiry day. The option will either be exercised against or expire worthless.

You would close out:

- to take a profit
- to limit a loss
- when there is a risk of unwanted early exercise.*

With options, there is no transfer of rights or obligations between parties.

* Note that with index options, exercise can only occur on the expiry day, so this risk does not exist for index options.

It is important to note that once the taker exercises an option it is too late for the writer of that option to close out their position.

How can options work for you?

There are a number of different reasons why investors trade in options. Some of these are outlined below.

1. Earn income

Writing options against shares you already own or are purchasing can be one of the simplest and most rewarding strategies. Below are two scenarios when this strategy may be appropriate. In each of these scenarios, your risk is that you will have to sell your shares at the exercise price but you still keep the option premium. This is most likely to happen if the market rises strongly.

Scenario 1: Writing options against shares you already own

Assume you own 100 Wesfarmers Limited (WES) shares. The current price is $34.00 and you would be happy to sell your shares if the price reached $36.50. You look in the newspaper and see a one month WES call option is worth around 70 cents. You call your broker and instruct them to sell a one month WES $36.50 call option which they do for 72 cents ($72 less fees and commissions). You now have the obligation to sell your WES shares for $36.50 any time between now and expiry. For undertaking this obligation you received $72 (less brokerage and exchange fees). Calls can also be written against stock bought on margin. Find out more from your margin lender, broker or ASX.

Scenario 2: Writing options at the same time as buying the shares

Assume you are interested in purchasing 100 WES shares but would like to reduce the cost of doing so. You could establish a buy and write over WES shares. This means you would buy 100 WES shares at around $34.00 and at the same time sell a one month WES $36.50 call for say 72 cents. The extra income of $72 (less brokerage and exchange fees) reduces the cost of buying the shares. You now have the obligation to sell your WES shares for $36.50 at any time between now and expiry.

*Please note: you will have to pay margins for the difference between the options settling and subsequent stock settlement (options settle T+1 vs stock T+3)

2. Protecting the value of your shares

This strategy can be useful if you are a shareholder in a particular company and are concerned about a short term fall in the value of the shares. Without using options you can either watch the value of your shares fall, or you could sell them.

Scenario 1: Writing call options to give you downside protection

Previous examples show how you can generate extra income from your shares by writing options. Writing call options can also generate extra income to offset a decline in share price.

If WES is trading at $34.00, writing a one month $32.00 call option for $2.50 means the shares could fall by $2.50 before you begin to incur a loss. If the share price falls to $31.50 the loss on WES shares is offset by the $2.50 option premium. If WES falls further, the $2.50 premium will not be enough to fully offset the fall in price.

If WES closes above $32.00 at expiry, the option will be exercised unless the option has been closed out.

Scenario 2: Take put options

Assume you own 100 WES shares and you think the price will fall. Writing call options will offset some of the loss, but you would like to be able to lock in a sale price for your shares if the market does fall. You could take 1 WES June $34.00 put option for 90 cents ($90 plus fees and commissions). If the price falls, you have until the end of June to exercise your put option and sell your shares for $34.00. If you are wrong and the market rises you could let the option lapse or alternatively close out before the expiry day.

3. Capitalising on share price movements without having to purchase shares

You can profit from a movement, either up or down, in the underlying shares without having to trade the underlying shares themselves. Some examples are outlined below.

Scenario 1: Take calls when expecting the market to rise

Buying call options allows you to profit from an increase in the price of the underlying shares. Suppose you believe Computershare Limited (CPU) shares will rise in price over the next few months. You don't want to pay the full $900 to buy 100 shares so you decide to buy a 3 month $9.50 call for 40 cents ($40 plus brokerage and exchange fees). If you are correct and the price of CPU shares rises then the value of your option will also rise. You can then sell an equivalent call option to close out any time prior to the expiry date and take your profit. You will not have to buy the CPU shares if you don't want to.

If the market doesn't move as expected, you can either close out the option and recoup some of your initial investment, or you can simply let the option expire worthless. When you take a call option, the most you can lose is the premium you have paid in the first place.

Scenario 2: Take puts when expecting the market to fall

Assume you believe CPU shares will fall in value. You don't like the idea of short selling the shares as you believe this is too risky so you decide to buy a 3 month CPU $9.00 put option for 60 cents ($60 plus fees and commissions). If you are correct and the price of CPU falls, the value of your put should rise. You can then sell the put to close out any time up to and including the expiry. If the market does not fall, then you can close out the option and recoup some of your initial investment, or you can simply let the option expire worthless.

When you take a put option you don't have to own the underlying shares and, as with call options, the most you can lose is the premium you have paid in the first place.

4. Using options gives you time to decide

Taking a call option can give you time to decide if you want to buy the shares. You pay the premium which is only a fraction of the price of the underlying shares. The option then locks in a buying price for the shares if you decide to exercise. You then have until the expiry day of the option to decide if you want to buy the underlying shares.

Put options can work in a similar manner. By taking a put option you can lock in a selling price for shares that you already own and then wait until the expiry day of the option to see if it is worthwhile exercising the option and selling your shares. Or you can let the option lapse if the price does not fall as expected.

In both cases the most you can lose is the premium you have paid for the option in the first place.

5. Index options let you trade all the stocks in an index with just one trade

By using call and put options over an index, you can trade a view on the general direction of the market, or hedge a portfolio with just one trade. If you are bullish on the market but don't know what stock to buy or which sector of the market will rise, you can buy a call option over the whole index. This means you don't have to choose a particular stock to invest in, you can just take a view on the direction of the broad stockmarket. If the level of the index rises the value of the call options will rise, just as for call options over individual shares. All the concepts about call and put options explained in this booklet apply to index options, which are explained in detail on page **20**.

6. Other strategies

Writing covered calls on stock bought on margin is an increasingly popular strategy. Options can allow you to construct strategies that enable you to take advantage of many market situations. Some can be quite complex and involve varying levels of risk.

Trading index options

How are index options different?

Except where specific reference has been made to index options, up to this point the options we have been discussing have been over shares in individual companies. Individual stock options enable you to trade a view on a particular company. ASX also offers options which are traded over a share price index (that is, a group of listed securities).

As the name suggests, index options give you exposure to a sharemarket index. They offer similar benefits and flexibility to that of options traded over individual stocks, with the added advantage of offering exposure to a broad range of securities comprising an index rather than being limited to one particular company. You can use index options to trade a view on the market as a whole, or on the sector of the market that is covered by the particular index.

There are some important differences between index options and options over individual securities:

- Index options are cash settled, rather than deliverable. You will receive a cash payment on exercising an in-the-money index option.
- Index options are European in exercise style. This means there is no risk of early exercise for sellers.
- The strike price and premium of an index option are usually expressed in points.

A multiplier is then applied to give a dollar figure. For example, the multiplier may be $10 per point, meaning that to buy an index option with a premium of 50 points, you would pay $500 (plus brokerage and exchange fees).

Settlement method

The index options settlement price is based on the *opening* price on ASX Trade of each stock in the underlying index on the morning of the expiry date. It is not based on the closing index level. As the stocks in the index open, the first trading price of each stock is recorded. Once all stocks in the index have opened, an index calculation is made using these opening prices. This process is called the Opening Price Index Calculation (OPIC). Shortly afterwards the OPIC is confirmed to ASX and ASX Clear, it is announced to the market. The OPIC is then posted onto the ASX website at **www.asx.com.au/options**

This method of calculating the index level for settling index options is used by several major exchanges internationally. It is regarded as an effective way to manage potential volatility around the expiry of index options and futures contracts.

The Australian market staggers the opening of stocks, with stocks opening in five tranches, according to the initial letter of the stock name:

- A and B
- C to F
- G to M
- N to R
- S to Z.

The staggered opening means it is not possible for the entire market to be traded in one 'hit' during the opening period. The unwinding of large positions to match the index option expiry can be done in a more orderly fashion. Furthermore, market opening is typically a time of higher liquidity, and therefore the time the market is better able to absorb orders placed by traders looking to unwind index arbitrage strategies.

Some key advantages of trading index options

1. Exposure to the broader market

Investing in index options approximates trading a share portfolio that tracks a particular index. It provides exposure to the broader market which the index represents, with no specific company risk.

2. Greater leverage

Like options over a single company, index options can provide leveraged profit opportunities. When the market rises (or falls), percentage gains (or losses) are far greater for the option than rises (or falls) in the underlying index.

3. Protection for a share portfolio

By purchasing index put options, you can lock in the value of a share portfolio. You may fear a market downturn, but have good reasons for not wanting to sell stocks. By purchasing index put options, you can make profits if the index falls. Profits on put options should compensate you for the loss of value in the stocks in the portfolio.

For example, you hold a $45,000 share portfolio that tacks the index. Assume the index is at 4500 points and assume you buy a 3 month 4500 put option for 250 points (or $2,500 plus fees and commissions). At expiry the index has fallen to 4000 points. You receive a cash payment equal to the difference between 4500 points (the insured value) and the level of the index at expiry, in this case 4000 points.

In other words, you receive a cash payment of $5,000 (500 points x $10 a point) for a net profit on the option of $2,500. *If your share portfolio has moved in line with the underlying index*, then the profits on the put options purchase will largely offset the fall in the value of the portfolio.

DATE	INDEX	OPTION TRADE	PREMIUM VALUE
Late today	4500 points	Buy 3 month 4500 Put @ 250 points	$2500 (PAY)
Expiry	4000 points	Exercise option, Receive 500 points x $10	$5,000 (RECEIVE)
			PROFIT = $2,500

Examples of how trading index options can work for you

Example 1: Using an index put option to protect a share portfolio

When you decide to buy shares in the sharemarket you are exposed to two types of risks:

1. Company risk – the risk that the specific company you have bought into will underperform.

2. Market risk – the risk that the whole market underperforms, including your shares.

There are a number of ways to protect your shares against market risk using index options. You can, for example, buy the shares you believe in and buy an index put option to protect yourself against a fall in the whole market. Depending on the amount of risk you wish to remain exposed to, you can choose to hedge all or only part of your portfolio. Let's assume that it is June, and the broad market index is at 4500 points. You have a share portfolio worth $135,000 which approximately tracks the index. You believe that there may be a downturn in the market over the next three months. As an alternative to selling shares, you decide to buy index put options to protect your portfolio. As the 3 month 4500 index put option has a contract value of $45,000 (4500 points x $10 per point), you are able to protect your $135,000 portfolio by buying three contracts, for 250 points each. The total cost is $7,500 (ignoring brokerage and exchange fees).

The 3 month 4500 put gives you the right, but not the obligation, to "sell" the index at a level of 4500 at expiry.

At expiry, the index has fallen to 4000 points, and your options have the following value:

DATE	INDEX	SHARE PORTFOLIO	4500 PUT	PREMIUM VALUE
Today	4500 points	$135,000	250 points	3 contracts x $2,500 = $7,500 (PAY)
Expiry	4000 points	$115,000	500 points	3 contracts x $5,000 = $15,000 (RECEIVE)
Profit (Loss)		($20,000)		($12,500) = ($20,000 - $7,500)

Your net position is a loss of $12,500. The loss of $20,000 in the value of your shares has been largely offset by the profit of $7,500 on the option trade.

Alternatively, you could buy index put options with an exercise price greater than the value of the share portfolio you want to protect. This will provide you with a larger profit on the option trade if the index falls as expected. However, you will be paying a higher amount in premium, an amount which will be lost if the expected market decline does not take place.

Example 2: Using an index call option to trade a bullish view of the market

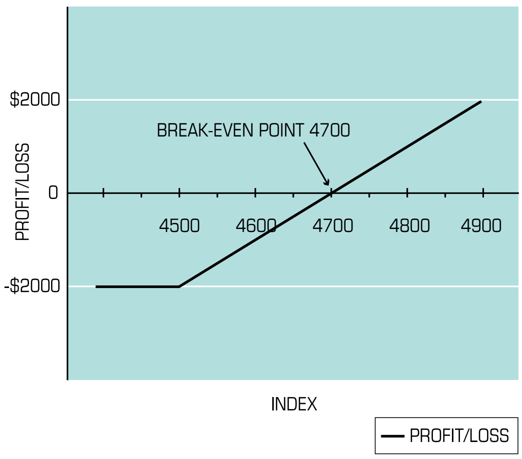
You are expecting the broad sharemarket to rise over the next 3 months. Assume the index is at 4500. As an alternative to buying a portfolio of shares directly, you decide to buy a 3 month 4500 index call option for 200 points, or $2,000 (plus brokerage and exchange fees). That gives you the right, but not the obligation, to "buy" the index at a level of 4500 at expiry. Ignoring brokerage and exchange fees, your break even point at expiry is 4500 + 200 = 4700 points.

The most you are risking in this trade is $2,000, the cost of the option. You have potentially unlimited profits. At expiry, for every point the index is above your break-even point of 4700 points, you will make a profit of $10. Two months later, it turns out that you were right in your prediction. The value has increased as shown in the table on the next page.

DATE	INDEX	4500 CALL	PREMIUM VALUE
Now	4500 points	200 points	$2,000
2 Months later	4725 (+5%)	320 points	$3,200
Profit / loss			+$1,200 (+60%)

The profit/loss profile (or pay-off diagram) for this position at expiry looks like this.
Note our example trades out of the position 1 month prior to expiry.

INDEX 4500 CALL OPTION



The chart above is called a pay-off diagram.
To learn more about these, check page **24**.

As you can see, the option has increased by 60% compared to a relatively small (+5%) increase in the index. This is the advantage of the leverage which an index call option provides. Since the option has not yet expired, you could also have:

1. Sold the option and realised the profit.

2. Kept the option and hoped for more upside (but remember that time decay is working against you).

These are just two of many strategies that are possible using index options. The range of expiry dates and exercise prices available makes it possible to structure a strategy to reflect any view you may have on the direction of the broader market.

Differences between equity options and index options

The table below summarises the main differences between exchange traded options over individual securities and index options.

	EXCHANGE TRADED OPTIONS	INDEX OPTIONS
Exercise style	Generally American	European
Settlement	Deliverable	Cash settled
Last trading and expiry day	The Thursday before the last Friday in the expiry month	The third Thursday of the month
Underlying asset	ASX approved securities	ASX approved indices
Premium	Expressed in dollars and cents	Expressed in points
Exercise price	Expressed in dollars and cents	Expressed in points
Contract size	100 shares	The exercise price of the option multiplied by $ value

Pay-off diagrams

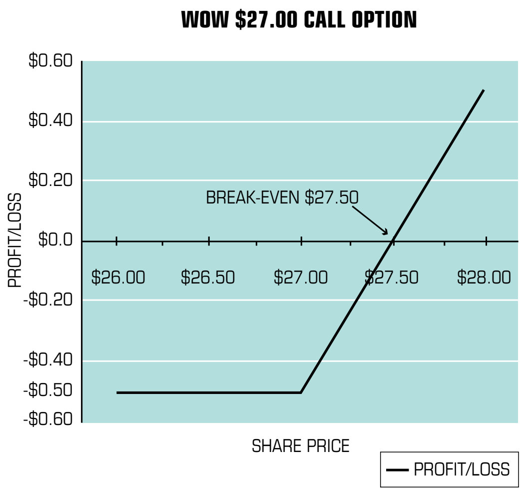
A pay-off or break-even diagram shows the potential profit or loss on the strategy at different stock prices at expiry. Pay-off diagrams can be drawn for any option or combination of options in the one class.

Visit the ASX website, **www.asx.com.au/options** (under "Calculators") to download any of the calculators and tools that will plot options profiles.

Call option taker

Using the example of buying a 3 month Woolworths Ltd (WOW) $27.00 call for 50 cents.

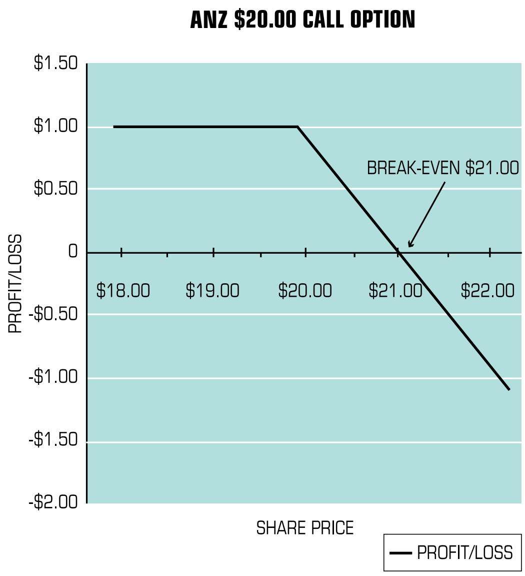
The break-even point for the call option taker is the exercise price of the option plus the premium paid. In this example it is $27.50 ($27.00 exercise price + 50 cent premium).



The diagram shows that while WOW is below $27.50 the call option taker has an unrealised loss. The most the call option taker can lose is the premium paid (50 cents). As the WOW share price rises above $27.50 the call option taker begins to profit. The maximum profit is unlimited as the higher the share price goes, the larger the taker's profit.

Call option writer

Using the example of selling a ANZ $20.00 call for $1.00.



The diagram shows that the call option writer has potential profit limited to the premium received ($100). If the option writer does not own the underlying shares the potential loss is unlimited. In this case, as the share price rises the writer will have to pay more to buy the shares at the market price if the option is exercised.

The break-even point for the call option writer is the exercise price of the option plus the premium received. This is the same as for the call option taker.

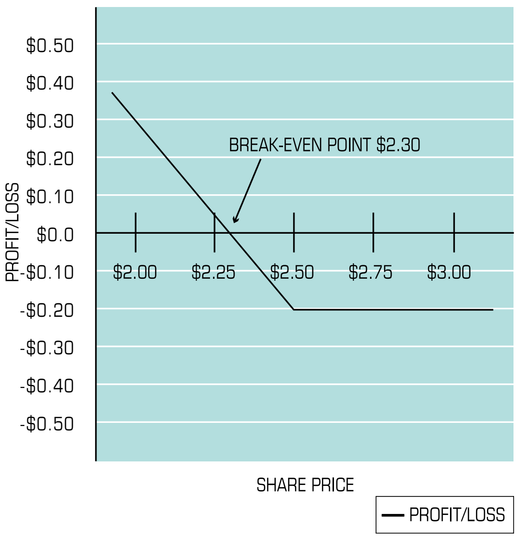
For call options the break-even point is the exercise price plus the premium.

For put options the break-even point is the exercise price less the premium.

Put option taker

Using the example of buying a 3 month BlueScope Steel Ltd (BSL) $2.50 put for 20 cents.

BSL $2.50 PUT OPTION

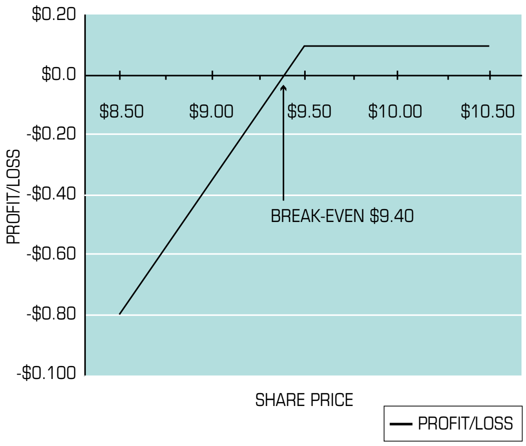


The diagram shows that the most the put option taker can lose is the premium paid. The further the share price falls below the break-even point of $2.30, the larger the investor's potential profit. The break-even point for the put option taker is the exercise price less the premium paid. The maximum profit is the exercise price less the premium paid.

Put option writer

Using the example of selling a 1 month CPU $9.50 put for 10 cents.

CPU $9.50 PUT OPTION



The diagram shows that the put option writer has profit potential limited to the premium received ($10). Once the share price falls below $9.50 the put writer's profits begin to erode. This becomes a loss after the share price falls below $9.40. The break-even price of $9.40 is the exercise price less the premium received, and the potential loss is limited only by a fall in the share price to zero.

These four pay-off diagrams are the basis for more advanced option strategies. By combining these positions, more elaborate and complex strategies can be created.

Summary

CALL OPTION TAKER	CALL OPTION WRITER
Characteristics	**Characteristics**
Pays premium	Receives premium
Right to exercise and buy the shares	Obligation to sell shares if exercised
Benefits from rising volatility	Benefits from time decay
Profits from price rising	Profits from price falling or remaining neutral
Limited losses, potentially unlimited gain	Potentially unlimited losses, limited gain
Can SELL before expiry to close out	Can buy back before expiry or before assignment to close out

PUT OPTION TAKER	PUT OPTION WRITER
Characteristics	**Characteristics**
Pays premium	Receives premium
Right to exercise and sell shares	Obligation to buy shares if exercised
Benefits from rising volatility	Benefits from time decay
Profits from price falling	Profits from price rising or remaining neutral
Limited losses, gain is only limited to the share price falling to zero	Losses only limited to the share price falling to zero limited gain
Can SELL before expiry to close out	Can buy back before expiry or before assignment to close out

In this booklet we discuss, in general terms, the risks associated with particular option strategies. It should be remembered that the risk associated with a particular strategy can change over time and in light of market circumstances. Furthermore if you vary the strategy, for example by adding or removing options from your initial position, this can have a dramatic impact on the risk profile of the total position. It could increase your risk, or reduce it. You should give serious consideration to these matters before varying your strategy, and also seek the advice of your broker.

Risks of options trading

Options are not suitable for all investors. In light of the risks associated with trading options, you should use them only if you are confident that you understand them and the risks. Before you invest, you should carefully assess your experience, investment objectives, financial resources and all other relevant considerations, and consult your broker.

Market risks

The market value of options is affected by a range of factors (see the section 'Option pricing fundamentals'). They may fall in price or become worthless on or before expiry. Changes in the price of the underlying may result in changes to the price of an option, but the change can sometimes be in a different direction or of a different magnitude to the change in the price of the underlying.

Options are a wasting asset

Options have an expiry date and therefore a limited life. An option's time value erodes over its life and this accelerates as an option nears expiry. It is important to assess whether the options selected have sufficient time to expiry for your view to be realised.

Effect of 'Leverage' or 'Gearing'

The initial outlay of capital may be small relative to the total contract value with the result that options transactions are 'leveraged' or 'geared'. A relatively small market movement may have a proportionately larger impact on the value of the contract. This may work against you as well as for you. The use of leverage can lead to large losses as well as large gains.

Options writers face potentially unlimited losses

Writing (selling) options may entail considerably greater risk than taking options. The premium received by the writer (seller) is fixed and limited, however the writer may incur losses greater than that amount. The writer who does not own the underlying shares or does not have offsetting positions potentially faces unlimited losses.

Additional margin calls

You may sustain a total loss of margin funds deposited with your broker in relation to your positions. Your liability in relation to a written option contract is not limited to the amount of the margin paid. If the market moves against your position or margins are increased, you may be called upon to pay substantial additional funds on short notice to maintain your position, or upon settlement. If you fail to comply with a request from your broker for additional funds within the time prescribed, they may close out your position and you will be liable for any loss that might result.

Liquidity risk

Market Makers play an important role in the liquidity of the options market. However, their obligations to provide quotes are not unqualified and your ability to trade out of a strategy may depend on your being able to obtain a quote from a Market Maker. The scope of the obligation of Market Makers is described on page 31.

Liquidity and pricing relationships

Market conditions (for example, lack of liquidity) may increase the risk of loss by making it difficult to effect transactions or close out existing positions.

Normal pricing relationships may not exist in certain circumstances, for example, in periods of high buying or selling pressure, high market volatility or lack of liquidity in the underlying security.

Orderly market powers

ASX and ASX Clear have broad powers under the ASX Operating Rules to take action in the interests of maintaining fair and orderly markets or of providing services in a fair and effective way. These powers include the ability to suspend trading, impose position limits or exercise limits and terminate open contracts. In some circumstances, this may affect your positions. Similarly, regulatory authorities such as ASIC may give directions to ASX or ASX Clear, for example to suspend dealings in products.

Trading disputes

You should be aware that all options transactions on ASX are subject to the rules, procedures, and practices of ASX and ASX Clear, and the ASIC Market Integrity Rules. Under the ASX Operating Rules, certain trading disputes between ASX Market Participants (for example errors involving traded prices that do not bear a relationship to fair market or intrinsic value) may lead to ASX cancelling or amending a trade. In these situations the client's consent is not required for the cancellation of a trade.

Trading Facilities

As with all trading facilities and systems, there is the possibility of temporary disruption to, or failure of the systems used in ASX's options market, which may result in your order not being executed according to your instructions or not being executed at all. Your ability to recover certain losses may be subject to limits on liability imposed by the system provider, ASX, ASX Clear or your broker.

You and your broker

This information relates to the relationship between you and your broker (or as they are called, ASX Market Participant) when trading and settling exchange traded options.

1. Your relationship with your broker

Brokers offer both trading and clearing services or they can specialise, with some parts of the trading and settlement process contracted to other brokers.

The different services a broker may offer in trading and settling options are as follows:

- Offer both trading and clearing services.
- Offer only trading services. If so, the broker will execute transactions but will not provide clearing services.
- Offer only clearing services. If so, the broker will settle transactions but will not offer trading services.
- Offer purely advisory or execution services. If so, the broker will not offer clearing or trading services but will only provide advice to clients. They will use another broker to perform these functions.

2. The paperwork: Client Agreement forms

If you are trading through a broker (which offers both trading and clearing services) you will only have to sign one Client Agreement form with that broker. If the broker does not offer both trading and clearing services then you may have to sign more than one Agreement.

A trading broker (which is not also a clearing broker) uses a clearing broker to clear its option trades. You don't have to use the trading broker's clearing broker.

The Client Agreement is a legal contract setting out the terms on which the broker(s) will act for you.

If you use an advice or execution only broker, you must still sign a Client Agreement with a trading broker and a clearing broker.

It is important that you read the Client Agreement carefully before signing it, and retain a copy of the agreement.

ASX does not prescribe a set Client Agreement, however the ASIC Market Integrity Rules specify minimum terms which the Client Agreement must contain. Brokers may have other terms provided they are not inconsistent with the minimum terms.

The involvement of ASX Clear Pty Limited (ASX Clear)

It is important to understand that options registered with the ASX Clear Pty Limited (ASX Clear) are contracts between clearing brokers and ASX Clear (on a principal to principal basis). ASX Clear does not have any contractual relationship with you.

More about the role of ASX Clear is detailed below.

Fees and commissions

ASX does not prescribe the rate of brokerage which brokers may charge. Clients should discuss these rates and how they will be administered directly with their broker(s) prior to signing the Client Agreement(s). ASX and ASX Clear have standard fees (e.g. for trading and exercise), which can be checked by calling ASX or your broker, or referring to **www.asx.com.au/options** (under Costs in the "Trading Information" section).

Confirmations (previously called contract notes) and monthly reports

The trading broker is under a legal obligation to provide you with a confirmation. In practice, the trading broker may arrange for the clearing broker to provide a confirmation to you on behalf of the trading broker. A confirmation must contain information about the trade and the client including (but not limited to):

- the client's details
- the option series traded
- the trade details
- brokerage and fees
- which broker traded
- which broker cleared the trade (if the trading broker is not also the clearer).

You should ensure the details contained in each confirmation are correct and immediately discuss any inaccuracies with your broker.

At the end of each month if you have open positions you will receive a statement listing your positions. Again, it is important that you carefully check these documents and immediately raise any inaccuracies with your broker.

Failing to pay your broker

If you fail to pay your broker, they may have the right to close out contracts opened for you.

Accordingly, it is important that you understand the settlement and margin requirements set out in the Client Agreement(s) before commencing trading.

3. Instructing a broker to trade options

Your investment objectives

Trading brokers are required to understand their client's financial situation in order to assess whether a particular investment (such as options) is suitable for that particular client's situation. The trading broker's adviser will ask you certain questions relating to your financial position and your investment objectives when dealing with you for the first time. The adviser will rely on the information you provide when advising you.

Accredited Derivatives Advisers

You can place an order through any adviser, however under the ASIC Market Integrity Rules, only those individuals who are Accredited Derivatives Advisers can advise retail investors about what orders to place.

What does "Opening" and "Closing" a transaction mean?

When you first buy (or sell) options it is called an opening transaction. If you then sell (or buy) options to cancel existing bought (or sold) open positions, it is called a closing transaction.

For example, if you have just opened an account with ABC Stockbroking Limited and instruct ABC Stockbroking to sell 10 one month Newcrest Mining Limited (NCM) calls with a strike price of $40.00, this is called an opening transaction. If, after one week, you decide you do not wish to remain exposed to having to sell 1,000 NCM underlying shares, you would instruct ABC Stockbroking to buy the 10 NCM one month $40.00 call options as a closing transaction.

It is important that you tell your broker whether you are entering into an options transaction to open or to close.

Once the transaction has been registered, and is entered to close, the initial open contract is cancelled and you have no further rights or obligations arising from these NCM call option contracts (on either the buy or sell sides).

If receiving investment or trading advice about options, you should check with your adviser to ensure they are accredited.

Exercising options

If you wish to exercise rather than close out taken (bought) open contracts you will need to notify your broker of exactly which option contract(s) you want to exercise. The broker will advise you of the latest time it will accept an instruction to exercise contracts in order for them to be exercised that day (T).

Where an exercise instruction is given, ASX Clear will randomly select a writer (seller) in that series of options and on the following day will notify that writer that their written (sold) position has been exercised (i.e. T+1).

Settlement of underlying securities on exercise

Payment for, and the delivery of, underlying securities, on exercise of an open contract are undertaken by the clearing broker. The clearing broker has the legal obligation to provide the confirmation for the settlement of the underlying securities following an exercise. The securities transaction resulting from exercise of an option takes place three business days after exercise (T+3).

Cash or collateral to cover margins

The broker's dealings with ASX Clear are as principal. In other words, ASX Clear's relationship is with the buying and selling broker of an option contract, and not with the end buyer and seller of the contract. The broker is liable for meeting payment, settlement and margin obligations to ASX Clear.

Brokers require option investors to provide money or property to enable the broker to manage the risks associated with the client's dealings in options. Client money and property must be dealt with in accordance with the Corporations Act, the ASIC Market Integrity Rules, the ASX Clear Operating Rules and the Client Agreement.

The broker is generally obliged to hold money on trust, but this does not include money paid to reimburse the broker for payments it has made to ASX Clear in respect of dealings for the client.

The broker may lodge CHESS securities held in the client's name with ASX Clear as collateral for margin obligations relating to options trades for the client. Where this occurs, the securities are held by ASX Clear as a "third party security". ASX Clear is not entitled to use the security to cover the broker's obligations to ASX Clear relating to dealings for other clients or the broker's own dealing. Margining is discussed in more detail on page 15.

4. Role of Market Makers

Market Makers play an important role in the ASX options market. Market Makers compete against one another while trading on their own accounts and at their own risk. Under contractual arrangements with ASX, they are incentivised to achieve benchmark quoting requirements.

The quoting requirements aim to ensure liquidity in the market, so that traders are more easily able to trade into and out of an options position. This also makes it easier to price and value options positions.

Liquidity is assisted when there are multiple Market Makers covering each stock. ETO Market Makers are contracted into one or more Classes (representing each underlying security) in which they must meet ASX's volume and spread requirements with maturities going out one year. This involves quoting buy and sell prices for a certain number of series, and/or responding to quote requests from other Market Participants for prices.

Description of Quoting Requirements for Market Makers

For each option Class in which a Market Maker is responsible there are three quoting benchmark requirements. Market Makers are judged on their performance in making markets in certain series on a Continuous Basis and on making markets in response to Quote Requests in certain series. These benchmarks are measured during the ASX options market trading hours over a calendar month.

1. Minimum of 50% of the required Continuous Quoting benchmark;
2. Minimum of 50% of the required Quote Request Quoting benchmark; and
3. A combined minimum average of 70% on Continuous Quoting and Quote Request Quoting

In practical terms this means that if a Market Maker meets the Quote Request benchmark 61% and the Continuous Quoting benchmark 83% of the time that the options market is trading (calculated over a calendar month) that is a pass. But if a Market Maker meets the Quote Request benchmark 49% of the time and the Continuous Quote benchmark 99% of the time, this would be a fail.

Continuous Quoting Benchmark

The Market Maker is required to provide continuous orders in eighteen series encompassing three calls and three puts in three of the next six expiration months. Each order must be for at least the minimum quantity, and at or within the designated maximum spread requirements.

Quote Request Quoting Benchmark

The Market Maker is required to provide orders on request for all series with up to twelve months expiration in the minimum quantity and at or within the maximum spread.

Minimum Contracts

Each security (Class) over which exchange traded options are traded has been allocated to a category designated by ASX. ASX has four different Class categories. A security is placed in a category by reference to the liquidity of such security. Category 1 stocks are the most highly liquid, Category 3 stocks are the least liquid and Category 4 is for Index options. The category of the security determines the minimum number of contracts for which the Market Maker must quote a price.

Full details of current ASX options market making requirements including benchmarks for incentives are also published on the ASX website.

www.asx.com.au/documents/products/asx_eto_market_making_scheme.pdf

Quoting Requirement Notes

Investors in ASX ETOs should be aware of the following;

- Market Maker monitoring (as to the Market Maker's quoting performance against the benchmark requirements) is calculated over the course of a calendar month not daily.
- Market Maker monitoring (as to the Market Maker's performance against the benchmark requirements) times are: 10.20am – 4.00pm for single stock options; and 10.00am – 4.30pm for index options.
- Market Makers are not required to quote option series with a maturity beyond 12 months, although they may respond to quote requests in these series.
- Regarding single stock option Classes (e.g. BHP & TLS), Market Makers are not required to quote into European style series. They are only required to quote into American style series.

- Market Makers are not required to provide quotes in all series, or at all times, and as such there can be no guarantee that all series will have prices displayed. The ability of Market Makers to provide quotes can be impacted at times by a variety of factors including, company announcements, company corporate actions, liquidity in the underlying and its options, price volatility in the underlying and its options and trading system limitations. While these events may occur infrequently traders and investors should have a contingency plan to deal with an absence of quotes.

5. ASX Clear Pty Limited (ASX Clear)

ASX Clear is a wholly owned subsidiary of ASX. It undertakes the registration and clearing of all options traded on ASX's options market. The points below are some of the key aspects of ASX Clear.

Novation

Through a process called "novation" ASX Clear becomes the counter-party to both the buying and selling brokers of an option contract. That is, ASX Clear becomes the buyer for each sold option and the seller for each bought option. For example: ABC Stockbroking places an order to sell 10 one month ANZ $15.00 call options and XYZ Stockbroking agrees to buy them. On registration of the trade with ASX Clear the original buy and sell trade (called a market contract) is "novated" and replaced by two new contracts (called open contracts) whereby ASX Clear becomes the counterparty buyer against the selling broker and correspondingly, becomes the counterparty seller against the buying broker. This means that the buying and the selling brokers only deal with ASX Clear in the settlement of the open contract and neither broker has to rely on the other to perform under the original market contract.

Adjustments to options series

In certain circumstances where the capital structure or value of the underlying securities over which options exist is changed, ASX may make adjustments to the contract specifications of a class of options.

Adjustments are discussed on page 8 of this booklet.

Position and exercise limits

ASX reserves the right to limit the number of options in a series or class which may be registered with ASX Clear and may also restrict the exercise of open contracts in a class. Both of these limits may be applied in relation to one or more accounts or accounts generally.

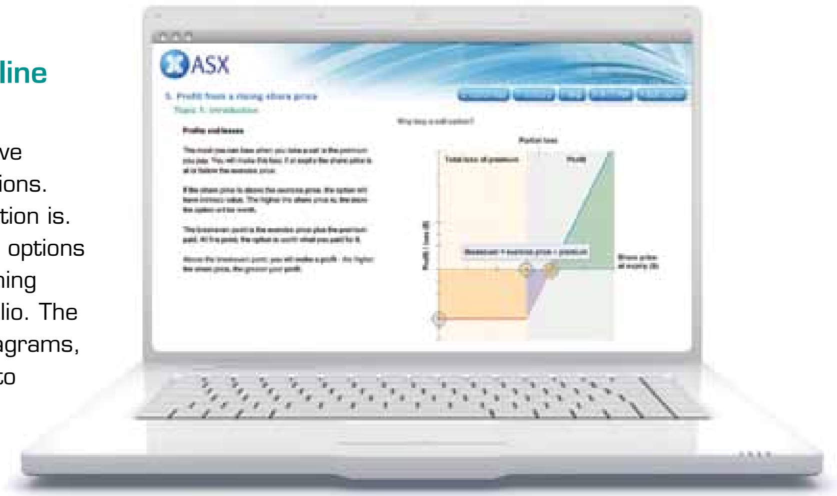
National Guarantee Fund

In certain circumstances you may have a claim against the National Guarantee Fund (NGF). The NGF is administered by the Securities Exchanges Guarantee Corporation Limited and is governed by the Corporations Act and Regulations. The NGF provides you with some protection in the specific circumstances set out in the legislation:

1. if a stock option is exercised, the NGF may provide compensation in certain circumstances if the resulting trades are not completed and
2. if you have entrusted property to your broker in the course of dealing in options, and the broker later becomes insolvent, you may claim on the NGF for any property which has not been returned to you or which has otherwise not been dealt with in accordance with the broker's obligations.

Further information on these potential NGF protections can be found at www.segc.com.au

Options online courses

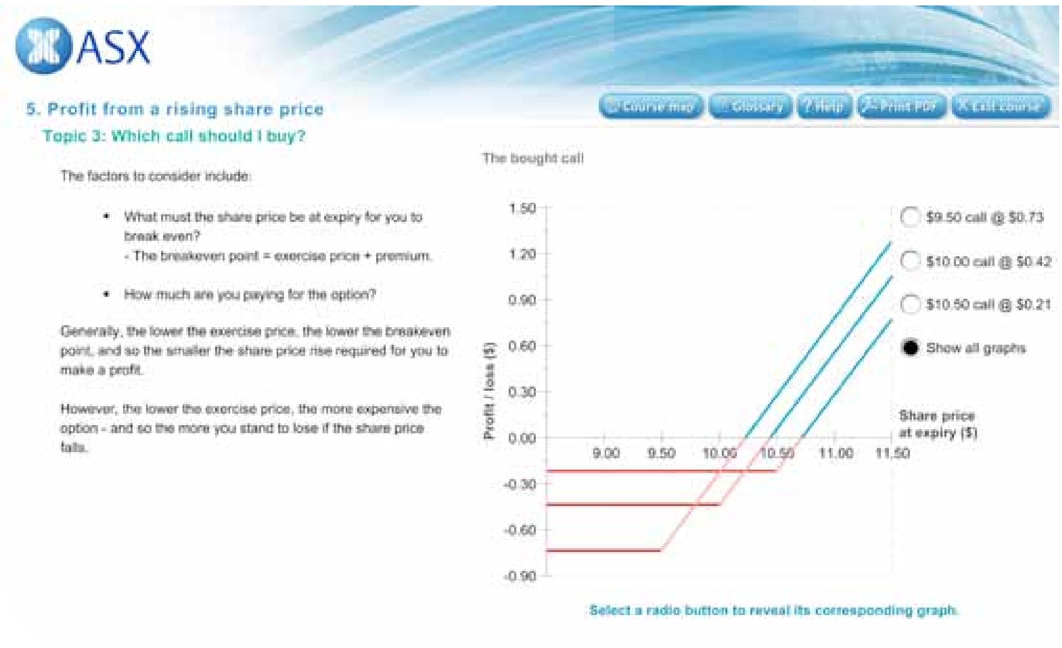


Comprehensive free online options courses

ASX offers a very comprehensive series of online courses on options. Learn the basics of what an option is. Understand the strategies that options can be used for including - earning income and protecting a portfolio. The courses are interactive with diagrams, activities and plenty of quizzes to practice your understanding.

You can access these options online courses any time. Visit **www.asx.com.au/classes**

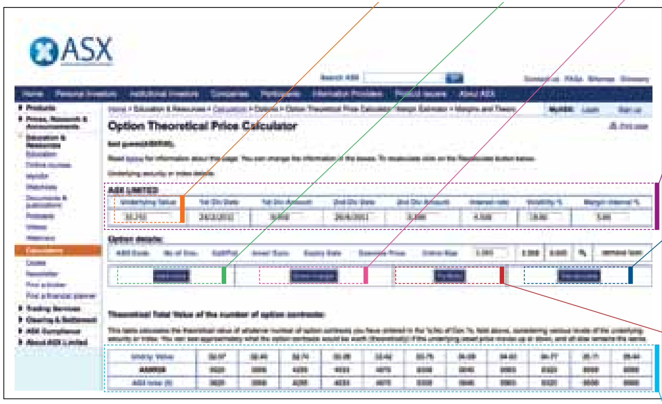
Our online courses help you to understand the ins and outs of options



Option calculators

The ASX website has a range of tools and calculators that you can explore and use as you become more confident with options trading. You can use the tools to draw options payoff diagrams, to calculate theoretical prices and estimate margins.

OPTION THEORETICAL PRICE CALCULATOR RESULTS



Underlying value

Delayed price of underlying share or index plus initial pricing assumptions.

Add more options

Multiple series can be displayed.

Show margin

Use this feature to show margin estimates.

Volatility assumptions

These assumptions can be changed to reflect your market view.

Recalculate

Changing your assumptions will affect the fair value calculation.

Portfolio

Multiple series over different stocks or indices can be displayed.

Theoretical total value

Option fair values shown for different underlying prices.

MARGIN ESTIMATOR RESULTS

Volatility assumptions

These assumptions can be changed to reflect your market view.

Bought option

Sold option

Portfolio

Combined calculation for multiple option series and underlying stocks/index.

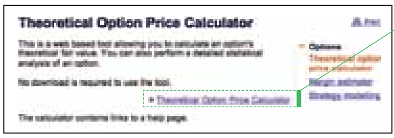
Net margin estimate

Getting to the calculators

All ASX calculators can be found by visiting
www.asx.com.au/calculators

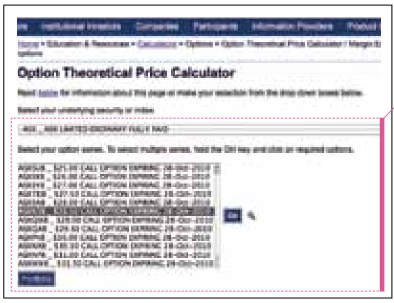
Step 1: Choose calculator

From the ASX calculators & tools page select the theoretical option price calculator



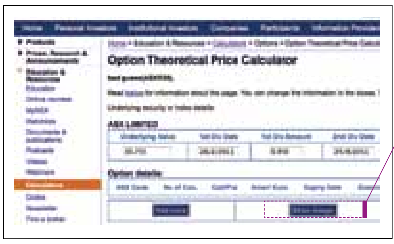
Step 2: Theoretical option price calculator

Click the calculator link



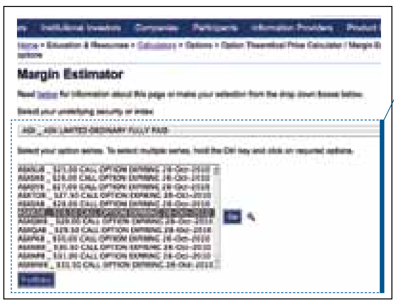
Step 3: Theoretical option price calculator

Choose the stock/index code then the option series you want to price.



Step 4: Margin estimator option

Click the *show margin* button to switch to the margin estimator.



Step 5: Margin estimator

Choose the stock/index code you want followed by the option series

Detailed help section

Scroll to the bottom of the theoretical option price calculator or margin estimator screen for help

Option prices

List of options and their prices

The ASX website has a complete list of the ETOs available over a particular stock. You can check prices and essential trading information.

SEARCH SCREEN

Expiry month

You can choose a particular expiry month.

Puts and calls

You can choose puts, calls or both.

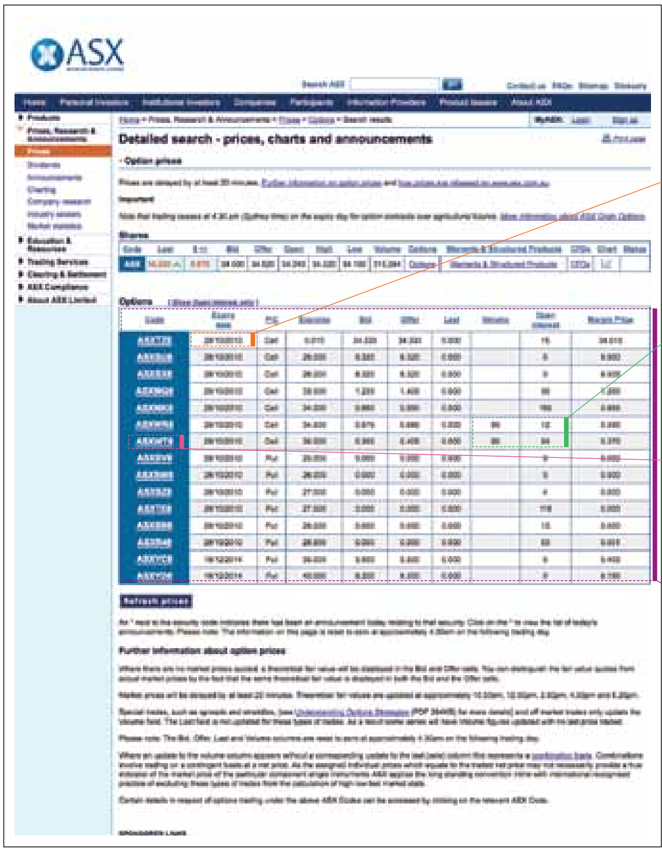
Direct option search

Use this search box if you know exactly which option series you are searching for.

Company search

Use this search box if you do not know the company code.

SEARCH RESULTS SCREEN



Expiry months

Expiry months are sorted with the nearest month first.

At the money

Most trading usually happens in the 'at the money' series.

Contract specifications

Click on the link for the key features of that option series.

Series listing

Series are listed in order of exercise price.

Glossary of terms

Adjustment to options contract
adjustments are made when certain events occur that may affect the value of the underlying securities. Examples of adjustments include changing the number of shares per contract and/or the exercise price of options in the event of a new issue or a reorganisation of capital by the issuer of the underlying securities.

American style
type of option contract which allows the holder to exercise at any time up to and including the expiry day

Annualised return
the return or profit, expressed on an annual basis, the writer of the option contract receives for buying the shares and writing that particular option.

Assignment
the random allocation of an exercise obligation to a writer. This is carried out by ASX Clear.

At-the-money
when the price of the underlying security equals the exercise price of the option.

ASX Clear Pty Limited (ASX Clear)
a wholly owned subsidiary of ASX.

ASX Trade:
The trading platform for cash market equities, exchange traded options, interest rate securities and warrants. ASX Trade is a screen based trading system - brokers have terminals in their office from which they can view the market and execute trades.

Buy and write
the simultaneous purchase of shares and sale of an equivalent number of call option contracts.

Call option
an option contract that entitles the taker (buyer) to buy a fixed number of the underlying securities (usually 100) at a stated price on or before a fixed expiry day.

Class Category
Each security (Class) over which exchange traded options are traded has been allocated to a category designated by ASX. ASX has four different Class categories. A security is placed in a category by reference to the liquidity of such security. Category 1 stocks are the most highly liquid, Category 3 stocks are the least liquid and Category 4 is for Index options.

CHESS
Clearing House Electronic Sub-register System which provides the central register for the clearing and settlement of CHESS approved financial products, the transfer of securities and the registration of transfers.

Class of options
all option contracts covering the same underlying security.

ASX Clearing Participant
means an entity that has been admitted as a Participant under the ASX Clear Operating Rules.

Closing purchase
a transaction in which a party who has previously written (sold) an option liquidates the position as a writer by "taking" an option in the same series as the option previously written.

Closing out
a transaction in which a party who had previously taken (purchased) an option, liquidates the position as a taker by "writing" an option in the same series as the option previously taken or vice versa for a sold position.

Delta
the rate of change of option premium due to a change in price of the underlying securities.

Derivative
an instrument which derives its value from the value of an underlying instrument (such as shares, share price indices, fixed interest securities, commodities, currencies, etc). Options are a type of derivative.

Designated Trading Representative (DTR)
is a staff member of a Trading Participant (that is, a broker that has trading permission in respect of one or more products) who is authorised by ASX to access trading systems.

European style
type of option contract which allows the holder to exercise only on the expiry day

Exercise price
the amount of money which must be paid by the taker (in the case of a call option) or the writer (in the case of a put option) for the transfer of each of the underlying securities upon exercise of the option.

Expiry day
the date on which all unexercised options in a particular series expire.

Fair value
the theoretical value generated using an options pricing model.

Hedge
a transaction which reduces or offsets the risk of a current holding. For example, a put option may act as a hedge for a current holding in the underlying instrument.

Implied volatility
a measure of volatility implied by the current market price of an option.

In-the-money
an option with intrinsic value.

Intrinsic value
the difference between the market value of the underlying securities and the exercise price of the option. It represents the advantage the taker has over the current market price if the option is exercised. Intrinsic value cannot be less than zero.

Long term option
an option with a term to expiry of two or three years from the date the series was first listed.

Margin
an amount calculated by ASX Clear to cover the obligations arising from option contracts.

Market maker
option traders with obligations to provide market liquidity by making bids and offers for nominated option series.

Multiplier
is used when considering index options. The strike price and premium of an index option are usually expressed as points. A multiplier is then applied to give a figure in dollars and cents. For example, the multiplier may be $10 per point, meaning that to buy an index option with a premium of 100 points, an investor would pay $1,000.

Open interest
the number of outstanding contracts in a particular class or series existing in the option market. Also called the "open position".

Opening purchase
a transaction in which a party becomes the taker of an option.

Opening sale
a transaction in which a party becomes the writer of an option.

Out-of-the-money
a call option if the market price of underlying securities is below the exercise price of the option; a put option is out-of-the-money if the market price of the underlying securities is above the exercise price of the options.

Premium
the amount payable by the taker to the writer for entering the option. It is determined through the trading process and represents current market value.

Put option
an option contract that entitles the taker (buyer) to sell a fixed number of underlying securities (usually 100) at a stated price on or before a fixed expiry day.

Random selection
the method by which an exercise of an option is allocated to a writer in that series of options.

Series of options
all contracts of the same class and type having the same expiry day.

Spot month option
an option with a term to expiry of around four weeks from the date the series was first listed.

Taker
the buyer of an option contract.

Time value
the amount investors are willing to pay for the possibility that they could make a profit from their option position. It is influenced by time to expiry, dividends, interest rates, volatility and market expectations.

Underlying securities
the shares or other securities subject to purchase or sale upon exercise of the option.

Volatility
a measure of the expected amount of fluctuation in the price of the particular securities.

Writer
the seller of an option contract.

Option contract specifications

Name	**ASX Equity Options**
Underlying security	Any share approved by ASX under Guidelines for Listing Equity Options
Security code	The first three characters will be the ASX code eg. BHP, the fourth and fifth character and sixth character (if required) will designate the expiry month and series
Contract size	Usually 100 shares per contract. This may be adjusted for rights, bonus issues and other capital adjustment events
Tick size	$0.001 per share = $0.10 (contract size 100 shares) for premium below 1 cent. $0.005 per share = $0.50 (contract size 100 shares) for premium of 1 cent or more.
Exercise style	Usually American, ie. exercisable on or before the expiry date
Exercise price	Varies for each stock
Type	Call and put options
Contract months	As detailed in the ASX expiry calendars
Expiry date	Thursday before last Friday of the settlement month. This may change due to public holidays
Trading hours	Normal trading 10.00am to 4.20pm (Sydney time). Late trading 4.20pm to 5.00pm and overseas trading in accordance with the ASX Operating Rules
Settlement	Physical delivery of underlying security

Contract name	**Index options**
Underlying index	S&P/ASX200 (XJO)
Security code	The first three characters will be the ASX code, eg. XJO, the fourth and fifth character and sixth character (if required) will designate the expiry month and series
Index multiplier	$10. Each index point is equal to $10
Tick size	Quoted as 1 index point
Exercise style	European, ie. exerciseable only on expiry day
Exercise interval	25 Index points
Type	Call and put options
Contract months	First 2 serial months and March quarterly expiry cycle up to 6 quarters ahead
Last trading	Expiry day
Expiry day	12.00pm on the third Thursday of the contract month
Trading hours	6.00am to 5.00pm and 5.30pm to 8.00pm (Sydney time)
Settlement	Cash settled against the Opening Index Price Calculation (OPIC) as calculated on expiry day

For current option contract specifications, please refer to the ASX website at www.asx.com.au/options

Further information

For ASX explanatory booklets on options, please phone 131 279, or download the booklets from the ASX website **www.asx.com.au/options**

Online Classes

Online options classes include interactive exercises that will aid your learning and a quiz at the end of each section to show your progress.

Webinars

Online seminars and recordings of past sessions to aid your learning.

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Understanding ASX Listed CFDs

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For this contract the market is operated by Sydney Futures Exchange Limited ACN 000 943 377

Exchange Centre, 20 Bridge Street Sydney NSW 2000. Telephone 131 279 www.asx.com.au

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Before you begin

This booklet explains what ASX Listed CFDs are and how they can be used. It should be noted that this booklet deals exclusively with ASX Listed CFDs. Information on any other ASX products is available by calling 131 ASX (279) or visiting www.asx.com.au

To assist you in your understanding of ASX Listed CFDs there is a Glossary of Terms on page 37. To increase your knowledge before trading ASX Listed CFDs, you may find it valuable to explore the ASX Listed CFD online education courses and test your knowledge and skills on the ASX CFD Trading Simulator (both available on www.asx.com.au/cfd)

Trading of ASX Listed CFDs involves risk. Transactions should only be entered into by traders and investors who understand the nature and extent of their rights, obligations and risks.

ASX Listed CFDs are traded on the SYCOM® trading platform and operate under the SFE (Sydney Futures Exchange) Operating Rules.

What is a CFD?

A CFD (Contract for Difference) is an agreement between a buyer and a seller to exchange the difference in value of a particular instrument between when the contract is opened and when it is closed. The difference is determined by reference to an 'underlying' – a share, index, FX rate or commodity and the period over which the CFD is held.

CFDs are leveraged instruments. This means that you are fully exposed to price movements of the underlying instrument without having to pay the full price of that instrument. CFDs therefore offer the potential to make a higher return from a smaller initial outlay than investing directly in the underlying security.

Leverage, however, usually involves more risks than a direct investment in the underlying. It is important to understand that this effect may work against as well as for traders – the use of leverage can lead to large losses as well as large gains.

ASX Listed CFDs include those listed over a range of ASX listed stocks, key global equity indices, foreign exchange currencies and commodities. A list of the full suite of ASX Listed CFDs is available on the ASX website www.asx.com.au/cfd.

Advantages of trading CFDs

CFDs have been used by professional investors for over twenty years and emerged first as an over-the-counter (OTC) product. CFD related trading and hedging is one of the fastest growing areas in the Australian and European derivatives markets.

This popularity has arisen from the following main features:

- **Leverage:** CFDs enable you to obtain full exposure to a share, commodity, FX cross or index for a fraction of the price of buying the underlying. CFDs require only a small initial margin to secure a trade.
- **The ability to go 'short':** CFDs allow traders to take advantage of falls in prices. This means that traders can profit when prices are going down, not just up. CFDs are thus an excellent trading and hedging tool.
- **Simplicity**
  - *Non-expiry:* Most CFDs do not have an expiry. They are perpetual in nature. For CFDs that do not expire, the only way to close a position is to trade the opposite side of the position.
  - *The CFD mirrors the price of the underlying:* Unlike other forms of derivatives (i.e. options and futures), cashflows such as carry costs and dividends are not reflected in the price of a CFD. Instead, cashflows are paid whilst the position is open, allowing CFD prices to track the underlying instrument rather than trade at a discount or premium, as can be the case in other forms of derivatives.

ASX Listed CFDs include the key features of over-the-counter CFDs augmented with the fundamental strengths of exchange-based trading.

Benefits of ASX Listed CFDs

Retail traders and investors can be confident trading ASX Listed CFDs because of the unique attributes of exchange traded markets. These include:

Market Independence

ASX is required under the Corporations Act to ensure that its markets are fair, orderly and transparent. ASX ensures a sound operational and front-line regulatory environment for its exchange-traded markets and clearing and settlement facilities, providing effective systems and infrastructure together with services designed to maintain and enhance the integrity, efficiency and effectiveness of its trading, clearing and settlement facilities. For the ASX Listed CFD trader, this means being able to participate in the market with confidence.

As the central market operator, ASX is independent of the parties with whom you are receiving advice and dealing through enabling it to act fairly and impartially. This separation of responsibility between broker and exchange also provides customers with choice as to whom they wish to execute their business through.

Having a central market also means there is one standard contract specification for all ASX Listed CFDs, not a different product depending on who you execute through. It's a fundamentally better CFD market.

Transparency

Transparency is a key ingredient in a well informed market. ASX reports on all ASX Listed CFDs transacted, open positions, bid, offers and their volumes. In fact, all the market information you are used to seeing from the ASX. This means a fundamentally better informed market.

ASX Listed CFDs are traded in the same way as other ASX traded contracts:

- All prices are formed in a fully transparent manner in ASX's CFD central market order book. Each trader's order is combined in the ASX Listed CFD central market order book with those from other market participants, including market makers, and becomes an integral part of the price discovery process.
- All trades are executed on a strict price/time priority. Price/time priority means the first person to enter the best price is traded against first. This results in everyone in the central market order book being treated fairly and consistently, no matter how big or small a trader you are.
- Importantly, while prices are transparent, the individual trader remains anonymous, which minimises market impact costs (especially those related to others identifying an individual's trading patterns and trading ahead of him/her).
- Anyone can place into the market a better bid or offer, as is the case in all exchange based markets. No-one is forced to accept the price offered in the market. However, once an order is executed, you are committed to settle the trade. All prices in the market are firm in the volume indicated.
- The ASX Listed CFD central market order book will include orders from market makers. Their activities help ensure the ASX Listed CFD market has competitive prices and deep liquidity.

Risk Management

ASX Listed CFDs trade in a centrally cleared marketplace. The Clearing House (SFE Clearing Corporation – SFECC) provides central counterparty clearing for the ASX Listed CFD market. This involves SFECC managing risks to ensure that the interests of its Participants and clients are protected and that the integrity of the marketplace is maintained.

Through a process called novation, SFE Clearing becomes the principal to all trades and liable to perform against all contracts to which it is a party and effectively 'guarantees' performance to other Clearing Participants. Novation and thus the clearing guarantee become effective on registration of the contract between a buyer and seller.

This exposure is then managed and the clearing guarantee put in place in a number of ways. Firstly this is achieved by the collection of the various margins as discussed later in this booklet. The collection of these moneys protects against extreme price movements and prevents participants from accumulating large unpaid losses that could potentially impact on the financial position of other market users. This is a key component that differentiates exchange-traded markets from over-the-counter (OTC) markets, where such a strict margining regime is not in place.

The ASX Listed CFD market also has access to the Clearing Guarantee Fund for use in the event of default of one or more Clearing Participants. The Clearing Guarantee Fund represents a significant component of the overall capital adequacy of SFECC.

Trading in the ASX Listed CFD Market

When trading ASX Listed CFDs, your order is entered directly via a Participant into the ASX Listed CFD central market order book. This order book is available for the market to see. All orders are executed on a strict price/time priority. This means that the first order with the best bid or offer price is always executed first. Trading in the ASX Listed CFD central market order book also ensures "client orders" are always given priority over a broker's "house orders".

In contrast, customers executing CFDs through an OTC provider, do not have their orders in the ASX Listed CFD central market order book. These orders are transacted with the OTC CFD counterparty (typically described as a CFD Provider). The customer's order is not protected by the ASX's price/time priority or client order precedence rules.

.....the key features of existing CFDs augmented with the fundamental strengths of exchange-based trading.

Key features of ASX Listed CFDs

Product Range

ASX Listed CFDs include CFDs listed over:

- The top 50 stocks listed on ASX;
- Key global equity indices;
- A range of major foreign currencies and crosses; and
- Selected commodities.

A full list of current ASX Listed CFDs is always available on www.asx.com.au/cfd.

Long and Short Positions

With an ASX Listed CFD it is possible to go both 'long' (to buy) and 'short' (to sell).

If you take a long position, you are anticipating a rise in the value of the underlying instrument and would experience a loss if the value fell.

If you take a short position, you are anticipating a fall in the value of the underlying instrument. If the value actually rose, you would experience a loss.

In contrast to shares, where a trader usually buys first and then sells later, with an ASX Listed CFD it is possible to firstly go short (or sell) to exploit falling prices and buy back (or go long) later.

Daily Settlement

At the end of each trading day, all positions in ASX Listed CFDs are 'marked to market' using the Daily Settlement Price (DSP).

The DSP for ASX Equity, Index and Commodity CFDs is determined by ASX and is generally[1] equal to that of the closing price of the underlying instrument – this being that quoted by the underlying instrument owner (e.g. ASX, the index price provider, etc) or an independent data source such as Reuters (e.g. in the case of ASX Gold and FX CFDs).

For details on the methodology or data source used to create the DSP for ASX Listed CFDs, go to www.asx.com.au/cfd

Expiry

ASX Listed CFDs do not expire. They are perpetual in nature. The only way to close a position is to trade the opposite side of your position.

There are limited circumstances in which ASX may expire and delist contracts. This is only likely to occur where the contract has open positions in the following situations:

- there is a lack of liquidity in the contract;
- the underlying has been delisted; or
- access to the data of the underlying instrument becomes permanently unavailable (for example, where an index provider ceases to calculate an index or terminates the index provider agreement with ASX).

If the above action were to be taken, ASX would provide as much notice to the market as possible to enable the closing out of open positions.

Corporate Actions

Any position in an ASX Equity CFD is adjusted to reflect the same economic effect as the underlying security on which the ASX Listed CFD is based. This means that whenever there is a corporate action – such as a share split, capital repayment, special dividend, bonus issue, takeover etc – the same impact will be reflected back into the ASX Listed CFD position.

ASX Index CFDs track indexes, which are adjusted by the index provider to reflect all corporate actions.

1 In exceptional circumstances where the underlying price is not immediately available, ASX may choose alternate methods to establish the Daily Settlement Price.

Profit and Loss Situations

The table below sets out profit and loss situations when trading ASX Listed CFDs.

PROFITABLE TRADES	UNPROFITABLE TRADES
Buy low – Sell high	Buy high – Sell low
Sell high – Buy low	Sell low – Buy high

Trading Hours

Trading hours vary for the different types of ASX Listed CFDs available. Up-to-date trading hours for all ASX Listed CFDs are available on **www.asx.com.au/cfd**

Exchange for Physical

Traders can convert their ASX Equity CFD position into stock. This conversion is allowed through the Exchange for Physical (EFP) facility. The EFP facility enables you to complete both sides of the conversion at a set price eliminating the risk of a price movement before you complete the transaction. To undertake an EFP, you need to speak to your ASX Listed CFD adviser.

Further details of the Exchange for Physical (EFP) are available on **www.asx.com.au/cfd**

Parties to an ASX Listed CFD Transaction

Traders of ASX Listed CFDs can either:

- Buy – undertake a long transaction; or
- Sell – undertake a short transaction.

When you first buy (or sell) an ASX Listed CFD it is called an opening transaction. If you then sell (or buy) an ASX Listed CFD to cancel existing bought (or sold) open positions, it is called a closing transaction. The market automatically recognises if a trade is an opening or closing trade.

Trading on SYCOM® is anonymous. This means the identity of the buyer or seller is unknown to the market.

After the trade occurs, the relationship between the two original contracting parties is broken with the SFECC becoming the counterparty for both buyer and seller. This process, called novation, is a key tool for managing counterparty risk and is a primary benefit of trading "on exchange".

Tracking Positions and Costs

When deciding whether to trade ASX Listed CFDs, there a number of factors to be aware of including:

- The costs of trading ASX Listed CFDs;
- How to track the value of your ASX Listed CFD positions; and
- The requirement to pay margins and other cashflows relating to holding an ASX Listed CFD position.

Costs of trading – Brokerage

Brokerage is charged by your ASX Listed CFD broker and is typically either a flat rate per contract or trade or expressed as a percentage based on the full value of the trade.

How to track ASX Listed CFDs

ASX Listed CFD codes and prices are available in the ASX Listed CFDs section of the ASX website, **www.asx.com.au/cfd**. You can set up watch lists and portfolios to assist in the monitoring of positions. Many brokers also offer portfolio management systems that enable you to manage your positions and trades on-line.

The ASX website – **www.asx.com.au** – has pricing and other information about the underlying securities and indices.

Current ASX Listed CFD prices are also available from all major information vendors such as Reuters, Bloomberg or Iress.

Price formation

What keeps the ASX Listed CFD price in line with the underlying price?

The price of an ASX Listed CFD is closely related to the price of its underlying instrument. It is also closely related to the price of other exchange-traded derivative products, such as futures and options, based on the same underlying security.

There are three factors that ensure this outcome:

- **Daily Settlement Price:** The Daily Settlement Price for ASX Listed CFDs is the same price as the closing price for the underlying instrument or index. For example, the ASX closing share prices resulting from the closing single price auction at 4.10pm (AEST) determine the Daily Settlement Prices used for ASX Equity CFDs. This ensures both markets close at parity. Daily variation margins for ASX Listed CFDs are therefore based on the closing price of the underlying instrument or index.

- **Arbitrage:** During the trading period, the arbitrage between the ASX Listed CFD and underlying instrument will ensure both markets remain at or close to parity. This arbitrage is based on the opportunity for traders to profit whenever the two markets are out of line. For example, assume the price of BHP Billiton shares are trading at $42.00 bid and $42.05 offered. If the ASX BHP Billiton CFD is offered below the bid on the ASX ($42.00), a trader will profit from buying the ASX BHP Billiton CFD at the lower price and selling the share at $42.00.

  The ASX has appointed designated price makers (DPMs) to provide prices in the ASX Listed CFD market. DPMs and other sophisticated market participants can be expected to utilise arbitrage to ensure that prices for the ASX Listed CFDs do not 'get out of line' with the underlying instrument or index.

- **Price competition:** DPMs compete to trade as this determines any incentive paid to them by ASX. DPMs provide users of the market with enhanced liquidity and tighter bid and offer spreads.

- **Contract Design and Cashflows:** ASX Listed CFDs include cashflows (Contract Interest, Dividend Cashflow, etc.) for all positions held. This has the economic effect of making the ASX Listed CFD position identical to holding a leveraged spot position in the underlying instrument.

Margins

Margins are designed to protect the financial security of the market by ensuring that you can meet your obligations. If you trade an ASX Listed CFD, you have a potential obligation to the market because the position may move against you.

After your order is executed, the ASX Listed CFD trade is registered with SFECC. This process, called novation, results in SFECC becoming the counterparty to both the buyer and the seller.

Each day, SFECC calculates the margin necessary to ensure you can meet your trading obligations on that day. (Note that SFECC's relationship is with your broker's Clearing Participant and not directly with you.)

The total margin for ASX Listed CFDs is made up of two components:

- Initial Margins
- Variation Margins

Initial Margins

Initial Margins apply to both buyers and sellers upon opening a contract. They protect SFECC from risk resulting from a negative movement in the value of a position as a result of a change in market prices. The Initial Margin is typically set at a level designed to cover reasonably foreseeable losses on a position between the close of business on one day and the next. The amount of Initial Margin for each contract varies according to the price volatility of the underlying, but typically is about 5% to 10% of the value of the underlying instrument described by the contract.

ASX publishes the Initial Margin rates for all ASX Listed CFDs. You can find these rates on the ASX website at www.asx.com.au/cfd.

Initial Margins are returned when the contract is closed out.

Variation Margins

In addition to the Initial Margins required to open contracts, any adverse price movements in the market must be covered by further payments, known as variation margins. The Variation Margin is based on the end of day marked to market revaluation of an ASX Listed CFD position.

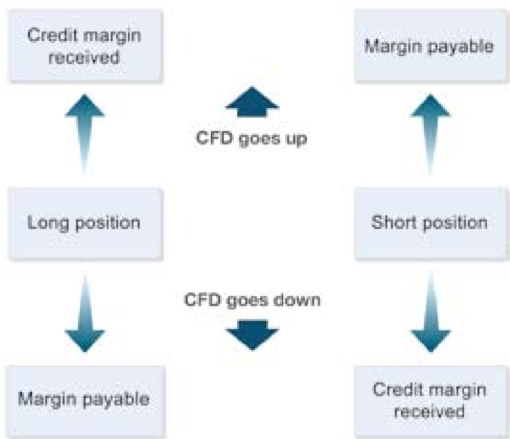
For example, if you have a long position and the price falls then you are required to pay a Variation Margin large enough to cover the adverse movement in the value of the position.

On the other hand, if you have a short position and the price falls, you would receive a Variation Margin equal to the positive movement in the value of the position.

Failure to meet (pay) a Variation Margin call can lead to the position being compulsorily closed out. The position holder is obligated to pay for any shortfall in funds if Variation and Initial Margins are insufficient to cover the shortfall.

Further discussion and examples on Variation Margins can be found on the ASX website at www.asx.com.au/cfd (under Online Education)

Margin implications



How margins are met

Your broker will require you to provide collateral to cover your margin obligations. Note that minimum margin requirements are set by SFECC, but higher margin requirements may be imposed by brokers and clearers.

Payment of margins

Margins are recalculated on a daily basis to ensure an adequate level of margin cover is maintained. However, in exceptional circumstances, margins may be recalculated intra-day. This means that you may have to pay more if the market moves against you. If the market moves in your favour, margins may fall.

Settlement requirements for trading ASX Listed CFDs are strict. You must pay margin calls by the time stated in your Client Agreement. This is usually within 24 hours of being advised of the margin call by your broker. If you do not pay in time, your broker can take action to close out your positions without further reference to you.

A detailed explanation of the ASX Listed CFD margining process can be found in the online education courses on the ASX website at **www.asx.com.au/cfd**.

Cashflows

Unlike other forms of derivatives (i.e. options and futures) cashflows such as carry costs and dividends are not reflected in the price of an ASX Listed CFD. Instead cashflows are paid whilst the position is open, allowing ASX Listed CFD prices to track the underlying security rather than trade at a discount or premium, as can be the case with other types of derivatives.

ASX Listed CFDs have 5 distinctive cashflows that impact on holders of an open position:

- Contract Interest
- Open Interest Charge (OIC)
- Dividend Cashflow
- Franking Credit Cashflow (ASX Equity CFDs only)
- Yield Cashflow (ASX FX CFDs only)

	HOLDERS OF LONG POSITIONS	HOLDERS OF SHORT POSITIONS
Contract Interest	Pay	Receive
Open Interest Charge	Pay	Pay
Dividend Cashflow	Receive	Pay
Franking Credit Cashflow	Receive	Pay
Yield Cashflow	Receive	Pay

Contract Interest (CI)

Contract Interest is paid daily by holders of long positions and received daily by holders of short positions. Contract Interest payable on positions held on Friday night will also include Saturday and Sunday (e.g. 3 days interest).

The Contract Interest Rate is fixed to a benchmark rate (Contract Interest Rate) in the contract currency of the ASX Listed CFD. The Contract Interest Rate is varied whenever the relevant benchmark rate is varied.

It is important to note that the contract interest reflects the cash rate in the currency applicable for a particular ASX Listed CFD. Contract Interest calculation examples are included later in this brochure (See page 18).

ASX LISTED CFD	CONTRACT DENOMINATION AND CONTRACT CURRENCY	BENCHMARK CONTRACT INTEREST RATE
ASX Equity CFD ASX S&P/ASX 200[3] CFD	AUD	Target overnight cash rate as published daily by Reserve Bank of Australia
ASX DAX®[4] CFD ASX Dow Jones EURO STOXX 50®[5] CFD ASX AUD/EUR CFD	EUR	EURO overnight Index Average (EONIA) as published daily by Reuters
ASX Gold CFD ASX Oil CFD ASX DJIA[6] CFD ASX NASDAQ[7] CFD ASX AUD/USD CFD ASX EUR/USD CFD ASX NZD/USD CFD	USD	Federal Funds Rate as published daily by the Federal Reserve Bank of New York
ASX FTSE[8] CFD	GBP	Sterling Overnight Index Average (SONIA) as published by the British Wholesale Markets Brokers' Association (WMBA)
ASX NZD/JPY CFD ASX AUD/JPY CFD ASX USD/JPY CFD	JPY	Overnight Target Rate as published daily by the Bank of Japan
ASX AUD/NZD CFD	NZD	Official Overnight Cash Rate (ONCR) as published daily by the Reserve Bank of New Zealand

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Note: the additional ASX Index CFD licence agreement disclaimers are set out on pages 39–40.

Open Interest Charge (OIC)

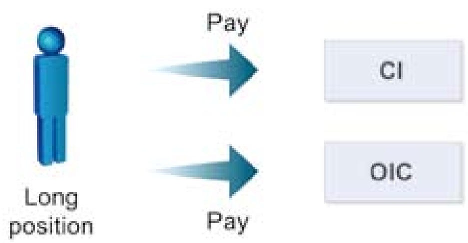
The Open Interest Charge (OIC) is the daily cost charged by the ASX for holding an open position in an ASX Listed CFD.

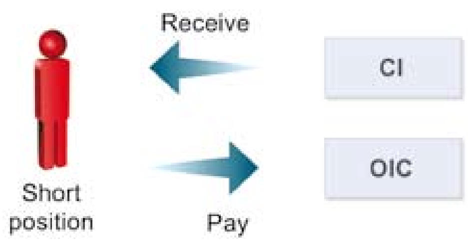
The OIC rate is set by the ASX and is paid daily by both long and short positions.

The OIC can be changed by ASX in response to market circumstances. The rate can move up and down but is expected to be adjusted only infrequently.

Traders will be able to view current OIC rates and any upcoming changes to the OIC on the ASX website at www.asx.com.au/cfd.

OIC calculation examples are included later in this brochure (on page 18).





Dividend Cashflow

ASX Listed CFDs replicate the dividends or earning rate paid by the underlying instrument.

ASX Equity CFDs

Long ASX Equity CFD positions receive the Dividend Cashflow and short positions pay the Dividend Cashflow. Positions are calculated at the close of trading on the last day cum dividend. The Dividend Cashflow is payable and received the following day (the first day ex dividend).

ASX Index CFDs

When a share in an index goes ex-dividend, the ASX Index CFD recognises the dividend and generates a Dividend Cashflow. This cashflow mirrors what would have been paid or received had someone held the physical share as part of the overall index. As with ASX Equity CFDs, longs receive and shorts pay the Dividend Cashflow.

Note: The timing for payment/receipt of the Dividend Cashflow is different to that of the underlying shares. In shares, payment of dividends occurs some weeks after the ex-date. In ASX Listed CFDs the Dividend Cashflow is paid or received on the ex-date.

Franking Credit Cashflow

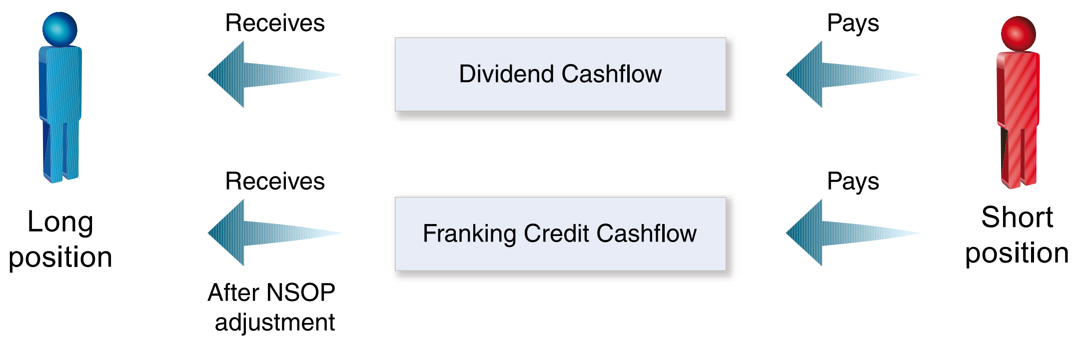
The Franking Credit Cashflow (FCC) applies only to ASX Equity CFDs. With equities, dividends may have a franking credit associated with them of a value which, for ASX Equity CFDs, is described as the FCC. The FCC represents the monetary equivalent of the declared franking credit. Similar to the Dividend Cashflow, holders of short positions pay the FCC whilst holders of long positions receive the FCC.

Note: The FCC paid by holders of short positions and the FCC received by holders of long positions may differ depending on the percentage of net short open positions (NSOP) held by Designated Price Makers (DPMs) at the close of trading on the last cum date.

The NSOP is determined by the Exchange calculating the net open position of DPMs and expressing it as a percentage of the market's total short open position. If the net DPM position is long, holders of long positions receive 100% of the FCC.
If the DPM net position is short, the FCC is discounted by the NSOP percentage.

For example, if the net DPM short open position is 30% then holders of long positions receive the FCC (short) discounted by 30%.

The net short open position of the DPMs at the close of each trading day for each ASX Equity CFD is available on the ASX website at **www.asx.com.au/cfd**.



Note: FCC is paid/received on the day following the ex-date.

Yield Cashflow

ASX FX CFDs replicate the relationship between the two currencies that make up the contract. As such, a characteristic of ASX FX CFDs is that there are two different currencies involved.

Margins, Contract Interest and the OIC are denominated in the contract currency. The Yield Cashflow is denominated in the yield currency.

For example, in the ASX AUD/USD CFD, the contract currency is the USD. This means margins, Contract Interest and OIC are all denominated in USD. The Yield Cashflow is denominated in AUD.

Holders of long positions receive the Yield Cashflow. Holders of short positions pay the Yield Cashflow.

The Yield Cashflow is paid and received the next trading day, based on positions held at the previous day's close. The interest rate used to calculate the Yield Cashflow is based on the applicable Benchmark Contract Interest Rate of the currency applicable for the Yield Cashflow.

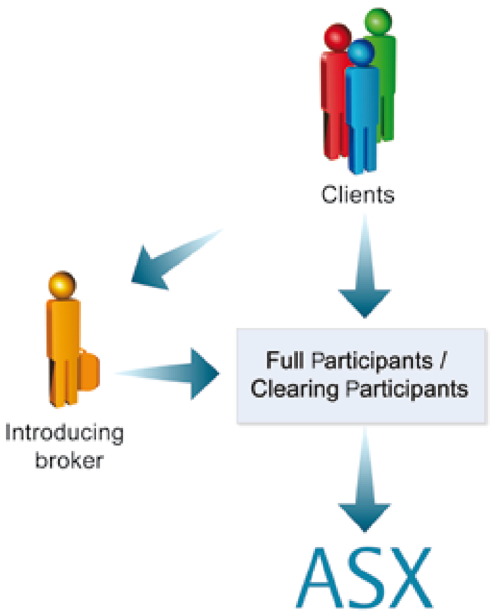
ASX LISTED CFD	YIELD CASHFLOW CURRENCY	BENCHMARK CONTRACT INTEREST RATE APPLICABLE FOR THE YIELD CURRENCY
AUD/USD AUD/NZD AUD/JPY AUD/EUR	AUD	Target overnight cash rate as published daily by Reserve Bank of Australia
NZD/JPY NZD/USD	NZD	Official Overnight Cash Rate (ONCR) as published daily by the Reserve Bank of New Zealand
EUR/USD	EUR	EURO overnight Index Average (EONIA) published daily by Reuters
USD/JPY	USD	Federal Funds Rate as published daily by the Federal Reserve Bank of New York

Yield Cashflow calculation examples are included later in this brochure (See page 27).

Trading ASX Listed CFDs

Where can I trade ASX Listed CFDs?

ASX Listed CFDs are traded on the Sydney Futures Exchange's SYCOM® trading platform and operate under the SFE (Sydney Futures Exchange) Operating Rules.



Access to products listed on SYCOM® is facilitated by SFE Full Participants. Full Participants provide services to end-customers and introducing brokers who themselves have end-customers. Full Participants can provide customers with either direct market access (electronic) to SYCOM® or through a dedicated SYCOM® Workstation.

As with investing in shares, traders need to first decide whether they wish to receive trading advice or not.

ASX accredits advisers from firms offering ASX Listed CFDs to end customers. This involves the adviser undertaking training and passing an examination created by ASX.

Product range

ASX EQUITY CFDs
Listed over the top 50 stocks on the ASX

ASX INDEX CFDs
ASX S&P/ASX 200 CFD
ASX DJIA CFD
ASX NASDAQ CFD
ASX FTSE CFD
ASX DAX® CFD
ASX DJ EURO STOXX 50® CFD

ASX FX CFDs
ASX AUD/USD CFD
ASX AUD/EUR CFD
ASX AUD/JPY CFD
ASX AUD/NZD CFD
ASX EUR/USD CFD
ASX USD/JPY CFD
ASX NZD/USD CFD
ASX NZD/JPY CFD

ASX COMMODITY CFDs
ASX Gold CFD
ASX Oil CFD

Additional ASX Listed CFDs will be listed in the future. Please refer to **www.asx.com.au/cfd** for the ASX Listed CFDs currently listed.

For a full list of parties (SFE Full Participants and introducing brokers) that are accredited and able to provide access to ASX Listed CFDs, visit the ASX website.

ASX Equity CFDs

ASX Equity CFDs give you access to trade a CFD over Australia's most actively traded shares. The contract value of one (1) ASX Equity CFD equals the price quoted in cents. For example, if the ASX Telstra CFD is trading at 450, then the value of one ASX Telstra CFD is AUD4.50.

For as little as the equivalent of 5% Initial Margin, you can gain 20 times leveraged exposure to the most actively traded shares listed on the ASX.

When trading ASX Equity CFDs, a number of factors affect the profitability of your position. These include:

- movements in the price of the ASX Equity CFD
- cashflows
- margins, and
- brokerage.

The examples on the following pages track both a long and short position over a number of days, illustrating the effect price movements, cashflows and margins have on an ASX Equity CFD position. Please note brokerage charged by and payable to your broker has not been taken into account in the examples that follow.

Long Example

Harry is a 'directional trader' who generally holds positions for no longer than 4 days. He believes that resource prices will be strong over the next few days and thinks XYZ Resources will rally off the back of them. Harry has $100,000 deposited with his broker and wants to expose 5% of his cash to this position.

ASX XYZ CFDs have an Initial Margin of $1.30 per contract or approximately 5%. With $5000, therefore, Harry can gain exposure to $100,000 ($5,000/5%), as the $5,000 he would like to expose is sufficient to pay his Initial Margin on the position.

ASX XYZ CFDs are currently trading at 2599 bid – 2600 offer (eg: $25.99-26.00).

Harry places an order to buy 3,846 ASX XYZ CFDs at 2600 = $99,996 value.

After the first day Harry must pay an Initial Margin, Contract Interest, Open Interest and is exposed to Variation Margins.

On subsequent days Harry is only subjected to Contract Interest, Open Interest and Variation Margins.

Note: If XYZ went ex-dividend during this period then Harry would receive the Dividend and any Franking Credit Cashflows.

ASX EQUITY CFD TRADE PRICE	$26.00			$27.00
Trade	**Buy 3,846**			**Sell 3,846**
	Day 1	**Day 2**	**Day 3**	**Day 4**
Daily Settlement Price	**$26.50**	**$26.80**	**$25.80**	**$27.00**
Initial Margin				
(1) # of contracts	3,846			
(2) Trade Price	$26.00			
(3) Initial Value (1x2)	$99,996			
(4) Margin	$1.30 or 5%			
Initial Margin (1x4) or (3x4)	-$4,999.80			+$4,999.80
[1]Contract Interest				
(1) # of contracts	3,846	3,846	3,846	
(2) Daily Settlement Price	$26.50	$26.80	$25.80	
(3) Position Value (1x2)	$101,919	$103,072.80	$99,226.80	
(4) CI/ # of days	7.25%/365 days	7.25%/365 days	7.25%/365 days	
Contract Interest (3x4)	-$20.24	-$20.47	-$19.71	
[1]Open Interest (OIC)				
(1) # of contracts	3,846	3,846	3,846	
(2) Daily Settlement Price	$26.50	$26.80	$25.80	
(3) Position Value (1x2)	$101,919	$103,072.80	$99,226.80	
(4) OIC/ # of days	1.5%/365 days	1.5%/365 days	1.5%/36 days	
Open Interest Charge (3x4)	-$4.19	-$4.24	-$4.08	
Variation Margin				
(1) Closing	$26.50	$26.80	$25.80	
(2) Opening	$26.00	$26.50	$26.80	
(3) Difference (1-2)	$0.50	$0.30	-$1.00	
(4) # of contracts	3,846	3,846	3,846	
Variation Margin(3x4)	$1,923.00	$1,153.80	-$3,846.00	
Cumulative Profit/Loss				
Gross Profit	$1,923.00	$3,076.80	-$769.20	[2]$3,846.00
Contract Interest	-$20.24	-$40.72	-$60.43	-$60.43
Open Interest	-$4.19	-$8.43	-$12.51	-$12.51
Net Profit/Loss	$1,898.57	$3,027.66	-$842.13	$3,773.07

1 Some brokers aggregate Contract Interest and Open Interest and give them a generic title such as funding cost.

2 $3,846 is the difference between the price when the ASX Listed CFDs were initially purchased ($26.00) and the price when the CFDs were sold ($27.00) multiplied by the number of CFDs traded (3,846)

Short Example

Jessica is a 'directional trader' who generally holds positions for no longer than 4 days. She believes that ABC Bank is overpriced and will fall over the next few days. Jessica has $100,000 deposited with her broker and wants to expose 5% of her cash to this position.

ASX ABC CFDs have an Initial Margin of $2.50 per contract or approximately 5%. With $5000, therefore, Jessica can gain exposure to $100,000 (5,000/5%), as the $5,000 is sufficient to pay her Initial Margin on the position.

ASX ABC CFDs are currently trading at 5000 bid – 5001 offer.

Jessica places an order to sell 2,000 ASX ABC CFDs at $50.00 = $100,000 value.

After the first day Jessica must pay an Initial Margin and the Open Interest Charge. She is exposed to Variation Margins, but receives Contract Interest. On subsequent days Jessica continues to pay the Open Interest Charge, any negative Variation Margins and continues to receive Contract Interest.

Note: If ABC went ex-dividend during this period then Jessica would pay Dividend and any Franking Credit Cashflow.

ASX EQUITY CFD TRADE PRICE	$50.00			$48.00
Trade	**Sell 2,000**			**Buy 2,000**
	Day 1	**Day 2**	**Day 3**	**Day 4**
Daily Settlement Price	**$51.00**	**$49.50**	**$49.00**	**$48.00**
Initial Margin				
(1) # of contracts	2,000			
(2) Trade Price	50.00			
(3) Initial Value (1x2)	$100,000			
(4) Margin	2.50 or 5%			
Initial Margin (1x4) or (3x4)	-$5,000.00	+$5,000.00		
[1]Contract Interest				
(1) # of contracts	2,000	2,000	2,000	
(2) Daily Settlement Price	$51.00	$49.50	$49.00	
(3) Position Value (1x2)	$102,000	$99,000.00	$98,000.00	
(4) CI/ # of days	7.25%/365 days	7.25%/365 days	7.25%/365 days	
Contract Interest (3x4)	$20.26	$19.66	$19.47	
[1]Open Interest (OIC)				
(1) # of contracts	2,000	2,000	2,000	
(2) Daily Settlement Price	$51.00	$49.50	$49.00	
(3) Position Value (1x2)	$102,000	$99,000.00	$98,000.00	
(4) OIC/ # of days	1.5%/365 days	1.5%/365 days	1.5%/365 days	
Open Interest Charge (3x4)	-$4.19	-$4.07	-$4.03	
Variation Margin				
(1) Opening	$50.00	$51.00	$49.50	
(2) Closing	$51.00	$49.50	$49.00	
(3) Difference (1-2)	-$1.00	$1.50	$0.50	
(4) # of contracts	2,000	2,000	2,000	
Variation Margin(3x4)	-$2,000	$3,000.00	$1,000.00	
Cumulative Profit/Loss				
Gross Profit	-$2,000.00	$1,000.00	$2,000.00	[2]$4,000.00
Contract Interest	$20.26	$39.92	$59.39	$59.39
Open Interest	-$4.19	-$8.26	-$12.29	-$12.29
Net Profit/Loss	-$1,983.93	$1,031.66	$2,047.10	$4,047.10

1 Some brokers aggregate Contract Interest and Open Interest and give them a generic title such as funding cost.

2 $4,000 is the difference between the price when the ASX Listed CFDs were initially sold ($50.00) and the price when the CFDs were bought back ($48.00) multiplied by the number of CFDs traded (2,000)

ASX Index CFDs

ASX Index CFDs give you access to trade some of the world's leading equity indices. The contract value of one (1) ASX Index CFD equals the price quoted in the currency of the index. For example, if the ASX DJIA CFD is trading at 12,600.00, then the value of one (1) ASX DJIA CFD is USD12,600.00.

For as little as the equivalent of 5% Initial Margin, you can gain 20 times leveraged exposure to these leading equity indices.

When trading ASX Index CFDs, a number of factors affect the profitability of your position. These include movements in the price of the ASX Index CFD, cashflows, margins and brokerage. The following examples track both a long and short position over a number of days. They showcase the effect price movement, cashflows and margins have on an ASX Index CFD position. Please note no brokerage has been taken into account.

Long Example

Tom – a 'directional trader' who generally holds positions for no longer than 4 days – believes that the S&P/ASX 200 Index will be strong over the next few days. Tom has $100,000 deposited with his broker and wants to expose 10% of his cash to this position.

In this example, ASX S&P/ASX 200 CFDs have an Initial Margin of $420 per contract or approximately 8%. With $10,000, therefore, Tom can gain exposure to $128,571 (10,000/7.78%). ASX S&P/ASX 200 CFDs are currently trading at 5399.0 bid – 5400.0 offer.

Tom places an order to buy 23 ASX S&P/ASX 200 CFDs at $5,400.00 = $124,200 value.

After the first day Tom must pay an Initial Margin, Contract Interest, Open Interest and is exposed to Variation Margins. On subsequent days Tom is only exposed to Contract Interest, Open Interest and Variation Margins.

On day 4, Tom places an order to sell all 23 CFDs when the index has reached 5500. Because he has sold his holding during the trading day he is not subject to Contract Interest, Open Interest or Variation Margin on day 4.

Note: If a constituent share of the index went ex-dividend during this period then Tom would receive Dividend Cashflow according to the share's weighting in the index.

ASX S&P/ASX 200 CFD				
TRADE PRICE	5400.0			5500.0
Trade	**Buy 23**			**Sell 23**
	Day 1	**Day 2**	**Day 3**	**Day 4**
Daily Settlement Price (Closing Price)	**5,450.0**	**5,920.0**	**5,750.0**	**5,500.0**
Initial Margin				
(1) # of contracts	23			
(2) Trade Price	5400.0			
(3) Initial Value (1x2)	$124,200			
(4) Margin	$420 or 7.778%			
(5) Initial Margin (1x4) or (3x4)	-$9,660.00		+$9,660.00	
[1]Contract Interest				
(1) # of contracts	23	23	23	
(2) Daily Settlement Price	5,450.0	5,520.0	5,350.0	
(3) Position Value (1x2)	$125,350.00	$126,960.00	$123,050.00	
(4) CI/# of days	7.25%/365 days	7.25%/365 days	7.25%/365 days	
(5) Contract Interest (3x4)	-$24.90	-$25.22	-$24.44	
[1]Open Interest (OIC)				
(1) Number of contracts	23	23	23	
(2) Daily Settlement Price	5,450.0	5,520.0	5,350.0	
(3) Position Value (1x2)	$125,350.00	$126,960.00	$123,050.00	
(4) OIC/# of days	1.5%/365 days	1.5%/365 days	1.5%/365 days	
(5) Open Interest Charge (3x4)	-$5.15	-$5.22	-$5.06	
Variation Margin				
(1) Closing	5,450	5,520	5,350	
(2) Opening	5,400	5,450	5,520	
(3) Difference (1-2)	$50.00	$70.00	-$170.00	
(4) Number of contracts	23	23	23	
Variation Margin (3x4)	$1,150.00	$1,610.00	-$3,910.00	
Cumulative Profit/Loss				
Gross Profit	$1,150.00	$2,760.00	-$1,150.00	[2]$2,300.00
Contract Interest	-$24.90	-$50.12	-$74.56	-$74.56
Open Interest	-$5.15	-$10.37	-$15.43	-$15.43
Net Profit / Loss	$1,119.95	$2,699.51	-$1,239.98	$2,210.02

1 Some brokers aggregate Contract Interest and Open Interest and give them a generic title such as funding cost.

2 $2,300 is the difference between the price when the ASX Listed CFDs were initially purchased (5400) and the price when the CFDs were sold (5500) multiplied by the number of CFDs traded (23)

Short Example

In this example all of the cashflows and margins are in USD. Sandra – a 'directional trader' who generally holds positions for no longer than 4 days – believes that the Dow Jones Industrial Average (DJIA) is overpriced and will fall over the next few days. Sandra has USD100,000 deposited with her broker and wants to expose 10% of her cash to this position.

In this example, ASX DJIA CFDs have an Initial Margin of USD530 per contract or approximately 4%. With USD10,000, therefore, Sandra can gain exposure to USD237,736 (10,000/4.2%).

ASX DJIA CFDs are currently trading at 12,600.0 bid – 12,601.0 offer.

Sandra places an order to sell 18 ASX DJIA CFDs at 12,600 = USD226,800 value.

After the first day Sandra must pay an Initial Margin, Open Interest, is exposed to Variation Margins, but receives Contract Interest. On subsequent days Sandra is only exposed to Open Interest, Variation Margins, and continues to receive Contract Interest.

Note: If a constituent share of the index went ex-dividend during this period then Sandra would pay the Dividend Cashflow according to the share's weighting.

ASX DJIA CFD TRADE PRICE	12,600.0			12,400.0
Trade	**Sell 15**			**Buy 15**
	Day 1	**Day 2**	**Day 3**	**Day 4**
Daily Settlement Price	**12,500**	**12,550**	**12,700**	**12,400**
Initial Margin (USD)				
(1) # of contracts	18			
(2) Trade Price	12,600			
(3) Initial Value (1x2)	$226,800			
(4) Margin	4.2%			
Initial Margin (1x4) or (3x4)	-$9,540.00			+$9,540.00
[1]Contract Interest (USD)				
(1) # of contracts	18	18	18	
(2) Daily Settlement Price	12,500.0	12,550.0	12,700.0	
(3) Position Value (1x2)	$225,000	$225,900.00	$228,600.00	
(4) CI/ # of days[2]	2.25%/360 days	2.25%/360 days	2.25%/360 days	
Contract Interest (3x4)	$14.06	$14.12	$14.29	
[1]Open Interest (OIC)				
(1) # of contracts	18	18	18	
(2) Daily Settlement Price	12,500.0	12,550.0	12,700.0	
(3) Position Value (1x2)	$225,000	$$225,900.00	$228,600.00	
(4) OIC/ # of days2	1.5%/360 days	1.5%/360 days	1.5%/360 days	
Open Interest Charge (3x4)	-$9.38	-$9.41	-$9.53	
Variation Margin				
(1) Opening	12,600.0	12,500.0	12,550.0	
(2) Closing	12,500.0	12,550.0	12,700.0	
(3) Difference (1-2)	$100.00	-$50.00	-$150.00	
(4) # of contracts	18	18	18	
Variation Margin(3x4)	$1,800	-$900.00	-$2,700.00	
Cumulative Profit/Loss				
Gross Profit	$1,800	$900.00	-$1,800.00	[3]$3,600.00
Contract Interest	$14.06	$28.18	$42.47	$42.47
Open Interest	-$9.38	-$18.79	-$28.31	-$28.31
Net Profit/Loss	$1,804.69	$909.39	-$1,785.84	$3,614.16

1 Some brokers aggregate Contract Interest and Open Interest and give them a generic title such as funding cost.

2 Market convention in the USA is to calculate interest based on a 360 day year. Therefore Contract and Open Interest Rates are divided by 360 not 365.

3 $3,600 is the difference between the price when the ASX Listed CFDs were initially sold (12,600) and the price when the CFDs were bought back (12,400) multiplied by the number of CFDs traded (18)

ASX FX CFDs

Just like all foreign exchange transactions, ASX FX CFDs are based on two currencies, commonly called currency 'pairs'.

The second currency quoted in the currency pair is referred to as the contract currency and is the currency used for margins.

It is critical to understand which currency is being bought and which is being sold when you buy CFDs (i.e. "go long") or sell CFDs (i.e. "go short").

The simple rule to remember is that if you go long you are selling the contract currency. If you go short, you are buying the contract currency.

For example:

- When BUYING an ASX AUD/USD CFD you will always be selling the second currency (USD) and buying the first currency (AUD).
- When SELLING an ASX AUD/USD CFD you will always buying the second currency (USD) and selling the first currency (AUD).

Therefore, if you want to profit from the AUD strengthening against the USD, you need to increase your exposure to the AUD and **buy** the ASX AUD/USD CFD.

The table below provides a guide and highlights the direction each currency in the cross rate must move for a trader to profit from a long and short position.

ASX FX CFD	CONTRACT CURRENCY	TRADE AND EFFECT	DESIRED OUTCOME	TRADE AND EFFECT	DESIRED OUTCOME
AUD/USD	USD	Sell = Long USD / Short AUD	USD ↑ AUD ↓	Buy = Short USD / Long AUD	USD ↓ AUD ↑
AUD/EUR	EUR	Sell = Long EUR / Short AUD	EUR ↑ AUD ↓	Buy = Short EUR / Long AUD	EUR ↓ AUD ↑
AUD/JPY	JPY	Sell = Long JPY / Short AUD	JPY ↑ AUD ↓	Buy = Short JPY / Long AUD	JPY ↓ AUD ↑
AUD/NZD	NZD	Sell = Long NZD / Short AUD	NZD ↑ AUD ↓	Buy = Short NZD / Long AUD	NZD ↓ AUD ↑
EUR/USD	USD	Sell = Long USD / Short EUR	USD ↑ EUR ↓	Buy = Short USD / Long EUR	USD ↓ EUR ↑
USD/JPY	JPY	Sell = Long JPY / Short USD	JPY ↑ USD ↓	Buy = Short JPY / Long USD	JPY ↓ USD ↑
NZD/USD	USD	Sell = Long USD / Short NZD	USD ↑ NZD ↓	Buy = Short USD / Long NZD	USD ↓ NZD ↑
NZD/JPY	JPY	Sell = Long JPY / Short NZD	JPY ↑ NZD ↓	Buy = Short JPY / Long NZD	JPY ↓ NZD ↑

Note: ASX FX CFDs have a value of 1 CFD = 100 x the rate quoted.

For example, if the AUD/USD exchange rate is .9300, one ASX AUD/USD CFD delivers a US dollar exposure of USD 93.00 and an Australian dollar exposure of AUD 100.

As with other ASX Listed CFDs, when trading ASX FX CFDs a number of factors affect the profitability of your position, including movements in the price of the ASX FX CFD, cashflows, margins, and brokerage. The following examples track both a long and short position over a number of days. They showcase the effect price movement, cashflows and margins have on an ASX FX CFD position. Please note no brokerage has been taken into account.

Long Example

Chris is a 'directional' trader who generally holds positions for no longer than 4 days. He believes that the AUD will strengthen against the USD in the coming days.

Chris buys 2,000 ASX AUD/USD CFDs @ 0.9300.

This gives him an exposure of long AUD200,000 and short USD186,000. In this example, the Initial Margin rate for the ASX AUD/USD CFD is USD2 per lot. Chris is therefore required to deposit as the initial margin USD4,000 with his broker to support the trade. Being long the contract means that if the price rises (i.e. the AUD appreciates against the USD), Chris will need less AUD to buy back the short USD position.

After the first trading day, Chris' account is debited by the broker to pay for the Initial Margin, Contract Interest and Open Interest Charge (OIC). He is also exposed to Variation Margins. All of these charges are denominated in USD.

Holding a long position in ASX AUD/USD CFDs means Chris will receive the Yield Cashflow in AUD. On subsequent days Chris continues to pay, in USD, Contract Interest, the Open Interest Charge and Variation Margins (if called), and receives the Yield cashflow in AUD.

On Day 4, Chris closes out his position by selling 2,000 CFDs at 0.9330. At this point his Initial Margin is returned. If the Yield Cashflow is converted into USD (at the rate of .9330), Chris has made a total profit for the trade of USD541.78 + USD111.19 = USD652.97 or AUD699.86.

ASX AUD/USD CFD TRADE PRICE	0.9300			0.9330
Trade	**Buy 2,000**			**Sell 2,000**
	Day 1	**Day 2**	**Day 3**	**Day 4**
Settlement Price (USD)	**0.9310**	**0.9315**	**0.9320**	**0.9330**
Initial Margin (USD)				
(1) Number of contracts	2,000			2,000
(2) Margin/per contract	$2.00/contract			$2.00/contract
(3) Initial Margin (1x2)	-$4,000.00			+$4,000.00
Variation Margin (USD)				
(1) Day's Opening	0.9300	0.9310	0.9315	
(2) Closing	0.9310	0.9315	0.9320	
(3) Difference (2-1)	0.0010	0.0005	0.0005	
(4) Multiplier	100	100	100	
(5) Number of contracts	2,000	2,000	2,000	
(6) Variation Margin(3x4x5)	200	100	100	
Contract Interest (USD)[1]				
(1) Number of contracts	2,000	2,000	2,000	
(2) Multiplier	100	100	100	
(3) Daily Settlement Price	0.9310	0.9315	0.9320	
(4) Position Value(1x2x3)	186,200	186,300	186,400	
(5) CI/ Number of days	2.25%/360 days	2.25%/360 days	2.25%/360 days	
(6) Contract Interest (4x5)	-$11.64	-$11.64	-$11.65	
Open Interest (OIC) in USD				
(1) Number of contracts	2,000	2,000	2,000	
(2) Multiplier	100	100	100	
(3) Daily Settlement price	0.9310	0.9315	0.9320	
(4) Position Value (1x2x3)	186,200	186,300	186,400	
(5) OIC/ Number of days	1.5%/360 days	1.5%/360 days	1.5%/360 days	
Open Interest Charge (4x5)	-$7.76	-$7.76	-$7.77	
Cumulative Profit/Loss (USD) excl. Yield				
(1) Gross Profit	$200	$300	400	[2]$600
(2) Contract Interest	-$11.64	-$23.28	-$34.93	-$34.93
(3) Open Interest	-$7.76	-$15.52	-23.29	-$23.29
	$180.60	$261.20	$341.78	$541.78
Yield (AUD)				
(1) Number of contracts	2,000	2,000	2,000	
(2) Multiplier	100	100	100	
(3) Yield/ Number of days	7.25%/365 days	7.25%/365 days	7.25%/365 days	
(4) Yield cashflow (1x2x3)	$39.73	$39.73	$39.73	
Net Yield AUD	$39.73	$79.45	$119.18	$119.18

1 The Benchmark Rate used for Contract Interest is the Federal Funds Rate as published daily by the Federal Reserve Bank of New York

2 $600 is the difference between the price when the ASX Listed CFDs were initially purchased (0.9300) and the price when the CFDs were sold (0.9330) multiplied by the number of CFDs traded (2,000), multiplied by 100

Short Example

Kylie is a 'Directional' trader who generally holds positions for no longer than 4 days. She believes that the USD will fall against the JPY in the coming days.

Kylie Sells 2,000 ASX USD/JPY CFDs @ 102.00 JPY.

The trade gives her an exposure of short USD200,000 and long JPY20,400,000. In this example, Initial Margin rates for the ASX USD/JPY CFD are JPY280 per contract. Kylie is therefore required to deposit JPY560,000 with her broker as the Initial Margin in order to trade. Being short the contract means that if the price falls (i.e. the JPY appreciates against the USD), Kylie will need less JPY to buy back the short USD position.

After the first day Kylie must pay to the broker an Initial Margin and is exposed to Variation Margins. These margins are denominated in JPY. Being short, Kylie pays the open interest charge less the contract interest in JPY whilst paying Yield denominated in USD. On subsequent days Kylie continues to receive Contract Interest and pay the Open Interest Charge and Variation Margins, if called, in JPY and pay the Yield Cashflow in USD.

ASX USD/JPY CFD TRADE PRICE	102.00			JPY 92.00
Trade	**Sell 2,000**			**Buy 2,000**
	Day 1	**Day 2**	**Day 3**	**Day 4**
Settlement Price (JPY)	**97.00**	**102.00**	**87.00**	**92.00**
Initial Margin (JPY)				
(1) Number of contracts	2,000			2000
(2) Margin/per contract	280 / contract			280 / contract
(3) Initial Margin (1x2)	-600,000			+600,000
Variation Margin (JPY)				
(1) Day's Opening	102.00	97.00	102.00	
(2) Closing	97.00	102.00	87.00	
(3) Difference (1-2)	5.00	-5.00	5.00	
(4) Multiplier	100	100	100	
(5) Number of contracts	2,000	2,000	2,000	
(6) Variation Margin (3x4x5)	1,000,000	-1,000,000	3,000,000	
Contract Interest (JPY)[1]				
(1) Number of contracts	2,000	2,000	2,000	
(2) Multiplier	100	100	100	
(3) Daily Settlement Price	97.00	102.00	87.00	
(4) Position Value (1x2x3)	22,000,000	23,000,000	20,000,000	
(5) CI/ Number of days[2]	0.5%/360 days	0.5%/360 days	0.5%/360 days	
(6) Contract Interest (4x5)	269	283	242	
Open Interest (OIC) in JPY				
(1) Number of contracts	2,000	2,000	2,000	
(2) Multiplier	100	100	100	
(3) Daily Settlement price	97.00	102.00	87.00	
(4) Position Value (1x2x3)	22,000,000	23,000,000	20,000,000	
(5) OIC/ Number of days	1.5%/360 days	1.5%/360 days	1.5%/360 days	
Open Interest Charge (4x5)	-808	-850	-725	
Cumulative Profit/Loss (JPY) excl. Yield				
(1) Gross Profit	1,000,000	0	3,000,000	[3]2,000,000
(2) Contract Interest	269	553	794	794
(3) Open Interest	-808	-1,658	-2,383	-2,383
	999,461	-1,106	2,998,411	1,998,411
Yield (USD)				
(1) Number of contracts	2,000	2,000	2,000	
(2) Multiplier	100	100	100	
(3)Yield/ Number of days	2.25%/360 days	2.25%/360 days	2.25%/360 days	
(4) Yield cashflow (1x2x3)	-$12.50	-$12.50	-$12.50	
Net Yield USD	-$12.50	-$25.00	-$37.50	

1 The Benchmark Rate used for Contract Interest is the Overnight Target Rate as published daily by the Bank of Japan

2 Market convention in Japan and the US is to calculate interest based on a 360 day year. In Australia the convention is to use a 365 day year.

3 2,000,000 is the difference between the price when the ASX Listed CFDs were initially sold (102.00) and the price when the CFDs were bought back (92.00) multiplied by the number of CFDs traded (2,000) multiplied by 100

ASX FX CFDs pay/receive yield in the opposing currency. Therefore a conversion needs to be made to determine the overall profit/loss including yield.

In this example USD$37.50 of yield multiplied by the current cross rate (92) equals JPY3,450. As short positions pay yield you deduct this figure from the original P&L figure to give an overall profit of JPY1,994,961.

ASX Commodity CFDs

ASX Commodity CFDs give you access to trade some of the world's key commodities. The contract value of one (1) ASX Commodity CFD equals the price quoted in the currency of the commodity. For example, if the ASX Gold CFD is trading at 925.00, then the value of one (1) ASX Gold CFD is USD925.00 – or the equivalent of 1 troy ounce of gold.

For as little as the equivalent of 2% Initial Margin, you can gain 50 times leveraged exposure to these key commodities.

When trading ASX Commodity CFDs a number of factors affect the profitability of your position, including price movements in the ASX Commodity CFD, cashflows, margins, and brokerage. The following examples track both a long and short position over a number of days. They illustrate the effect that price movements, cashflows and margins have on a position. Please note no brokerage has been taken into account.

Long Example

Larry is a 'Directional' trader who generally holds positions for no longer than 4 days. He believes that Gold will rally in the coming days.

Larry buys 50 ASX Gold CFDs at 925.00.

The position gives him an exposure of USD46,250. In this example, the Initial Margin for an ASX Gold CFDs is USD29 per contract. Larry is required to deposit USD1,450 with his broker to support the position.

After the first day Larry must pay to the broker an Initial Margin, Contract Interest and the Open Interest Charge. He is also exposed to Variation Margins. All of these charges are based in USD.

On subsequent days Larry continues to pay Contract Interest, the Open Interest Charge and, if called, Variation Margins in USD.

ASX GOLD CFD TRADE PRICE	$925.00			$945.00
Trade	**Buy 50**			**Sell 50**
	Day 1	**Day 2**	**Day 3**	**Day 4**
Settlement Price (USD)	**$940.00**	**$925.00**	**$930.00**	**$945.00**
Initial Margin (USD)				
(1) # of contracts	50			50 x
(2) Margin/per contract	$29/per contract			$29/per contract =
Initial Margin (1x2)	-$1,450.00			+$1,450.00
Variation Margin (USD)				
(1) Closing	$940.00	$925.00	$930.00	
(2) Opening	$925.00	$940.00	$925.00	
(3) Difference (1-2)	$15.00	-$15.00	$5.00	
(4) # of contracts	50	50	50	
(5) Variation margin (3x4)	$750.00	-$750.00	$250.00	
[1]**Contract Interest (USD)**[4]				
(1) # of contracts	50	50	50	
(2) Daily Settlement Price	$940.00	$925.00	$930.00	
(3) Position Value (1x2)	$47,000	$46,250.00	$46,500.00	
(4) CI / # of days2	2.25%/360 days	2.25%/360 days	2.25%/360 days	
Contract Interest (3x4)	-$2.94	-$2.89	-$2.91	
[1]**Open Interest (OIC) in USD**				
(1) # of contracts	50	50	50	
(2) Daily Settlement Price	$940.00	$925.00	$930.00	
(3) Position Value (1x2)	$47,000	$46,250.00	$46,500.00	
(4) OIC / # of days[2]	1.5%/360 days	1.5%/360 days	1.5%/360 days	
Open Interest (3x4)	-$1.96	-$1.93	-$1.94	
Cumulative Profit/Loss (USD)				
Gross P & L	$750.00	$0.00	$250.00	[3]$1,000.00
Contract Interest	-$2.94	-$5.83	-$8.73	-$8.73
Open Interest	-$1.96	-$3.89	-$5.82	-$5.82
Net Profit/Loss	$745.10	-$9.71	$235.44	$985.44

1 Some brokers aggregate Contract Interest and Open Interest and give them a generic title such as funding cost.

2 Market convention in the USA is to calculate interest based on a 360 day year. Therefore Contract and Open Interest Rates are divided by 360 not 365.

3 $1,000 is the difference between the price when the ASX Listed CFDs were initially purchased ($925) and the price when the CFDs were sold ($945) multiplied by the number of CFDs traded (50)

4 The Benchmark Rate used for Contract Interest is the Federal Funds Rate as published daily by the Federal Reserve Bank of New York

Short Example

Barbara is a 'Directional' trader who generally holds positions for no longer than 4 days. She believes that Gold will fall in the coming days.

Barbara Sells 50 ASX Gold CFDs at 925.00.

The position gives her an exposure of USD46,250.

In this example, Initial Margin rates for ASX Gold CFDs are USD29.00 per lot.

Barbara is required to deposit USD1,450 with her broker to support the position.

After the first day Barbara must pay to the broker an Initial Margin and the Open Interest Charge. Having a short position, she receives Contract Interest and is exposed to Variation Margins. All of these cashflows are based in USD.

On subsequent days Barbara continues to receive Contract Interest, pay the Open Interest Charge and if called Variation Margins, in USD.

This example tracks Barbara's cashflow obligations and ultimate profit/loss.

ASX GOLD CFD TRADE PRICE	$925.00			$905.00
Trade	**Sell 50**			**Buy 50**
	Day 1	**Day 2**	**Day 3**	**Day 4**
Settlement Price (USD)	**$940.00**	**$925.00**	**$915.00**	**$905.00**
Initial Margin (USD)				
(1) # of contracts	50			50
(2) Margin/per contract	$29 per contract			$29 per contract
Initial Margin (1x2)	-$1,450.00			+$1,450.00
Variation Margin (USD)				
(1) Opening	$925.00	$940.00	$925.00	
(2) Closing	$940.00	$925.00	$915.00	
(3) Difference (1-2)	-$15.00	$15.00	$10.00	
(4) # of contracts	50	50	50	
(5) Variation margin (3x4)	-$750.00	$750.00	$500.00	
[1]Contract Interest (USD)[4]				
(1) # of contracts	50	50	50	
(2) Daily Settlement Price	$940.00	$925.00	$915.00	
(3) Position Value (1x2)	$47,000	$46,250.00	$45,750.00	
(4) CI / # of days[2]	2.25%/360 days	2.25%/360 days	2.25%/360 days	
Contract Interest (3x4)	$2.94	$2.89	$2.86	
[1]Open Interest (OIC) in USD				
(1) # of contracts	50	50	50	
(2) Daily Settlement Price	$940.00	$925.00	$915.00	
(3) Position Value (1x2)	$47,000	$46,250.00	$45,750.00	
(4) OIC / # of days2	1.5%/360 days	1.5%/360 days	1.5%/360 days	
Open Interest (3x4)	-$1.96	-$1.93	-$1.91	
Cumulative Profit/Loss (USD)				
Gross P & L	-$750.00	$0.00	$500.00	[3]$1,000.00
Contract Interest	$2.94	$5.83	$8.69	$8.69
Open Interest	-$1.96	-$3.89	-$5.79	-$5.79
Net Profit/Loss	-$749.02	$1.94	$502.90	$1,002.90

1 Some brokers aggregate Contract Interest and Open Interest and give them a generic title such as funding cost.

2 Market convention in the USA is to calculate interest based on a 360 day year. Therefore Contract and Open Interest Rates are divided by 360 not 365.

3 $1,000 is the difference between the price when the ASX Listed CFDs were initially sold ($925) and the price when the CFDs were bought back ($905) multiplied by the number of CFDs traded (50)

4 The Benchmark Rate used for Contract Interest is the Federal Funds Rate as published daily by the Federal Reserve Bank of New York

Risks of Trading ASX Listed CFDs

ASX Listed CFDs are not suitable for all traders and investors. In light of the risks associated, you should only trade them if you are confident that you understand ASX Listed CFDs and the risks. Before trading ASX Listed CFDs you should carefully assess your experience, investment objectives, financial resources and all other relevant considerations and consult your adviser. Among the main risks of trading ASX Listed CFDs are the following:

Implications of leverage:

Leverage (or gearing) is the use of given resources in such a way that the potential positive or negative outcome is magnified.

ASX Listed CFDs are leveraged. They offer the potential to make a higher return from a smaller initial outlay than for a non-leveraged transaction such as direct share investing.

The example illustrates the effect of leverage on a long ASX Equity CFD position. The table compares the possible purchase of 10,000 long ASX Equity CFDs and 10,000 shares. The higher percentage return from the ASX Equity CFDs demonstrates how leverage can work.

The initial outlay of capital is small relative to the total position value. Consequently, a relatively small market movement has a proportionately larger impact on the amount of funds supporting the position.

It is important to remember that leverage can work both for and against you by magnifying gains and losses.

Additional margin calls and unlimited loss:

It is important to note that the liability for a holder of either a long or short ASX Listed CFD position is not limited to the margin paid.

If the market moves against a position or margin levels are increased, then the holder of that position may be called upon to pay additional funds on short notice to maintain the position (see section on Variation Margins on page 9).

If a holder of a position fails to comply with a request from their broker for additional funds within the time prescribed, the broker may close out the position. In addition, the holder will still be liable for any further losses that may have resulted from the position being closed out.

Note: The potential for loss is not limited to the amount of money paid as Initial and Variation Margins. Adverse market moves can result in losses being a multiple of the Initial Margin originally provided to support the position.

For a holder of a short position, a continuing adverse market price movement (e.g. market price rise), can result in theoretically unlimited losses being accumulated.

OPENING CONTRACT VALUE	SHARE	ASX LISTED CFD
Quantity purchased	10,000	10,000
Price	$20.00	$20.00
Position value	$200,000	$200,000
Capital outlay (Assume initial margin for CFD = 5%)	$200,000	$10,000

MARKET/CLOSING CONTRACT VALUE	SHARE	ASX LISTED CFD
Quantity held	10,000	10,000
Market/closing price	$18.00	$18.00
Position value	$180,000	$180,000
Gross profit/loss	-$20,000	-$20,000
Gross return on initial capital outlay	-10.00%	-200.00%

Foreign exchange risk

Not all ASX Listed CFDs are denominated in Australian Dollars.

It is important to keep in mind that when trading ASX FX, Commodity or overseas Index CFDs all profits/losses are denominated in the currency of the particular product. For example, the ASX DJIA CFD is denominated in USD.

The following list indicates the currency denomination of each ASX Index and Commodity CFDs.

ASX LISTED CFDS	CURRENCY DENOMINATION
ASX S&P/ASX 200 CFD	AUD
ASX DJIA CFD	USD
ASX NASDAQ CFD	USD
ASX FTSE CFD	GBP
ASX DAX® CFD	EUR
ASX Dow Jones EURO STOXX 50® CFD	EUR
ASX Gold CFD	USD
ASX Oil CFD	USD

The currency denomination of each ASX FX CFD is listed on page 12.

Liquidity risk

Market conditions (for example, lack of liquidity) may increase the risk of loss by making it difficult to effect transactions or close out existing positions.

Normal pricing relationships may not exist in certain circumstances. For example, normal pricing relationships may not exist in periods of high buying or selling pressure, high market volatility or lack of liquidity in the market for a particular ASX Listed CFD.

Gapping, whereby a market price falls or rises without the opportunity to trade, can result in significant losses even when a stop loss has been put on. This is because it may not be possible to transact at the nominated price if the market has gapped.

ASX Listed CFD traders may reduce liquidity risk by combining ASX Listed CFD positions with ASX Exchange Traded Options. The result is similar to a guaranteed stop loss. More details are available on the ASX Website at **www.asx.com.au/cfd**.

Furthermore, there are limited circumstances in which ASX may expire and delist the contract. Please see page 6 for more detail.

Market disruptions / emergencies & issue resolution

ASX Listed CFD transactions are subject to the rules, procedures, and practices of SFE and SFECC. Under the SFE Operating Rules, certain trading disputes between market participants (for example errors involving traded prices that do not bear a relationship to fair market or intrinsic value) may lead to SFE cancelling or amending a trade. In these situations your consent is not required for the cancellation of a trade.

In some circumstances underlying instruments or securities may be halted, suspended from trading or have their quotations withdrawn from the exchange. These factors will directly affect an ASX Listed CFDs value.

Taxation

It is beyond the scope of this booklet to provide a detailed treatment of the taxation issues that are relevant to trading in ASX Listed CFDs. You should, however, take taxation into consideration when you are investing in ASX Listed CFDs, just as you would when investing in shares.

Based on the law and administrative practice as of July 2007, we note that it may benefit potential investors to review Australian Taxation Office ("ATO") ruling TR 2005/15 (available at http://law.ato.gov.au/pdf/tr2005-015.pdf) paying particular attention as to how the ruling applies to your facts and circumstances. Some additional issues that may be relevant include:

- Your tax residency status;
- Taxation of Financial Arrangements ("TOFA") implications of trading in foreign currency denominated CFDs; and
- Goods and Service Tax ("GST") paid in connection with CFD related services/ transactions.

You and your broker

This information relates to the relationship between you and your broker (or, as they are officially called, Full Participants or introducing brokers) when trading and settling ASX Listed CFDs.

Your relationship with your broker

As mentioned previously in this brochure, brokers can offer both trading and clearing services for ASX Listed CFDs or they can specialise, with some parts of the trading and clearing process contracted to other brokers.

The different services a broker may offer are as follows

- Offer both trading and clearing services as a SFE Full Participant;
- Offer only trading services as a SFE Full Participant. If so, the broker will execute transactions themselves but will clear through another party; or
- Offer only trading services as an introducing broker. If so, they will execute transactions through a SFE Full Participant and clear through a SFE Clearing Participant.

Client agreement forms

The Client Agreement is a legal contract setting out the terms on which broker(s) will act for you. It is important that you read the Client Agreement carefully before signing it and retain a copy of the agreement.

ASX does not prescribe a set Client Agreement but requires minimum terms which the Client Agreement must contain. Brokers may have other terms provided they are not inconsistent with the minimum terms.

Failing to pay your broker

One of the significant terms required in every Client Agreement with a broker is their right to close out contracts opened for you, without further notice to you, if you fail to pay as agreed in the Client Agreement. Accordingly, it is important that you understand the settlement and margin requirements set out in the Client Agreement(s) before commencing trading.

Fees and commissions

ASX does not prescribe the rate of fees and commissions which brokers may charge clients. Clients should discuss these rates and how they will be administered directly with their broker(s) prior to signing the Client Agreement(s). ASX has standard fees (e.g. for Contract and Open Interest), which can be checked on the ASX website.

SFE Clearing Corporation

Clearing houses provide financial integrity by allowing participants to deal freely without credit-risk constraints. The margining regime adopted by exchange clearing houses are well established and strictly enforced. This prevents participants from accumulating large unpaid losses that could threaten the financial position of other market users.

The SFE Clearing Corporation Pty Ltd (SFECC) has responsibility for the registration, clearing and processing of all trades executed on the SFE Markets including ASX Listed CFDs.

The important functions to note here, in relation to ASX Listed CFDs are as follow:

- *Confirm and register all trades:* Whenever a deal is concluded, a record is passed to SFECC where it is processed and the following morning a statement is issued to the SFE Clearing Participant describing the trades registered in their name.
- *Novation:* After the contract is registered by SFECC (in the names of the SFE Clearing Participants) the nexus between the two original contracting parties is broken. SFECC then becomes the buyer to the seller, and the seller to the buyer. Thus, the identity of the other party to the contract is no longer of importance. Parties to an original contract are not obliged to return to each other to complete or unwind the contract.
- *Set and collect margins:* SFECC can guarantee the payment of any profits made on contracts because of the system of initial and variation margins (daily settlements) it imposes, as well as its own substantial financial backing.
- *Monitor Clearing Participants' positions:* In protecting its guarantee, SFECC monitors the size of each Participant's position relative to the overall market.

Instructing a broker to trade ASX Listed CFDs

Brokers are required to understand their client's financial situation in order to assess whether a particular investment (such as ASX Listed CFDs) is suitable for that particular client's situation. The broker's adviser will ask you certain questions relating to your financial position and your investment objectives when dealing with you for the first time. The adviser will rely on the information you provide when advising you.

Accredited ASX Listed CFD advisers

If receiving investment or trading advice about ASX Listed CFDs, you should ensure that the individual from whom you are receiving such advice is accredited to advise on ASX Listed CFDs.

You can place an order through any adviser able to offer ASX Listed CFDs. A full list of accredited advisers is available on the ASX website.

Further information

Contract specifications

Contract specifications for all ASX Listed CFDs are available on **www.asx.com.au/cfd**

Education

For explanatory booklets on ASX Listed CFDs phone 131 279, or download the booklets from the ASX website **www.asx.com.au/cfd**

Explanatory booklets on other derivatives including options, futures and warrants are also available.

Face to face classes

On a regular basis, ASX runs 'Getting Started in ASX Listed CFDs – The essentials of trading' classes. These are practical classes where audience participation is encouraged and an interactive format is used.

No prior knowledge of ASX Listed CFDs is necessary. However, it is assumed that those attending have a working knowledge of the sharemarket and an awareness of the risks associated with trading CFDs.

Details of upcoming class schedules are available from the ASX website **www.asx.com.au/cfd**

Online education

You may prefer to complete classes in your own time and a place that suits you. ASX has three classes on ASX Listed CFDs available online on **www.asx.com.au/cfd**. Each course includes interactive exercises that will aid your learning and a quiz at the end of each course to show your progress.

Trading Simulator

Also on **www.asx.com.au/cfd**, ASX provides a trading simulator which allows traders and investors to explore the fundamentals of trading ASX Listed CFDs without putting any of their own funds at risk. For those new to trading CFDs, exploring the trading simulator after they have attended an ASX Listed CFD class (either online or face-to-face) may be a useful way of ensuring they have a solid understanding of the fundamentals and the risks in trading ASX Listed CFDs.

Contact Details

Website

www.asx.com.au/cfd

Email

ASXCFDs@asx.com.au

Phone

131 279

Post

ASX Listed CFDs
20 Bridge Street,
Sydney NSW 2000

Glossary of terms

Contract for Difference (CFD)

An agreement between buyer and seller to exchange the difference in value of a particular instrument between when the contract is opened and when it is closed. The difference is determined by reference to an 'underlying' – a stock, Index, FX rate or commodity.

Contract Interest

An amount calculated daily on all open positions held at the close of trade; paid and received daily by long and short position holders

Daily Settlement Price (DSP)

Price used by SFECC in marking open positions to market for calculating Variation Margins for open ASX Listed CFD positions.

Designated Price Maker (DPM)

An Exchange approved market maker whose role is to provide liquidity in the ASX Listed CFD market.

DPMs receive incentives from the Exchange based on their success in trading ASX Listed CFDs.

Dividend Cashflow

Payments replicating the dividends applying to the stocks underlying ASX Listed CFDs. They apply to:

- ASX Equity CFDs based on stocks that declare dividends,
- ASX Index CFDs where a component stock pays out a dividend.

Long ASX Equity CFD positions receive the Dividend cashflow.

Short ASX Equity CFD positions pay the Dividend cashflow.

The amount of the Dividend Cashflow is determined based on ASX Listed CFD positions held.

For ASX Index CFDs a weighting is applied and the Dividend Cashflow is denominated in the base currency of the ASX Listed CFD.

Exchange-traded CFD

Where CFDs are traded on a formal regulated market involving transparent and competitive prices.

Exchange for Physical (EFP)

An off-market trading mechanism that enables a derivatives position to be swapped for an offsetting physical position.

Franking Credit Cashflow (FCC)

The monetary equivalent of the franking credit declared on a particular underlying stock.

FCC applies only to ASX Equity CFDs

Holders of long positions receive the FCC.

Holders of short positions pay the FCC.

Initial Margin

Every trader in the ASX Listed CFD market is required to put up an Initial Margin (deposit) for each contract they trade. This applies to both buyers and sellers.

This Initial Margin is returned when the contract is closed out. Initial Margins protect the Clearing House and Participant against non-payment of losses by any customer. The amount is normally set at a level designed to cover reasonably foreseeable losses on a position between the close of business on one day and the next. The amount of Initial Margin for each contract varies according to the price volatility of the commodity, but is usually about 5% to 10% of the value of the goods described by the contract.

Intra-day Margin

During periods of extreme market volatility, additional margin calls known as an intraday margin calls may be made. Although very rare, such a call can be affected at any point during the trading day and is payable by the time specified by the SFECC.

Long

To buy.

Mark to market

A system whereby the value of an open position is revalued against the current market for the purpose of calculating variation margins. A settlement price is used by the clearing house for marking ASX Listed CFD positions to market. SFECC uses settlement prices at the close of the previous trading day.

Market maker model

Where the OTC CFD provider acts as principal, providing a two-way spread based on the market price, and clients trade directly with the OTC CFD provider.

Novation

Where the original parties to a contract created on market are separated by the interposition of a third party, typically a clearing house. The interposition on a clearing party provides certainty of contract completion by the contract guarantee provided by the clearing house.

Open Interest Charge (OIC)

Interest amount paid by both long and short positions. The OIC rate is determined by the ASX and may vary according to product. In the case of ASX Equity CFDs, and only in the case of ASX Equity CFDs, the OIC will also vary depending on whether a long or short position is held.

OTC Direct market access (DMA)

Where the OTC CFD order is replicated by the provider placing a corresponding stock order in the underlying market.

Over the counter (OTC)

Non-exchange traded

Settlement prices

Price used by SFECC in marking open positions to market for calculating variation margins for open CFD positions. For ASX Equity CFDs and ASX Index CFDs, SFECC uses the closing prices /levels of the underlying stock or index on the previous trading day.

SFE Clearing Corporation (SFECC)

The clearing house undertaking all clearing and processing of ASX Listed CFDs

Short

To sell.

Stop loss order

An order placed at the same time as an order to open a position which becomes activated when the market price reaches a designated level. Stop loss orders are used to close out losing positions to prevent further loss.

SYCOM®

SFE trading system used for the trading of futures contracts and ASX Listed CFDs.

Variation Margin

Refers to the payment of profits or losses following revaluation of an ASX Listed CFD contract. Clearing houses enforce a regime of daily variation margin calls. For this purpose, open positions are revalued (or marked to market) against settlement prices at the close of the previous trading day.

Yield Cashflow

A payment applicable only to ASX FX CFDs. Paid by holders of short positions and received by holders of long positions.

Paid or received the next trading day based on open positions held at the close of trading the previous day

Yield Rate

Applicable only to ASX FX CFDs. The Yield rate is used for calculating Yield cashflow. It is fixed to a benchmark rate in the currency opposite to the base currency of the ASX FX CFD. The Yield rate varies according to movements in the relevant benchmark rate.

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  - The accuracy or completeness of the Dow Jones EURO STOXX 50® and its data;
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AUSTRALIAN SECURITIES EXCHANGE

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Interactive Brokers LLC

Australian
BEST EXECUTION POLICY
Retail Clients

Version Control

Document version	Date	Author	Key changes
1.0	Sept 2011	J Kelly	Policy to comply with ASIC Market Integrity Rules

1. Introduction

1.1 Interactive Brokers LLC (**IB LLC**) recognises that it has a duty to take all reasonable steps to obtain the best outcome for the handling and execution of retail client orders. This means that IB LLC has in place a policy and procedures that are designed to obtain the best outcome for retail clients when executing orders on their behalf, subject to, and taking into account, any specific instructions from the client, the nature of the particular orders and the nature of the markets concerned.

1.2 The Australian Securities & Investments Commission (**ASIC**) has published the *ASIC Market Integrity Rules (Competition in Exchange Markets) 2011* (**MI Rules**). Chapter 3 of the MI Rules, which comes into effect on 31 October 2011, sets out the requirements for *Best Execution* including requirements for documented policies and procedures (Part 3.2) and client disclosure (Part 3.3).

1.3 This document sets out IB LLC‟ s Best Execution Policy (the **Policy**) in accordance with Part 3.2 of the MI Rules

2. IB LLC.

2.1 IB LLC is a US online broker; specializing in routing orders and executing and processing trades in securities, futures and foreign exchange instruments for its clients (“IB LLC clients”)

2.2 Timber Hill Australia Pty Limited (“THA”) is a Market Participant of the Australian Securities Exchange and acts as executing broker for IB LLC .All IB LLC client orders for ASX financial products are routed through THA‟ s connection to the ASX Integrated Trading System („ITS”) using an electronic communications process (“ecp”) dedicated to the routing of only IB client orders

2.3 IB LLC has applied to be a trading participant of Chi-X Australia (**CXA**) for its Australian securities market.IB LLC holds Australian Financial Services Licence number

2.4 IB LLC has applied to join the ASX PureMatch Order Book as an ASX Market Participant and the ASX PureMatch Order Book is anticipated to be launched on 28 November 2011.

3. Scope

IB LLC owes a duty of best execution when it handles and executes orders on clients‟ behalf. For the purposes of this Policy IB LLC is in receipt of an order and acting on a client‟ s behalf when an execution instruction is given which gives rise to contractual or agency obligations owed by IB LLC to a client. IB LLC believes this to be the case where it exercises its discretion in relation to the execution of a client order.

4. Interpretation

4.1 Terms defined or described in the MI Rules have the same meaning in this Policy as they have in the MI Rules. To the extent that there is any inconsistency between the terms of this Policy and Chapter 3 of the MI Rules the MI rules prevail.

4.2 The term “***venue***” refers to any or all of the order books and systems referred to in paragraph 6.1 below.

5. Specific Instructions

5.1 Where a retail client provides IB LLC with a specific instruction in relation to -
- an order,
- a particular aspect of an order ,

IB LLC will take reasonable steps to execute the orders in accordance with such instructions.

5.2 In following client instructions IB LLC will be deemed to have taken all reasonable steps to provide the best outcome.

5.4 Therefore, if a client requires its order to be executed in a particular manner, the client should clearly state the desired method of execution when the order is placed and such instruction must be clear and ambiguous.

6. Execution Venues

6.1 In meeting its obligations to take all reasonable steps to consistently obtain the best outcome, IB LLC may use one or more of the following order books and systems when executing the order on the client" s behalf.

- The ASX TradeMatch Order Book,
- CXA Order Book.
- The ASX PureMatch Order Book

6.2 IB LLC will periodically assess each of the execution venues and order books it access when executing Australian stocks to determine if alternative sources of execution provide a material opportunity to achieve best execution.

7. Execution factors

7.1 In the absence of specific instructions from the client, IB LLC may consider the following factors to determine the manner in which a client order will be executed.

- Total consideration
- Price
- Speed
- Likelihood of execution or settlement
- Size of order
- Nature of order
- Costs
- Any other factor relevant to the execution of the order.

7.2 IB LLC will take all reasonable steps to obtain the best outcome when executing orders on behalf of a client and will ordinarily place a higher importance on total consideration . However, IB LLC will, in certain circumstances, determine that other execution factors are relevant; and in such cases it will take into account the characteristics of:

- The client,
- The client order,
- The security subject to the order, and
- The execution venue.

8. No Fiduciary Responsibility

IB LLC" s commitment to provide "best execution" does not mean that it owes any of its clients any fiduciary responsibilities over and above any specific regulatory obligations placed upon it or as may be otherwise contracted between IB LLC and any individual client. Each client remains responsible for its own investment decisions and IB LLC will not be responsible for any market or trading loss that a client might suffer as a result of those decisions.

9. Monitoring & Review

9.1 IB LLC will monitor the effectiveness of its order execution arrangements and Best Execution Policy in order to identify and, where appropriate, incorporate any amendments to procedures.

9.2 IB LLC will assess on a regular basis, whether the execution venues included in this Policy provide the best outcome for its clients or whether it needs to make changes to its execution arrangements. IB LLC will review its order execution arrangements and this Policy at least annually or whenever a material change occurs that affects its ability to continue to obtain the best outcome for the execution of client orders on a consistent basis using the venues included in this Policy. IB LLC will notify clients of any material changes to its order execution arrangements or Best Execution Policy as described above by posting the information on its website or by email.

Euronext.LIFFE Disclosure

1. **Rules of LIFFE and our capacity:** All contracts in the terms of an Exchange Contract made on LIFFE (hereinafter,"LIFFE" or "Exchange") shall be subject to the Rules of LIFFE as from time to time in force. As a member of LIFFE, an affiliate of Interactive Brokers LLC ("IB"), which shall act as executing broker, contracts only as a principal in respect of contracts in the terms of an Exchange Contract. In the event of a conflict between the Rules of LIFFE and the terms of this Agreement, the Rules of LIFFE as from time to time in force, shall prevail.

2. **LIFFE Risk Disclosure for Financial Futures:** Pursuant to General Notice Number 1376, issued 18 March 1999 with an effective date of 12 April 1999, LIFFE requires that we provide you with certain information in connection with your trading of equity futures and options through LIFFE CONNECT, as follows:

   Client Issues

   1. **Exclusion of Liability:** As set forth in section 8 below, unless otherwise expressly provided for, the Exchange shall not be liable to any member or client for loss or damage caused as a result of such curtailment of trading opportunities.

   2. **Client Orders:** Prior to the commencement of trading, clients must undertake to understand the characteristics of order types recognised in LIFFE CONNECT™ and be aware that the Exchange has a number of powers which, if exercised, may impact upon the ability of a member to submit an order on behalf of a client or which may lead to the cancellation of an order after submission to the LIFFE CONNECT™ trading Host prior to execution. In particular, in addition to the powers already available to the Exchange (including those in relation to investor protection and maintaining an orderly and proper market), clients should be aware that, in respect of LIFFE CONNECT™

      1. the Exchange has the power to suspend a member's access, or access via a particular Individual Trading Mnemonic ("ITM") or ITMs, following a single warning, and to terminate a member's access under certain conditions;

      2. the Exchange will cancel all outstanding orders on the default of a member;

      3. orders outside the price limits will be rejected automatically by the Trading Host;

      4. all orders (with the exception of GTC orders) will be cancelled automatically at Market close or when the ITM under which the order was submitted is logged out without being transferred to an alternative ITM

      5. all orders (including GTC orders) will be cancelled at close of business on the Last Trading Day of the expiry month to which they relate; and

      6. all orders with the exception of GTC orders will be cancelled automatically if the Trading Host fails.

3. **Error Correction Facility**: In our and your interests, the Exchange may from time to time sanction the making of contracts by us outside the pit in order to satisfy your order, where there has been an error in the execution of your order in the pit. Where a better price (an improvement) can be obtained, we will seek to secure and offer that improvement to you. However, you should note that where, in response to your order, we have bought or sold in accordance with the instruction in your order to buy or, as the case may be, to sell but have traded the wrong delivery/expiry month or wrong exercise price of the relevant contract, then we may in accordance with the Exchange's Rules offset any loss arising from that trade against any improvement achieved for you in the course of correctly satisfying your order, thus offering you only the net improvement, if any.

4. **Matching contracts:** In respect of every contract made between us subject to the Rules of LIFFE, we shall have made an equivalent contract on the floor of the market for execution by open outcry or in the market conducted on the Automated Pit Trading system, or shall have accepted the allocation of any such contract.

5. **Allocation:** In respect of every contract made between us for allocation to another member specified by you:

   (a) in the event that such other member accepts the allocation, we shall (without prejudice to any claim we may have for commission or other payment) upon such acceptance cease to be a party to the contract and shall have no obligation to you for its performance;

   (b) in the event that such other member declines to accept the allocation, we shall be entitled at our option either to confirm the contract with you or to liquidate it by such sale, purchase, disposal or other transaction or cancellation as we may in our discretion determine, whether on the market or by private contract or any other feasible method; and any balance resulting from such liquidation shall be promptly settled between us.

6. **Allocation on Delivery or Exercise:** Where the London Clearinghouse ("LCH") does not specify a particular contract when making a delivery or exercise, IB shall use a random lottery when selecting particular contracts. This method is detailed in the Disclosure Regarding IB's Procedures for Allocating Equity Option Exercise Notices available on the IB website. However, Customer acknowledges that: (A) commodity options cannot be exercised and must be closed out by offset; and (B) for futures contracts that settle not in cash but by physical delivery of the commodity (including currencies not on IB's Deliverable Currency List), Customer cannot make or receive delivery. If Customer has not offset a commodity option or physical delivery futures position prior to the deadline on the IB website, IB is authorized to roll or liquidate the position or liquidate any position or commodity resulting from the option or futures contract, and Customer is liable for all losses/costs. As such, IB does not use an allocation method on physical delivery futures.

7. **Margin:** Customer shall monitor Customer's account so that at all times the account shall contain a sufficient Account Balance to meet the margin requirements set by IB, margin requirements which IB may modify for any Customer for open and new positions at any time in IB's sole discretion. The required margin may exceed the margin required by any exchange or clearing house. IB may reject any Customer Order while determining the correct margin status of Customer's account. Customer shall maintain, without notice or demand, a sufficient Account Balance at all times so as to continuously meet the margin requirements established by IB. IB has no obligation to notify Customer of any failure to meet margin requirements in Customer's account prior to exercising its rights and remedies under this Agreement. Customer understands that IB will not issue margin calls, and that IB will not credit Customer's account to meet intraday margin deficiencies.

8. **The Market - Exclusion of Liability (rule 1.4):** The Exchange is obliged under the Financial Services Markets Act 2000 to ensure that business conducted by means of its facilities is conducted in an orderly manner and so as to afford proper protection to investors. To this end, the Exchange will at all times endeavour to maintain a fair and orderly market as is consistent with the Exchange's legal obligations and the object of the market.

   The Exchange wishes to draw to the attention of members and clients that, inter alia, business on the market may from time to time be suspended or restricted or the market may from time to time be closed for a temporary period or for such longer period as may be determined in accordance with the LIFFE's Rules including, without limitation, as a result of a decision taken under Rule 4.15 or 4.16 on the occurrence of one or more events which require such action to be taken in the interests of, inter alia, maintaining a fair and orderly market. Any such action may result the inability of one or more members and through such members one or more clients to enter into contracts in accordance with the Rules on the terms of Exchange Contracts either by means of contracts entered into on the market floor or through an ATS.

   Furthermore, a member and through the member one or more clients may from time to time be prevented from or hindered in entering into contracts in the terms of Exchange Contracts, or errors in orders or in contracts in the terms of Exchange Contracts may arise, as a result of a failure or malfunction of communications, or equipment, or market facilities, or the ATS central processing systems, or one or more ATS workstations supplied to the member by the Exchange or otherwise used by the member or software supplied to the member by the Exchange or any other person.

   The Exchange further wishes to draw the following exclusion of liability to the attention of members and clients. Unless otherwise expressly provided in the Rules or in any other agreement to which the Exchange is party, the Exchange shall not be liable to any member or client for loss (including any indirect or consequential loss including, without limitation, loss of profit), damage, injury or delay, whether direct or indirect, arising from any of the circumstances or occurrences referred to in Rule 1.4.2. or from any act or omission of the Exchange, its officers, employees, agents or representatives under LIFFE's Rules or pursuant to the Exchange's obligations under statute or from any breach of contract by or any negligence howsoever arising of the Exchange, its officers, employees, agents or representatives.

9. **Arbitration.** Any dispute arising from or relating to this agreement, in so far as it relates to contracts made between us subject to the Rules of LIFFE, and any dispute arising from or relating to any such contract as aforesaid and made hereunder shall, unless resolved between us, be referred to arbitration under the arbitration rules of LIFFE, or to such other organisation as LIFFE may direct before either of us resort to the jurisdiction of the courts (other than to obtain an injunction or an order for security for a claim).

10. **Governing Law.** This agreement and all contracts made under this agreement shall be subject to and construed in accordance with English law.

11. **Jurisdiction:** Subject to the arbitration clause above, disputes arising from this agreement or from contracts made under this agreement shall (for our benefit) be subject to the exclusive jurisdiction of the English courts to which both parties hereby irrevocably submit, provided that this shall not prevent us bringing an action in the courts of any other jurisdiction.

12. **Changes to Agreement:** Notwithstanding any previous agreement between us to the contrary, we now agree that a variation of the terms agreed between us from time to time does not require the written agreement of both of us. This notification shall take effect 12 days after despatch by us, provided that you do not object within 10 days of receipt.

REGULATORY INFORMATION AND ADDITIONAL PROVISIONS FOR USERS FROM HONG KONG & USERS TRADING ON HONG KONG EXCHANGES

Your agreement is with Interactive Brokers' United States office ("IB"). IB wants to make sure that you are aware that:

- As of March 6, 2000, The Stock Exchange of Hong Kong Limited (“SEHK”), Hong Kong Futures Exchange Limited (“HKFE”) and Hong Kong Securities Clearing Company Limited (“HKSCC”) merged under a single holding company, Hong Kong Exchanges and Clearing Limited (“HKEx”). The SEHK Options Clearing House Limited (“SEOCH”) and the HKFE Clearing Corporation Limited are also wholly-owned subsidiaries of HKEx.
- IB is not a member of the HKFE.
- IB is not a member of the SEHK.
- Factual information, including market quotations and other data, is provided as a discretionary courtesy; and IB does not warrant in any fashion, and is not responsible for, the accuracy or timeliness of such information. Reliance on such information is at the Customer's own risk. (See paragraph 25 of the IB Customer Agreement).
- Electronic or computer-based facilities and systems such as those used by IB are vulnerable to disruption or failure. Your ability to make claims or recover losses may be subject to limits on liability imposed by the IB Customer Agreement. (See paragraph 28 of the IB Customer Agreement).
- **Because information is being sent to you, and from you, through internet facilities, there will be a time delay with respect to price quotations and data transmission and your orders may not necessarily be executed at the price indicated to you through the internet.**

The following "Additional Provisions" are applicable to Users from Hong Kong and Users trading on Hong Kong Exchanges and are in addition to the Provisions of the IB Customer Agreement. To the extent that there is any conflict between the terms of the IB Customer Agreement and the terms of the Additional Provisions, the Additional Provisions shall prevail.

The following definitions are applicable to the Additional Provisions:

- "Agreement" refers to the IB Customer Agreement and these Additional Provisions;
- “Commission” means the Securities and Futures Commission;
- "HKFE" means Hong Kong Futures Exchange Limited;
- "the HKFE Clearing House" means HKFE Clearing Corporation Limited;
- "SEHK" means The Stock Exchange of Hong Kong Limited;
- "SEOCH" means The SEHK Options Clearing House Limited;
- “CCASS” means the Central Clearing and Settlement System operated by Hong Kong Securities Clearing Company Limited;
- “HKSCC” means Hong Kong Securities Clearing Company Limited;
- "IB" means Interactive Brokers LLC, an overseas company registered with the Securities and Futures Commission as a Dealer and also registered in the United States as a broker-dealer with the U.S. Securities and Exchange Commission and a Futures Commission Merchant with the U.S. Commodity Futures Trading Commission;
- "Procedures" means the practices, procedures and administrative requirements prescribed from time to time by the HKEx, HKFE, SEHK, HKFE Clearing House, CCASS/HKSCC or SEOCH, as applicable;
- "the Ordinance" means the Securities and Futures Ordinance, Chapter 571 of the Laws of Hong Kong as amended from time to time;
- "THSHK" means Timber Hill Securities Hong Kong Limited, an entity registered with the Securities and Futures Commission and a member of the SEHK, HKFE, HKFE Clearing House, SEOCH and HKSCC; THSHK is an affiliate of IB.
- "Rules" means the Rules and Regulations of the HKEx, HKFE, SEHK, HKFE Clearing House, CCASS/HKSCC or SEOCH, as applicable, and any amendments, supplements, variations or modifications thereto.

1. These Additional Provisions are subject to and governed by the provisions of the Ordinance and Hong Kong Law.

2. The rules and regulations of the HKEx, HKFE or SEHK as applicable, and the HKFE Clearing House, CCASS/HKSCC or SEOCH, as applicable, shall be binding on the Customer and IB. Those rules and regulations contain provisions which require IB, in certain circumstances, to disclose the name and beneficial identity or such other information concerning Customer as the exchange or Commission may request. Customer agrees to provide such information to IB in compliance with the Ordinance, exchange Rules, Regulations and Procedures or as the exchange or Commission may require. Customer acknowledges that if such information is not provided, the Chief Executive of the exchange may require the closing out of Customer’s positions or the imposition of a margin surcharge on Customer's positions.

3. IB, its affiliates, including THSHK, and their respective directors and/or employees may trade on their own account and, subject to the provisions of the Ordinance, IB and its affiliates may take the opposite position to the Customer's order in relation to any futures/options contract, whether on IB's or its affiliate's own account or for the account of other customers of IB, provided that such trade is executed competitively on or through the facilities of HKFE in accordance with its rules or the facilities of any other commodity, futures or options exchange in accordance with the rules and regulations of the exchanges and clearinghouses governing the relevant markets.

4. Unless otherwise confirmed in writing by IB and agreed to by the Customer and IB, IB is acting solely as broker to any transactions made with IB by the Customer.

5. In all transactions referred to in the Agreement, IB or its affiliates are authorized to engage in proprietary trading and may contract as principal.

6. The Customer submits to the non-exclusive jurisdiction of the Courts of Hong Kong in respect of all disputes, differences and claims relating to or arising out of the Agreement.

7. The Customer is bound by rule 631 of the HKFE which permits the HKFE or Chief Executive of the HKFE to take steps to limit positions or require the closing out of contracts of the Customer who in the opinion of the HKFE or the Chief Executive are accumulating positions which are or may be detrimental to any particular Market or Markets, or which are or may be capable of adversely affecting the fair and orderly operation of any Market or Markets as the case may be. In addition, IB may be required to report information regarding large open positions held by its Customers in accordance with relevant regulations. More information on these requirements can be found in HKFE rules 628 – 633 and the Securities and Futures (Contracts Limits and Reportable Positions) Rules and related guidance notes issued by the Commission.

8. All monies or other properties received by IB from the Customer or from any other person, including the HKFE Clearing House for the account of the Customer in respect of the futures/options contracts transacted on behalf of the Customer, shall be held by IB as trustee, segregated from IB's own assets and paid into a segregated bank account. All monies or other property so held by IB shall not form part of the assets of IB for insolvency or winding up purposes but shall be promptly returned to Customer upon the appointment of a provisional liquidator, liquidator or similar officer over all or any part of IB's business or assets.

9. The Customer hereby authorizes IB to apply any monies, approved debt securities or approved securities which the Customer may pay to IB in order to: (i) meet obligations to the HKFE Clearing House (provided that no withdrawal from the Customer's accounts with IB may be made which would have the effect that the relevant margin requirements or trading liabilities conducted on behalf of any Customer are thereby financed by any other Customer); (ii) pay commission, brokerage, levies and other proper charges for contracts transacted by IB on behalf of the Customer; and/or (iii) make payments in accordance with the Customer's directions (provided that no money may be paid into another account of the Customer unless that account is also a segregated bank account). The Customer acknowledges that IB may apply such monies, approved debt securities or approved securities in or towards meeting IB's obligations to any party insofar as such obligations arise in connection with or incidental to all futures/options contracts transacted on the Customer's behalf. The Customer agrees that IB may retain interest on the Customer's money.

10. In respect of any account of IB, its affiliates, including THSHK, or any other broker acting on their behalf, maintained with the HKFE Clearing House, whether or not such account is maintained wholly or partly in respect of the futures/options contracts transacted on behalf of the Customer and whether or not monies or approved securities paid or deposited by the Customer has been paid to the HKFE Clearing House, as between such entities and the HKFE Clearing House, such entities deal as principal and accordingly no such account is impressed with any trust or other equitable interest in favor of the Customer and the monies and/or approved securities paid to or deposited with the HKFE Clearing House are thereby freed from the trust referred to in paragraph 8, above.

11. In the event that the Customer directs IB to enter into any contract on an exchange or other market on which such transactions are effected in a foreign currency: (i) any profit or loss arising as a result of a fluctuation in the exchange rate affecting such currency will be entirely for the account and risk of the Customer; (ii) all initial and subsequent deposits for margin purposes shall be made in such currency in such amounts as IB may, at its sole discretion, require; and (iii) when such a contract is liquidated IB shall debit or credit the account of the Customer in the currency in which such account is denominated at a rate of exchange (where the relevant contract is denominated in a currency other than that of the account) determined by IB at its sole discretion on the basis of the then prevailing money market rates of exchange.

12. The Customer acknowledges that the HKFE Clearing House may do all things necessary to transfer any open positions held by IB on the Customer's behalf and money and securities standing to the credit of the Customer's account with IB to another member of the HKFE if necessary.

13. LEVIES & COMMISSIONS

- Every contract executed on the floor of the HKFE shall be subject to the charge of an applicable Investor Compensation Fund levy and a levy pursuant to the Ordinance, the cost of both of which shall be borne by the Customer.
- In respect of contracts executed in markets other than those organized by the HKFE, any charges levied on such contracts by the relevant markets shall be borne by the Customer.
- The Customer will pay commission and other charges at rates to be determined by IB and at charges pursuant to Hong Kong law or the rules of the HKFE or other exchanges governing the relevant markets.

14. RULES & LAWS

- All transactions shall be subject to the constitution, rules, regulations, customs, usages, rulings and interpretations, from time to time extant or in force of the HKEx, HKFE or SEHK or other markets as applicable (and of their respective clearing house, if any), where the transactions are executed by IB or IB agents. All transactions under this agreement shall also be subject to any law, rule, or regulation then applicable thereto, including but not by way of limitation, the provisions of the Ordinance, as amended from time to time, and the rules and regulations thereunder.
- All transactions entered between IB and the Customer relating to any money, foreign currency, currency option, currency future, or currency forward contract or foreign exchange contract shall be governed by and subject to all the rules, regulations, orders and laws of the country of the currency or money concerned and those of Hong Kong and/or the by-laws, rules and regulations of the exchange concerned in which the transaction is done.
- All transactions related to futures/options contracts executed in markets other than those organized by the HKFE will be subject to the rules and regulations of those markets and not those of the HKFE, with the result that the Customer may have a markedly different level and type of protection in relation to those transactions as compared to the level and type of protection afforded by the rules of the HKFE.

- No provisions of this Agreement will operate to remove, exclude, or restrict any of your rights or any obligations of IB under Hong Kong law.

15. EXPLANATION OF MARGIN PROCEDURES AND UNILATERAL CLOSING OUT OF CLIENTS' POSITIONS

Margin Procedures

We set out below an explanation of margin procedures and the circumstances under which Customer positions may be unilaterally closed.

- Paragraph 11 of the IB Customer Agreement sets out detailed provisions regarding Margin Requirements.
- IB follows all margin rules laid down by all exchanges on which products are traded on margin.
- Any changes in margin requirements (whether imposed by the exchange or by IB) will be communicated to customers.
- Customers must remember that, in the event of a default, IB may close out the customers' open positions without prior notice to or consent from the customers as provided for by the terms of the Agreement. IB has reserved in the Agreement the right to close out any open positions(s) without notice: (i) when the margins on deposit with IB are exhausted, inadequate in the opinion of IB to protect it against possible price fluctuations or any adverse conditions; or (ii) any other appropriate circumstances. Please Note: IB is required to notify the HKFE (and may be required to report to the HKFE and the Commission particulars of all open positions) if Customer fails to meet two or more successive margin calls or demands for variation adjustments if the total amount in default exceeds HK $150,000.
- No conduct or omission on behalf of IB, nor any agreement purportedly entered into on IB's behalf (save an agreement in accordance with the terms of the Agreement), shall constitute any form of waiver or variation or relaxation of IB's rights to close out customers' positions unilaterally.
- Any steps taken by IB to close out customers' positions unilaterally will be entirely without prejudice to IB's other rights under the Agreement and otherwise, in particular the right to payments from customers of all amounts outstanding.

16. STATEMENT OF PARTICULARS OF APPROVED CONTRACTS

IB and THSHK are licensed to trade in the products approved by the HKEx, HKFE or SEHK, as applicable, from time to time. Contract specifications for the products in question are available on request.

17. If Customer suffers pecuniary loss by reason of IB’s default, the liability of the Investor Compensation Fund will be restricted to valid claims as provided for in the Ordinance and the relevant subsidiary legislation and will be subject to the monetary limits specified in the Securities and Futures (Investor Compensation – Compensation Limits) Rules and accordingly there can be no assurance that any pecuniary loss sustained by reason of such a default will necessarily be recouped from the Investor Compensation Fund in full, in part or at all.

18. We disclose the following to you: Company Name: Interactive Brokers LLC. Licensed for Dealing in Securities, Dealing in Futures Contracts and Leveraged Foreign Exchange Trading. Central Entity Number (CE Number): AEX264. Staff responsible for your account: The IB Customer Service Desk. Name of IB Responsible Officer / Registered Representative: David E. Friedland CE No.: ACP478.

19. RISK DISCLOSURE STATEMENT FOR EQUITY SECURITIES

- Customer acknowledges that the price of securities can and does fluctuate, and that any individual security may experience downward movements, and under some circumstances even become valueless. Customer appreciates therefore that there is an inherent risk that losses may be incurred rather than profit made, as a result of buying and selling securities. This is a risk that the Customer is prepared to accept.
- Customer also acknowledges that there are risks in leaving securities in the custody of the Broker or in authorizing the Broker to deposit securities as collateral for loans or advances made to the Broker or authorizing the Broker to borrow or loan securities.

HONG KONG RISK DISCLOSURE STATEMENTS

A. RISK OF SECURITIES TRADING

- The prices of securities fluctuate, sometimes dramatically. The price of a security may move up or down, and may become valueless. It is as likely that losses will be incurred rather than profit made as a result of buying and selling securities.

B. RISK OF TRADING FUTURES AND OPTIONS

- The risk of loss in trading futures contracts or options is substantial. In some circumstances, you may sustain losses in excess of your initial margin funds. Placing contingent orders, such as "stop-loss" or "stop-limit" orders, will not necessarily avoid loss. Market conditions may make it impossible to execute such orders. You may be called upon at short notice to deposit additional margin funds. If the required funds are not provided within the prescribed time, your position may be liquidated. You will remain liable for any resulting deficit in your account. You should therefore study and understand futures contracts and options before you trade and carefully consider whether such trading is suitable in the light of your own financial position and investment objectives. If you trade options you should inform yourself of exercise and expiration procedures and your rights and obligations upon exercise or expiry.

C. RISK OF TRADING IN LEVERAGED FOREIGN EXCHANGE CONTRACTS

- The risk of loss in leveraged foreign exchange trading can be substantial. You may sustain losses in excess of your initial margin funds. Placing contingent orders, such as "stop-loss" or "stop-limit" orders, will not necessarily limit losses to the intended amounts. Market conditions may make it impossible to execute such orders. You may be called upon at short notice to deposit additional margin funds. If the required funds are not provided within the prescribed time, your position may be liquidated. You will remain liable for any resulting deficit in your account. You should therefore carefully consider whether such trading is suitable in light of your own financial position and investment objectives.

D. RISK OF TRADING IN GROWTH ENTERPRISE MARKET STOCKS

- Growth Enterprise Market (GEM) stocks involve a high investment risk. In particular, companies may list on GEM with neither a track record of profitability nor any obligation to forecast future profitability. GEM stocks may be very volatile and illiquid.
- You should make the decision to invest only after due and careful consideration. The greater risk profile and other characteristics of GEM mean that it is a market more suited to professional and other sophisticated investors.
- Current information on GEM stocks may only be found on the internet website operated by The Stock Exchange of Hong Kong Limited. GEM Companies are usually not required to issue paid announcements in gazetted newspapers.
- You should seek independent professional advice if you are uncertain of or have not understood any aspect of this risk disclosure statement or the nature and risks involved in trading of GEM stocks.

E. RISK OF CLIENT ASSETS RECEIVED OR HELD OUTSIDE HONG KONG

- Client assets received or held by the licensed or registered person outside Hong Kong are subject to the applicable laws and regulations of the relevant overseas jurisdiction which may be different from the Securities and Futures Ordinance (Cap.571) and the rules made thereunder. Consequently, such client assets may not enjoy the same protection as that conferred on client assets received or held in Hong Kong.

F. RISK OF PROVIDING AN AUTHORITY TO REPLEDGE YOUR SECURITIES COLLATERAL ETC.

- There is risk if you provide the licensed or registered person with an authority that allows it to apply your securities or securities collateral pursuant to a securities borrowing and lending agreement, repledge your securities collateral for financial accommodation or deposit your securities collateral as collateral for the discharge and satisfaction of its settlement obligations and liabilities.
- If your securities or securities collateral are received or held by the licensed or registered person in Hong Kong, the above arrangement is allowed only if you consent in writing. Moreover, unless you are a professional investor, your authority must specify the period for which it is current and be limited to not more than 12 months. If you are a professional investor, these restrictions do not apply.
- Additionally, your authority may be deemed to be renewed (i.e. without your written consent) if the licensed or registered person issues you a reminder at least 14 days prior to the expiry of the authority, and you do not object to such deemed renewal before the expiry date of your then existing authority.
- You are not required by any law to sign these authorities. But an authority may be required by licensed or registered persons, for example, to facilitate margin lending to you or to allow your securities or securities collateral to be lent to or deposited as collateral with third parties. The licensed or registered person should explain to you the purposes for which one of these authorities is to be used.
- If you sign one of these authorities and your securities or securities collateral are lent to or deposited with third parties, those third parties will have a lien or charge on your securities or securities collateral. Although the licensed or registered person is responsible to you for securities or securities collateral lent or deposited under your authority, a default by it could result in the loss of your securities or securities collateral.
- A cash account not involving securities borrowing and lending is available from most licensed or registered persons. If you do not require margin facilities or do not wish your securities or securities collateral to be lent or pledged, do not sign the above authorities and ask to open this type of cash account.

G. RISK OF MARGIN TRADING

- The risk of loss in financing a transaction by deposit of collateral is significant. You may sustain losses in excess of your cash and any other assets deposited as collateral with the licensed or registered person. Market conditions may make it impossible to execute contingent orders, such as "stop-loss" or "stop-limit" orders. You may be called upon at short notice to make additional margin deposits or interest payments. If the required margin deposits or interest payments are not made within the prescribed time, your collateral may be liquidated without your consent. Moreover, you will remain liable for any resulting deficit in your account and interest charged on your account. You should therefore carefully consider whether such a financing arrangement is suitable in light of your own financial position and investment objectives.

H. ADDITIONAL RISK DISCLOSURE FOR FUTURES AND OPTIONS TRADING

- This brief statement does not disclose all of the risks and other significant aspects of trading in futures and options. In light of the risks, you should undertake such transactions only if you understand the nature of the contracts (and contractual relationships) into which you are entering and the extent of your exposure to risk. Trading in futures and options is not suitable for many members of the public. You should carefully consider whether trading is appropriate for you in light of your experience, objectives, financial resources and other relevant circumstances.

<u>Futures</u>

1. Effect of 'Leverage' or 'Gearing'

Transactions in futures carry a high degree of risk. The amount of initial margin is small relative to the value of the futures contract so that transactions are 'leveraged' or 'geared'. A relatively small market movement will have a proportionately larger impact on the funds you have deposited or will have to deposit: this may work against you as well as for you. You may sustain a total loss of initial margin funds and any additional funds deposited with the firm with which you deal to maintain your position. If the market moves against your position or margin levels are increased, you may be called upon to pay substantial additional funds on short notice to maintain your position. If you fail to comply with a request for additional funds within the time prescribed, your position may be liquidated at a loss and you will be liable for any resulting deficit.

2. Risk-reducing orders or strategies

The placing of certain orders (e.g. “stop-loss” orders, or “stop-limit” orders), which are intended to limit losses to certain amounts, may not be effective because market conditions may make it impossible to execute such orders. Strategies using combinations of positions, such as 'spread' and 'straddle' positions may be as risky as taking simple 'long' or 'short' positions.

<u>Options</u>

3. Variable degrees of risk

Transactions in options carry a high degree of risk. Purchasers and sellers of options should familiarize themselves with the type of option (i.e. put or call) which they contemplate trading and the associated risks. You should calculate the extent to which the value of the options must increase for your position to become profitable, taking into account the premium and all transaction costs.

The purchaser of options may offset or exercise the options or allow the options to expire. The exercise of an option results either in a cash settlement or in the purchaser acquiring or delivering the underlying interest. If the option is on a futures contract, the purchaser will acquire a futures position with associated liabilities for margin (see the section on Futures above). If the purchased options expire worthless, you will suffer a total loss of your investment which will consist of the option premium plus transaction costs. If you are contemplating purchasing deep-out-of-the-money options, you should be aware that the chance of such options becoming profitable ordinarily is remote.

Selling ('writing' or 'granting') options generally entails considerably greater risk than purchasing options. Although the premium received by the seller is fixed, the seller may sustain a loss well in excess of that amount. The seller will be liable for additional margin to maintain the position if the market moves unfavorably against him. The seller will also be exposed to the risk of the purchaser exercising the option and the seller will be obligated to either settle the options in cash or to acquire or deliver the underlying interest. If the option is on a futures contract, the seller will acquire a position in a futures contract with associated liabilities for margin (see the section on Futures above). If the option is 'covered' by the seller holding a corresponding position in the underlying interest or a futures contract or another option, the risk may be reduced. If the option is not covered, the risk of loss can be unlimited.

Certain exchanges in some jurisdictions permit deferred payment of the option premium, exposing the purchaser to liability for margin payments not exceeding the amount of the premium. The purchaser is still subject to the risk of losing the premium and transaction costs. When the option is exercised or expires, the purchaser is responsible for any unpaid premium outstanding at that time.

Additional Risks Common to Futures and Options

4. Terms and conditions of contracts

You should ask the firm with which you deal about the terms and conditions of the specific futures or options which you are trading and associated obligations (e.g. the circumstances under which you may become obliged to make or take delivery of the underlying interest of a futures contract and, in respect of options, expiration dates and restrictions on the time for exercise). Under certain circumstances the specifications of outstanding contracts (including the exercise price of an option) may be modified by the exchange or clearing house to reflect changes in the underlying interest.

5. Suspension or restriction of trading and pricing relationships

Market conditions (e.g. illiquidity) and/or the operation of the rules of certain markets (e.g. the suspension of trading in any contract or contract month because of price limits or 'circuit breakers') may increase the risk of loss by making it difficult or impossible to effect transactions or liquidate/offset positions. If you have sold options, this may increase the risk of loss.

Further, normal pricing relationships between the underlying interest and the futures, and the underlying interest and the option may not exist. This can occur when, for example, the futures contract underlying the option is subject to price limits while the option is not. The absence of an underlying reference price may make it difficult to judge 'fair' value.

6. Deposited cash and property

You should familiarize yourself with the protections given to money or other property you deposit for domestic and foreign transactions, particularly in the event of a firm insolvency or bankruptcy. The extent to which you may recover your money or property may be governed by specific legislation or local rules. In some jurisdictions, property which had been specifically identifiable as your own will be pro-rated in the same manner as cash for purposes of distribution in the event of a shortfall.

7. Commission and other charges

Before you begin to trade, you should obtain a clear explanation of all commission, fees and other charges for which you will be liable. These charges will affect your net profit (if any) or increase your loss.

8. Transactions in other jurisdictions

Transactions on markets in other jurisdictions, including markets formally linked to a domestic market, may expose you to additional risk. Such markets may be subject to regulation which may offer different or diminished investor protection. Before you trade, you should enquire about any rules relevant to your particular transactions. Your local regulatory authority will be unable to compel the enforcement of the rules of regulatory authorities or markets in other jurisdictions where your transactions have been effected. You should ask the firm with which you deal for details about the types of redress available in both your home jurisdiction and other relevant jurisdictions before you start to trade.

9. Currency risks

The profit or loss in transactions in foreign currency-denominated contracts (whether they are traded in your own or another jurisdiction) will be affected by fluctuations in currency rates where there is a need to convert from the currency denomination of the contract to another currency.

10. Trading facilities

Electronic trading facilities are supported by computer-based component systems for the order-routing, execution, matching, registration or clearing of trades. As with all facilities and systems, they are vulnerable to temporary disruption or failure. Your ability to recover certain losses may be subject to limits on liability imposed by the system provider, the market, the clearing house and/or participant firms. Such limits may vary: you should ask the firm with which you deal for details in this respect.

11. Electronic trading

Trading on an electronic trading system may differ not only from trading in an open-outcry market but also from trading on other electronic trading systems. If you undertake transactions on an electronic trading system, you will be exposed to risks associated with the system including the failure of hardware and software. The result of any system failure may be that your order is either not executed according to your instructions or is not executed at all.

12. Off-exchange transactions

In some jurisdictions, and only then in restricted circumstances, firms are permitted to effect off-exchange transactions. The firm with which you deal may be acting as your counterparty to the transaction. It may be difficult or impossible to liquidate an existing position, to assess the value, to determine a fair price or to assess the exposure to risk. For these reasons, these transactions may involve increased risks. Off-exchange transactions may be less regulated or subject to a separate regulatory regime. Before you undertake such transactions, you should familiarize yourself with applicable rules and attendant risks.

I. DISCLOSURE REGARDING HONG KONG OPTIONS

- Hong Kong options are treated as normal premium options in that IB will not post changes in variation margin (profits or losses) for such options. The profit or loss will be determined at the time a position is closed and will be the difference between the opening and closing transaction prices. You should note that the end profit or loss calculation result remains identical. It is important to note that positions resulting from strategies with combined futures and options legs may require additional collateral to maintain. This is because commodity accounts must maintain a positive cash balance and adverse market movements may cause the futures portion of the strategy to generate negative cash which will not be offset by options price changes.

Client Standing Authority

To: Interactive Brokers LLC
Suite 1512, Two Pacific Place
88 Queensway
Admiralty, Hong Kong

Authority under Securities and Futures (Client Securities) Rules

This letter of authority is in respect of my/our securities or securities collateral as set out below.

Unless otherwise defined, all the terms used in this authorisation letter shall have the same meanings as in the Securities and Futures Ordinance and the Securities and Futures (Client Securities) Rules as amended from time to time.

This letter authorises you to:

i. apply any of my/our securities or securities collateral pursuant to a securities borrowing and lending agreement;

ii. deposit any of my/our securities collateral with an authorized financial institution as collateral for financial accommodation provided to you;

iii. deposit any of my/our securities collateral with Hong Kong Securities Clearing Company Limited ("HKSCC") as collateral for the discharge and satisfaction of your settlement obligations and liabilities. I/We understand that HKSCC will have a first fixed charge over my/our securities to the extent of your obligations and liabilities;

iv. deposit any of my/our securities collateral with any other recognised clearing house, or another intermediary licensed or registered for dealing in securities, as collateral for the discharge and satisfaction of your settlement obligations and liabilities; and

v. apply or deposit any of my/our securities collateral in accordance with paragraphs (i), (ii), (iii) and/or (iv) above if you provide financial accommodation to me/us in the course of dealing in securities and also provide financial accommodation to me/us in the course of any other regulated activity for which you are licensed or registered.

You may do any of these things without giving me/us notice. I/We acknowledge that this authority shall not affect your right to dispose or initiate a disposal by your associated entity of my/our securities or securities collateral in settlement of any liability owed by or on behalf of me/us to you, the associated entity or a third person.

This authority is given to Interactive Brokers LLC in consideration of its agreeing to continue to maintain securities cash and/or margin account(s) for me/us and in consideration of its agreeing to continue to maintain futures account(s) for me/us.

I/We understand that a third party may have rights to my/our securities, which you must satisfy before my/our securities can be returned to me/us.

This authority is valid for a period of 12 months from the date of this letter.

This authority may be revoked by giving you written notice addressed to the Customer Service Department at your address specified above. Such notice shall take effect upon the expiry of two weeks from the date of your actual receipt of such notice.

I/We understand that this authority shall be deemed to be renewed on a continuing basis without my/our written consent if you issue me/us a written reminder at least 14 days prior to the expiry date of this authority, and I/we do not object to such deemed renewal before such expiry date.

This letter has been explained to me/us and I/we understand the contents of this letter.

Client Money Standing Authority

To: Interactive Brokers LLC
Suite 1512, Two Pacific Place
88 Queensway
Admiralty, Hong Kong

Authority under Securities and Futures (Client Money) Rules

This letter of authority covers money held or received by Interactive Brokers LLC in Hong Kong (including any interest derived from the holding of the money which does not belong to you) in one or more segregated account(s) on my/our behalf ("Monies").

Unless otherwise defined, all the terms used in this authorisation letter shall have the same meanings as in the Securities and Futures Ordinance and the Securities and Futures (Client Money) Rules as amended from time to time.

This letter authorises you to:

1. combine or consolidate any or all segregated accounts, of any nature whatsoever and either individually or jointly with others, maintained by you or IBG LLC ("IB Group") and/or any of its subsidiaries from time to time and you may transfer any sum of Monies to and between such segregated account(s) to satisfy my/our obligations or liabilities to any member of the IB Group, whether such obligations and liabilities are actual, contingent, primary or collateral, secured or unsecured, or joint or several; and

2. transfer any sum of Monies interchangeably between any of the segregated accounts maintained at any time by any member of the IB Group.

You may do any of these things without giving me/us notice.

This authority is given to Interactive Brokers LLC in consideration of its agreeing to continue to maintain securities cash and/or margin account(s) for me/us and in consideration of its agreeing to continue to maintain futures account(s) for me/us.

This authority is given without prejudice to other authorities or rights which IB Group may have in relation to dealing in Monies in the segregated accounts.

This authority is valid for a period of 12 months from the date of this letter.

This authority may be revoked by giving you written notice addressed to the Customer Service Department at your address specified above. Such notice shall take effect upon the expiry of two weeks from the date of your actual receipt of such notice.

I/We understand that this authority shall be deemed to be renewed on a continuing basis without my/our written consent if you issue me/us a written reminder at least 14 days prior to the expiry date of this authority, and I/we do not object to such deemed renewal before such expiry date.

This letter has been explained to me/us and I/we understand the contents of this letter.

Notice Regarding NFA's BASIC System

Interactive Brokers LLC ("IBL") is required to inform its customers of the National Futures Association ("NFA") Background Affiliation Status Information Center ("BASIC"). The BASIC system compiles various information on registrants and anyone can access this system on the Internet.

The information in the BASIC system includes Commodity Futures Trading Commission ("CFTC") registration information and membership information from the NFA. Also included are regulatory and non-regulatory actions contributed by the NFA, the CFTC and the U.S. futures exchanges regarding futures-related activity.

The NFA BASIC system may be accessed at www.nfa.futures.org/basicnet/. To locate information on a registrant, simply enter the registrant's NFA ID number when prompted. For questions regarding this system, you may contact the NFA information center at 1-800-621-3570 between the hours of 8:00 a.m. to 5:00 p.m. CST.

FINRA Investor Protection Information Resources

Financial Industry Regulatory Authority ("FINRA") Conduct Rule 2267 requires that Interactive Brokers provide customers with certain information regarding its Public Disclosure Program. This information is included below:

1. The FINRA Public Disclosure (BrokerCheck) Program Hotline Number, Address and Facsimile number are:

   Telephone: (800) 289-9999

   FINRA BrokerCheck
   P.O. Box 9495
   Gaithersburg, MD 20898-9495

   Fax: (240) 386-4750

2. The FINRA Website address is:

   http://www.finra.org

Customers who wish to obtain a brochure that describes FINRA BrokerCheck should contact the FINRA at the address or phone number listed above.

Notice Regarding USA PATRIOT Act Section 311

Pursuant to U.S. regulations issued under Section 311 of the USA PATRIOT Act, Interactive Brokers prohibits customers from establishing, maintaining, administering or managing an account for, or on behalf of the following financial institutions:

- Aktsionerny Bank Russian Federation
- Banco Continental, S.A.
- Banco Delta Asia
- Bank Rossiya
- Bank Severny Morskoy Put
- Commercial Bank of Syria
- Credex
- Delta Asia Credit Limited
- Delta Asia Insurance
- FBME Bank Ltd.
- Hawali Exchange Co.
- Inresbank ooo
- Investcapitalbank
- Joint Stock Company Genbank
- Joint Stock Company Sevastopolsky Morskoy Bank
- JSB Sobinbank
- Kassem Rmeiti & Co for Exchange
- Mir Business Bank Zao
- Open Joint Stock Company Commercial Bank Verkhnevolzhsky
- Open Joint Stock Company Krasnodar Regional Investment Bank
- PAO Mosoblbank
- a.k.a. AKB Mosoblbank OAO
- a.k.a. Aktsionerny Kommercheski Bank
- a.k.a. Moskovski Oblastnoi Bank
- a.k.a. Otkrytoe Aktsionernoe Obshchestvo
- a.k.a. Public Joint Stock Company Moscow Regional Bank
- PJSC Trustbank
- Russian Financial Alliance Bank
- Russian National Commercial Bank
- SMP Bank
- Syrian Lebanese Commercial Bank

The regulations also require us to notify you that your account with Interactive Brokers may not be used to provide services to any of the financial institutions or jurisdictions listed above with access to Interactive Brokers. If we become aware that any of the entities or jurisdictions listed above are directly or indirectly using the account you hold at Interactive Brokers, we will be required to take appropriate steps to prevent such access, including, where necessary, terminating your account. We may from time to time apprise you of additional entities that are added to this list as new restrictions are issued.

Interactive Brokers LLC Customer Agreement
Individual Retirement Account

Article I

Customer is establishing a traditional individual retirement account under section 408(a) of the Internal Revenue Code to provide for his or her retirement and for the support of his or her beneficiaries after death.

Article II

Customer agrees that such individual retirement account shall be administered by Delaware Charter Guarantee & Trust Company doing business as Principal Trust Company ("Principal Trust Company" or "Trustee") who will act as Trustee with regard to this account.

Customer agrees that he or she has received, read and understands the documents included in the "Traditional, Rollover, Roth, or SEP Individual Retirement Account" Application Booklet ("the IRA Application Booklet") produced by Principal Trust Company that is distributed during the Interactive Brokers LLC ("IB") application process and is also available on IB's website. Included in the IRA Application Booklet are Principal Trust Company's Privacy Notice, Internal Revenue Service Opinion Letter and the Disclosure Statement for Self-Directed Individual Retirement Accounts. Customer acknowledges having received and read these documents.

Customer agrees to be bound by the following points included in the IRA Application Booklet:

I appoint Principal Trust Company to serve as Trustee. By making this appointment, I agree to and acknowledge the following:

- I have read and understand the Trust Agreement and Disclosure Statement included in the IRA Application Booklet and agree to abide by the terms of the plan documents listed above.
- I have read and understand the information provided in the Instructions included in the IRA Application Booklet regarding float.
- I understand Principal Trust Company is not an investment advisor and does not supervise or control my investment representative. Principal Trust Company does not endorse any particular investment. I agree to use independent judgment in making my investment decisions.
- I agree to resolve disputes with Principal Trust Company through binding arbitration. See Article 5.8G of the Trust Agreement included in the IRA Application Booklet.
- I certify that the social security number provided on the IB IRA Application is true and correct.

Article III

1. Customer Agreement: This Agreement ("Agreement") governs the relationship between Customer and Interactive Brokers LLC ("IB"). If this Agreement varies from the IB website, this Agreement controls. This Agreement cannot be amended or waived except in writing by an IB officer. Customer Service employees cannot amend or waive any part of this Agreement. Customer acknowledges that IB may modify this Agreement by sending notice of the revised Agreement by e-mail or upon Customer log-in. Customer's use of IB after such notice constitutes acceptance of the revised Agreement.

2. No Investment, Tax or Trading Advice: IB representatives are not authorized to provide investment, tax or trading advice or to solicit orders. Nothing on IB's website is a recommendation or solicitation to buy or sell securities, futures or other investments.

3. Responsibility for Customer Orders/Trades: Customer acknowledges that IB does not know whether someone entering orders with Customer's user name/password is Customer. Unless IB is notified and agrees, Customer will not allow anyone to access Customer's account. Customer is responsible for the confidentiality and use of Customer's user name/password and agrees to report any theft/loss of such user name/password, or any unauthorized access to Customer's account, immediately by telephone or electronically through the IB website. Customer remains responsible for all transactions entered using Customer's user name/password.

4. Order Routing: Unless otherwise directed, IB will select the market/dealer to which to route Customer's orders. For products traded at multiple markets, IB may provide "Smart Routing", which seeks the best market for each order through a computerized algorithm. Customer should choose Smart Routing if available. If Customer directs orders to a particular market, Customer assumes responsibility for knowing and trading in accordance with the rules and policies of that market (e.g., trading hours, order types, etc.). IB cannot guarantee execution of every order at the best posted price: IB may not have access to every market/dealer; other orders may trade ahead; market centers may not honor posted prices or may re-route orders for manual handling; or market rules, decisions or system failures may prevent/delay execution of Customer's orders or cause orders not to receive the best price.

5. Order Cancellation/Modification: Customer acknowledges that it may not be possible to cancel/modify an order and that Customer is responsible for executions notwithstanding a cancel/modify request.

6. Order Execution: IB shall execute Customer orders as agent, unless otherwise confirmed. IB can execute Customer orders as principal. IB may use another broker, or an affiliate, to execute orders, and they have benefit of all IB's rights hereunder. IB may decline any Customer order, or terminate Customer's use of IB's services at any time in IB's discretion. All transactions are subject to rules and policies of relevant markets and clearinghouses, and applicable laws and regulations. **IB IS NOT LIABLE FOR ANY ACTION OR DECISION OF ANY EXCHANGE, MARKET, DEALER, CLEARINGHOUSE OR REGULATOR.**

7. Confirmations:

A. Customer agrees to monitor each order until IB confirms execution or cancellation. Customer acknowledges that confirmations of executions or cancellations may be delayed or may be erroneous (e.g. due to computer system issues) or may be cancelled/adjusted by an exchange. Customer is bound by the actual order execution, if consistent with Customer's order. If IB confirms execution or cancellation in error and Customer delays reporting such error, IB reserves the right to remove the trade from the account or require Customer to accept the trade, in IB's discretion.

B. Customer agrees to notify IB immediately by telephone or electronically through the IB website if: i) Customer fails to receive an accurate confirmation of an execution or cancellation; ii) Customer receives a confirmation that is different than Customer's order; iii) Customer receives a confirmation for an order that Customer did not place; or iv) Customer receives an account statement, confirmation, or other information reflecting inaccurate orders, trades, balances, positions, margin status, or transaction history. Customer acknowledges that IB may adjust Customer's account to correct any error. Customer agrees to promptly return to IB any assets erroneously distributed to Customer.

8. Proprietary Trading - Display of Customer Orders: Subject to all laws and regulations, Customer authorizes IB to execute proprietary trades of itself and its affiliates, though IB may simultaneously hold unexecuted Customer orders for the same products at the same price.

9. Customer Qualification: Customer warrants that their application is true and complete; will promptly notify IB of any information changes; and authorizes IB to make any inquiry to verify information.

A. Natural Persons: Customer warrants that Customer is over 18; is under no legal incapacity; and has sufficient knowledge and experience to understand the nature and risks of the products to be traded.

B. Organizations: Customer and its authorized representatives warrant that Customer: (i) is authorized under its governing document(s) and in the jurisdictions in which it is organized and/or regulated to enter this Agreement and trade (including on margin if applicable); (ii) is under no legal incapacity; and (iii) that persons identified to enter orders have proper authority and have sufficient knowledge and experience to understand the nature and risks of the products to be traded.

C. Trusts: “Customer" refers to the Trust and/or Trustees. Trustee(s) represent(s) that there are no Trustees other than listed in the application and certifies(y) that IB may follow instructions from any Trustee and deliver funds, securities, or any other assets to any Trustee or on any Trustee's instructions, including delivering assets to a Trustee personally. IB, in its discretion, may require written consent of any or all Trustee(s) prior to following instructions of any Trustee. Trustee(s) has (have) the power under the Trust documents and applicable law to enter this Agreement, open the type of account applied for, and enter transactions and issue instructions. Such powers include, without limit, authority to buy, sell (including short), exchange, convert, tender, redeem and withdraw assets (including delivery of securities to/from the account) to trade securities on margin or otherwise (including purchase/sale of options), and trade futures and/or options on futures, for the Trust. Should only one Trustee execute this Agreement, Trustee represents that Trustee has the authority to execute this Agreement, without consent by the other Trustees. Trustee(s) certifies(y) that all transactions for this account will comply with the Trust documents and applicable law. Trustee(s), jointly and severally, shall indemnify IB and hold IB harmless from any claim, loss, expense or liability for effecting any transactions, and acting upon any instructions given by the Trustee(s).

D. Regulated Persons and Entities: Unless Customer notifies IB otherwise, Customer represents that Customer is not a broker-dealer; futures commission merchant; or affiliate, associated person or employee thereof. Customer agrees to notify IB immediately by telephone or electronically through the IB website if Customer becomes employed or associated with a broker-dealer or futures commission merchant.

10. Joint Accounts: Each joint account holder agrees that each joint holder has authority, without notice to the other, to: (i) buy/sell securities, futures or other products (including on margin); (ii) receive account confirmations and correspondence; (iii) receive and dispose of money, securities or other assets; (iv) enter, terminate, or agree to modify this Agreement; (v) waive any part of this Agreement; and (vi) deal with IB as if each joint holder was the sole holder. Notice to any joint holder constitutes notice to all joint holders. Each joint account holder is jointly and severally liable to IB for all account matters. IB may follow instructions of any joint holder and make delivery to any joint account holder individually of any account property.

Upon death of any joint holder, the surviving holder shall give IB notice by telephone or electronically through the IB website and IB may, before or after notice, initiate proceedings, require documents, retain assets and/or restrict transactions as it deems advisable to protect itself against any liability or loss. The estate of any deceased joint account holder shall be liable and each survivor will be liable, jointly and severally, to IB for any debt or loss in the account or upon liquidation of the account. Unless Customers indicate otherwise, IB may presume that account holders are joint tenants with rights of survivorship. Upon death of any joint holder, the account shall be vested in the surviving holders, without in any manner releasing the deceased joint holder's estate from liability.

11. Margin:

A. Risk of Margin Trading: Margin trading is highly risky and may result in a loss of funds greater than Customer has deposited in the account. Customer has read the “Disclosure of Risks of Margin Trading” provided separately by IB.

B. Requirement to Maintain Sufficient Margin Continuously: Margin transactions are subject to initial and maintenance margin requirements of exchanges, clearinghouses and regulators and also to any additional margin requirement of IB, which may be greater ("Margin Requirements"). **IB MAY MODIFY MARGIN REQUIREMENTS FOR ANY OR ALL CUSTOMERS FOR ANY OPEN OR NEW POSITIONS AT ANY TIME, IN IB'S SOLE DISCRETION.**

Customer shall monitor their account so that at all times the account contains sufficient equity to meet Margin Requirements. IB may reject any order if the account has insufficient equity to meet Margin Requirements, and may delay processing any order while determining margin status. Customer shall maintain, without notice or demand, sufficient equity at all times to continuously meet Margin Requirements. Formulas for calculating Margin Requirements on the IB website are indicative only and may not reflect actual Margin Requirements. Customers must at all times satisfy whatever Margin Requirement is calculated by IB.

C. IB Will Not Issue Margin Calls: IB does not have to notify Customer of any failure to meet Margin Requirements prior to IB exercising its rights under this Agreement. Customer acknowledges that IB generally will not issue margin calls; generally will not credit Customer's account to meet intraday or overnight margin deficiencies; and is authorized to liquidate account positions in order to satisfy Margin Requirements without prior notice.

D. Liquidation of Positions and Offsetting Transactions:

i. IF AT ANY TIME CUSTOMER'S ACCOUNT HAS INSUFFICIENT EQUITY TO MEET MARGIN REQUIREMENTS OR IS IN DEFICIT, IB HAS THE RIGHT, IN ITS SOLE DISCRETION, BUT NOT THE OBLIGATION, TO LIQUIDATE ALL OR ANY PART OF CUSTOMER'S POSITIONS IN CUSTOMER'S ACCOUNT, AT ANY TIME AND IN ANY MANNER AND THROUGH ANY MARKET OR DEALER, WITHOUT PRIOR NOTICE OR MARGIN CALL TO CUSTOMER. CUSTOMER SHALL BE LIABLE AND WILL PROMPTLY PAY IB FOR ANY DEFICIENCIES IN CUSTOMER'S ACCOUNT THAT ARISE FROM SUCH LIQUIDATION OR REMAIN AFTER SUCH LIQUIDATION. IB HAS NO LIABILITY FOR ANY LOSS SUSTAINED BY CUSTOMER IN CONNECTION WITH SUCH LIQUIDATIONS (OR IF THE IB SYSTEM DELAYS EFFECTING, OR DOES NOT EFFECT, SUCH LIQUIDATIONS) EVEN IF CUSTOMER RE-ESTABLISHES ITS POSITION AT A WORSE PRICE.

ii. IB may allow Customer to pre-request the order of liquidation in event of a margin deficiency, but such requests are not binding on IB and IB retains sole discretion to determine the assets to be liquidated and the order/manner of liquidation. IB may liquidate through any market or dealer, and IB or its affiliates may take the other side of the transactions consistent with laws and regulations. If IB liquidates any/all positions in Customer's account, such liquidation shall establish Customer's gain/loss and remaining indebtedness to IB, if any. Customer shall reimburse and hold IB harmless for all actions, omissions, costs, fees (including, but not limited to, attorney's fees), or liabilities associated with any such transaction undertaken by IB. If IB executes an order for which Customer did not have sufficient equity, IB has the right, without notice, to liquidate the trade and Customer shall be responsible for any resulting loss and shall not be entitled to any resulting profit.

iii. If IB does not, for any reason, liquidate under-margined positions, and issues a margin call, Customer must satisfy such call immediately by depositing funds. Customer acknowledges that even if a call is issued, IB still may liquidate positions at any time.

iv. Customer acknowledges that IB also has the right to liquidate all or part of Customer's positions without prior notice: (i) if any dispute arises concerning any Customer trade, (ii) upon any "Default" as described in 17 below, or (iii) whenever IB deems liquidation necessary or advisable for IB's protection.

12. Universal Accounts: An IB Universal Account is two underlying accounts, an SEC-regulated securities account and a CFTC-regulated commodity account. Customer authorizes transfers between the securities and commodity accounts to cover Margin Requirements and other obligations, and acknowledges IB may liquidate positions to cover obligations in the other account. Customer authorizes IB to provide combined confirmations/statements for both accounts. **Customer acknowledges that only assets in the securities account are covered by SIPC protection and excess coverage and not assets in the commodity account.**

13. Short Sales: Customer acknowledges that short sales must be done in a margin account, subject to Margin Requirements; that prior to selling short, IB must believe it can borrow stock for delivery; and that if IB cannot borrow stock (or re-borrow after a recall notice) IB may buy-in stock on Customer's behalf, without notice to Customer, to cover short positions and Customer is liable for any losses/costs.

14. Event of Default: A "Default" occurs automatically, without notice upon: (i) Customer breach/repudiation of any agreement with IB; (ii) Customer failure to provide assurance satisfactory to IB of performance of an obligation, after request from IB in IB's sole discretion; (iii) proceedings by/against Customer under any bankruptcy, insolvency, or similar law; (iv) assignment for the benefit of Customer's creditors; (v) appointment of a receiver, trustee, liquidator or similar officer for Customer or Customer property; (vi) Customer representations being untrue or misleading when made or later becoming untrue; (vii) legal incompetence of Customer; (viii) proceeding to suspend Customer business or license by any regulator or organization; (ix) IB having reason to believe that any of the foregoing is likely to occur imminently.

Customer unconditionally agrees that, upon a Default, IB may terminate any or all IB's obligations to Customer and IB shall have the right in its discretion, but not the obligation, without prior notice, to liquidate all or any part of Customer's positions in any IB account, individual or joint, at any time and any manner and through any market or dealer. Customer shall reimburse and hold IB harmless for all actions, omissions, costs, fees (including, but not limited to, attorney's fees), or liabilities associated with any Customer Default or any transaction undertaken by IB upon Default.

15. Suspicious Activity: If IB in its sole discretion believes that a Customer account has been involved in any fraud or crime or violation of laws or regulations, or has been accessed unlawfully, or is otherwise involved in any suspicious activity (whether victim or perpetrator or otherwise), IB may suspend or freeze the account or any privileges of the account, may freeze or liquidate funds or assets, or may utilize any of the remedies in this Agreement for a "Default".

16. Multi-Currency Function in IB Accounts: Customers may be able to trade products denominated in different currencies using a base currency chosen by Customer. Upon purchase of a product denominated in a different currency from the base currency, a margin loan is created to fund the purchase, secured by the assets in Customer's accounts. If Customer maintains positions denominated in foreign currencies, IB will calculate Margin Requirements by applying exchange rates specified by IB. **IB WILL APPLY "HAIRCUTS" (A PERCENTAGE DISCOUNT ON THE FOREIGN CURRENCY EQUITY AMOUNT) TO REFLECT THE POSSIBILITY OF FLUCTUATING EXCHANGE RATES BETWEEN THE BASE CURRENCY AND THE FOREIGN CURRENCY. CUSTOMER MUST CLOSELY MONITOR MARGIN REQUIREMENTS AT ALL TIMES, PARTICULARLY FOR POSITIONS DENOMINATED IN FOREIGN CURRENCIES, BECAUSE FLUCTUATION IN THE CURRENCY *AND* THE VALUE OF THE UNDERLYING POSITION CAN CAUSE A MARGIN DEFICIT.**

17. Foreign Currency Exchange ("Forex") Transactions:

A. HIGH RISKS OF FOREX TRADING: FOREX TRADING IS GENERALLY UNREGULATED, IS HIGHLY RISKY DUE TO THE LEVERAGE (MARGIN) INVOLVED, AND MAY RESULT IN LOSS OF FUNDS GREATER THAN CUSTOMER DEPOSITED IN THE ACCOUNT. Customer acknowledges the "Risk Disclosure Statement for Forex Trading and Multi-Currency Accounts" provided separately by IB.

B. For Forex transactions, IB generally will act as agent or riskless principal and charge a fee. IB may effect Forex transactions through an affiliate or third party, which may profit or lose from such transactions. Customer agrees that IB may transfer to or from Customer's regulated futures or securities account(s) from or to any of Customer's non-regulated Forex account any funds or assets that may be required to avoid margin calls, reduce debit balances or for any other lawful reason.

C. Netting: (i) Netting by Novation. Each Forex transaction between Customer and IB will immediately be netted with all then existing Forex transactions between Customer and IB for the same currencies to constitute one transaction. (ii) Payment Netting. If on any delivery date more than one delivery of a currency is due, each party shall aggregate the amounts deliverable and only the difference shall be delivered. (iii) Close-Out Netting. If Customer: (a) incurs a margin deficit in any IB account, (b) defaults on any obligation to IB, (c) becomes subject to bankruptcy, insolvency or other similar proceedings, or (d) fails to pay debts when due, IB has the right but not the obligation to close-out Customer's Forex transactions, liquidate all or some of Customer's collateral and apply the proceeds to any debt to IB. (iv) Upon Close-Out Netting or any "Default", all outstanding Forex transactions will be deemed terminated as of the time immediately preceding the triggering event, petition or proceeding. (v) IB's rights herein are in addition to any other rights IB has (whether by agreement, by law or otherwise).

D. Nothing herein constitutes a commitment of IB to offer Forex transactions generally or to enter into any specific Forex transaction. IB reserves the unlimited right to refuse any Forex order or to decline to quote a two-way market in any currency.

18. Commodity Options and Futures Not Settled in Cash: Customer acknowledges that: (A) commodity options cannot be exercised and must be closed out by offset; and (B) for futures contracts that settle not in cash but by physical delivery of the commodity (including currencies not on IB's Deliverable Currency List), Customer cannot make or receive delivery. If Customer has not offset a commodity option or physical delivery futures position prior to the deadline on the IB website, IB is authorized to roll or liquidate the position or liquidate any position or commodity resulting from the option or futures contract, and Customer is liable for all losses/costs.

19. Commissions and Fees, Interest Charges, Funds: Commissions and fees are as specified on the IB website unless otherwise agreed in writing by an officer of IB. Customer acknowledges that IB deducts commissions/fees from Customer accounts, which will reduce account equity. Positions will be liquidated if commissions or other charges cause a margin deficiency. Changes to commissions/fees are effective immediately upon either of: posting on the IB website or email or other written notice to Customer. IB shall pay credit interest to and charge debit interest from Customer at interest rates and terms on the IB website. Customer funds will not be disbursed until after transactions are settled. Terms and conditions for deposit and withdrawal of funds (including holding periods) are as specified on the IB website.

20. Account Deficits: If a cash account incurs a deficit, margin interest rates will apply until the balance is repaid, and IB has the right, but not the obligation, to treat the account as a margin account. **Customer agrees to pay reasonable costs of collection for any unpaid Customer deficit, including attorneys' and collection agent fees.**

21. Risks of Foreign Markets; After Hours Trading: Customer acknowledges that trading securities, options, futures, currencies, or any product on a foreign market is speculative and involves high risk. There also are special risks of trading outside ordinary market hours, including risk of lower liquidity, higher volatility, changing prices, un-linked markets, news announcements affecting prices, and wider spreads. Customer represents that Customer is knowledgeable and able to assume these risks.

22. Knowledge of Securities, Warrants and Options; Corporate Actions: Customer acknowledges Customer's responsibility for knowing the terms of any securities, options, warrants or other products in Customer's account, including upcoming corporate actions (*e.g.*, tender offers, reorganizations, stock splits, etc.). IB has no obligation to notify Customer of deadlines or required actions or dates of meetings, nor is IB obligated to take any action without specific written instructions sent by Customer to IB electronically through the IB website.

23. Quotes, Market Information, Research and Internet Links: Quotes, news, research and information accessible through IB (including through links to outside websites) ("Information") may be prepared by independent Providers. The Information is the property of IB, the Providers or their licensors and is protected by law. Customer agrees not to reproduce, distribute, sell or commercially exploit the Information in any manner without written consent of IB or the Providers. IB reserves the right to terminate access to the Information. None of the Information constitutes a recommendation by IB or a solicitation to buy or sell. Neither IB nor the Providers guarantee accuracy, timeliness, or completeness of the Information, and Customer should consult an advisor before making investment decisions. **RELIANCE ON QUOTES, DATA OR OTHER INFORMATION IS AT CUSTOMER'S OWN RISK. IN NO EVENT WILL IB**

OR THE PROVIDERS BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR INDIRECT DAMAGES ARISING FROM USE OF THE INFORMATION. THERE IS NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, REGARDING THE INFORMATION, INCLUDING WARRANTY OF MERCHANTIBILITY, WARRANTY OF FITNESS FOR A PARTICULAR USE, OR WARRANTY OF NON-INFRINGEMENT.

24. **License to Use IB Software:** IB grants Customer a non-exclusive, non-transferable license to use IB Software solely as provided herein. Title to IB Software and updates shall remain the sole property of IB, including all patents, copyrights and trademarks. Customer shall not sell, exchange, or transfer the IB Software to others. Customer shall not copy, modify, translate, decompile, reverse engineer, disassemble or reduce to a human readable form, or adapt, the IB Software or use it to create a derivative work, unless authorized in writing by an officer of IB. IB is entitled to immediate injunctive relief for threatened breaches of these undertakings.

25. LIMITATION OF LIABILITY AND LIQUIDATED DAMAGES PROVISION: CUSTOMER ACCEPTS THE IB SYSTEM "AS IS", AND WITHOUT WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, PURPOSE OR APPLICATION; TIMELINESS; FREEDOM FROM INTERRUPTION; OR ANY IMPLIED WARRANTIES ARISING FROM TRADE USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE. UNDER NO CIRCUMSTANCES SHALL IB BE LIABLE FOR ANY PUNITIVE, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL LOSS OR DAMAGES, INCLUDING LOSS OF BUSINESS, PROFITS OR GOODWILL. IB SHALL NOT BE LIABLE TO CUSTOMER BY REASON OF DELAYS OR INTERRUPTIONS OF SERVICE OR TRANSMISSIONS, OR FAILURES OF PERFORMANCE OF THE IB SYSTEM, REGARDLESS OF CAUSE, INCLUDING, BUT NOT LIMITED TO, THOSE CAUSED BY HARDWARE OR SOFTWARE MALFUNCTION; GOVERNMENTAL, EXCHANGE OR OTHER REGULATORY ACTION; ACTS OF GOD; WAR, TERRORISM, OR IB'S INTENTIONAL ACTS. CUSTOMER RECOGNIZES THAT THERE MAY BE DELAYS OR INTERRUPTIONS IN THE USE OF THE IB SYSTEM, INCLUDING, FOR EXAMPLE, THOSE CAUSED INTENTIONALLY BY IB FOR PURPOSES OF SERVICING THE IB SYSTEM. IN NO EVENT SHALL IB'S LIABILITY, REGARDLESS OF THE FORM OF ACTION AND DAMAGES SUFFERED BY CUSTOMER, EXCEED THE HIGHEST TOTAL MONTHLY COMMISSIONS PAID BY CUSTOMER TO IB OVER THE 6 MONTHS PRIOR TO ANY INCIDENT.

26. Customer Must Maintain Alternative Trading Arrangements: Computer-based systems such as those used by IB are inherently vulnerable to disruption, delay or failure. **CUSTOMER MUST MAINTAIN ALTERNATIVE TRADING ARRANGEMENTS IN ADDITION TO CUSTOMER'S IB ACCOUNT FOR EXECUTION OF CUSTOMER'S ORDERS IN THE EVENT THAT THE IB SYSTEM IS UNAVAILABLE. By signing this Agreement, Customer represents that Customer maintains alternative trading arrangements.**

27. IB and Its Affiliates: A copy of IB's audited financial statements shall be posted on the IB website and, upon request, mailed to Customer. Customers shall rely only on the financial condition of IB, and not on its affiliates, which are not liable for IB's acts and omissions.

28. DISCLOSURE STATEMENT: THIS STATEMENT IS FURNISHED TO YOU BECAUSE RULE 190.10(c) OF THE COMMODITY FUTURES TRADING COMMISSION REQUIRES IT FOR REASONS OF FAIR NOTICE UNRELATED TO IB'S CURRENT FINANCIAL CONDITION: (A) YOU SHOULD KNOW THAT IN THE UNLIKELY EVENT OF THIS COMPANY'S BANKRUPTCY, PROPERTY, INCLUDING PROPERTY SPECIFICALLY TRACEABLE TO YOU, WILL BE RETURNED, TRANSFERRED OR DISTRIBUTED TO YOU, OR ON YOUR BEHALF, ONLY TO THE EXTENT OF YOUR PRO RATA SHARE OF ALL PROPERTY AVAILABLE FOR DISTRIBUTION TO CUSTOMERS; (B) NOTICE CONCERNING THE TERMS FOR THE RETURN OF SPECIFICALLY IDENTIFIABLE PROPERTY WILL BE MADE BY PUBLICATION IN A NEWSPAPER OF GENERAL CIRCULATION. (C) THE COMMISSION'S REGULATIONS CONCERNING BANKRUPTCIES OF COMMODITY BROKERS CAN BE FOUND AT 17 CODE OF FEDERAL REGULATIONS PART 190.

29. Consent To Accept Electronic Records And Communications

IB provides electronic trade confirmations, account statements, tax information and other Customer records and communications (collectively, "Records and Communications") in electronic form. Electronic Records and Communications may be sent to Customer's Trader Workstation or to Customer's e-mail address, or for security purposes may be posted on the IB website, with a notification sent to customer to login and retrieve the Communication. By entering into this Agreement, Customer consents to the receipt of electronic Records and Communications. Such consent will apply on an ongoing basis and for every tax year unless withdrawn by Customer. Customer may withdraw such consent at any time by providing electronic notice to IB through the IB website. If Customer withdraws such consent, IB will provide required tax documents in paper form upon request by telephone or via the IB website. However, IB reserves the right to require Customer to close Customer's account.

In order to trade using the IB Trader Workstation ("TWS"), and to receive Records and Communications through the TWS, there are certain system hardware and software requirements, which are described on the IB Website at www.interactivebrokers.com. Since these requirements may change, Customer must periodically refer to the IB website for current system requirements. To receive electronic mail from IB, Customer is responsible for maintaining a valid Internet e-mail address and software allowing customer to read, send and receive e-mail. Customer must notify IB immediately of a change in Customer's e-mail address by using those procedures to change a Customer e-mail address that may be available on the IB website.

30. Miscellaneous:

A. This Agreement is governed by the laws of the State of New York, without giving effect to conflict of laws provisions. Courts of New York have exclusive jurisdiction over disputes relating to this Agreement, except when arbitration is provided. **IN ALL JUDICIAL ACTIONS, ARBITRATIONS, OR DISPUTE RESOLUTION METHODS, THE PARTIES WAIVE ANY RIGHT TO PUNITIVE DAMAGES.**

B. Customer agrees to the provision of this Agreement in English and represents that Customer understands its terms and conditions. This Agreement contains the entire agreement between the parties, who have made no other representations or warranties. If any provision of this Agreement is unenforceable, it shall not invalidate other provisions. Failure of IB to enforce any term or condition of this Agreement is not a waiver of the term/condition.

C. Customer consents to recording of all telephone conversations. Customer acknowledges the IBG Privacy Statement and consents to collection/use of Customer information as described therein.

D. Customer may not assign or transfer any rights or obligations hereunder without the prior written consent of IB. Upon notice to Customer IB may assign this Agreement to another broker-dealer or futures commission merchant. This Agreement shall inure to the benefit of IB's successors and assigns. IB may terminate this Agreement or its services to Customer at any time. Customer may close its account upon notice to IB electronically through the IB website, but only after all positions are closed and all other requirements specified on the IB website regarding account closure are satisfied.

31. <u>Mandatory Arbitration:</u>

A. This agreement contains a pre-dispute arbitration clause. By signing an arbitration agreement the parties agree as follows:

- **ALL PARTIES TO THIS AGREEMENT ARE GIVING UP THE RIGHT TO SUE EACH OTHER IN COURT, INCLUDING THE RIGHT TO A TRIAL BY JURY, EXCEPT AS PROVIDED BY THE RULES OF THE ARBITRATION FORUM IN WHICH A CLAIM IS FILED.**
- **ARBITRATION AWARDS ARE GENERALLY FINAL AND BINDING; A PARTY'S ABILITY TO HAVE A COURT REVERSE OR MODIFY AN ARBITRATION AWARD IS VERY LIMITED.**
- **THE ABILITY OF THE PARTIES TO OBTAIN DOCUMENTS, WITNESS STATEMENTS AND OTHER DISCOVERY IS GENERALLY MORE LIMITED IN ARBITRATION THAN IN COURT PROCEEDINGS.**
- **THE ARBITRATORS DO NOT HAVE TO EXPLAIN THE REASON(S) FOR THEIR AWARD.**
- **UNLESS, IN AN ELIGIBLE CASE, A JOINT REQUEST FOR AN EXPLAINED DECISION HAS BEEN SUBMITTED BY ALL PARTIES TO THE PANEL AT LEAST 20 DAYS PRIOR TO THE FIRST SCHEDULED HEARING DATE.**
- **THE PANEL OF ARBITRATORS WILL TYPICALLY INCLUDE A MINORITY OF ARBITRATORS WHO WERE OR ARE AFFILIATED WITH THE SECURITIES INDUSTRY.**
- **THE RULES OF SOME ARBITRATION FORUMS MAY IMPOSE TIME LIMITS FOR BRINGING A CLAIM IN ARBITRATION.**
- **IN SOME CASES, A CLAIM THAT IS INELIGIBLE FOR ARBITRATION MAY BE BROUGHT IN COURT.**
- **THE RULES OF THE ARBITRATION FORUM IN WHICH THE CLAIM IS FILED, AND ANY AMENDMENTS THERETO, SHALL BE INCORPORATED INTO THIS AGREEMENT.**

B. Customer agrees that any controversy, dispute, claim, or grievance between IB, any IB affiliate or any of their shareholders, officers, directors employees, associates, or agents, on the one hand, and Customer or, if applicable, Customer's shareholders, officers, directors employees, associates, or agents on the other hand, arising out of, or relating to, this Agreement, or any account(s) established hereunder in which securities may be traded; any transactions therein; any transactions between IB and Customer; any provision of the Customer Agreement or any other agreement between IB and Customer; or any breach of such transactions or agreements, shall be resolved by arbitration, in accordance with the rules then prevailing of any one of the following: (a) The Financial Industry Regulatory Authority; or (b) any other exchange of which IB is a member, as the true claimant-in-interest may elect. If Customer is the claimant-in-interest and has not selected an arbitration forum within ten days of providing notice of Customer's intent to arbitrate, IB shall select the forum. The award of the arbitrators, or a majority of them, shall be final, and judgment upon the award rendered may be entered in any court, state or federal, having jurisdiction.

C. No person shall bring a putative or certified class action to arbitration, nor seek to enforce any pre-dispute arbitration agreement against any person who has initiated in court a putative class action; or who is a member of a putative class who has not opted out of the class with respect to any claims encompassed by the putative class action until:

- **the class certification is denied; or**
- **the class is decertified; or**
- **the customer is excluded from the class by the court. Such forbearance to enforce an agreement to arbitrate shall not constitute a waiver of any rights under this Agreement except to the extent stated herein.**

CERTIFICATION FOR U.S. TAXPAYERS ONLY:

Under penalties of perjury, I certify that:
1) The number provided is my correct taxpayer identification number and 2) I am not subject to backup withholding because: a) I am exempt from backup withholding, or b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a

failure to report all interest or dividends or the IRS has notified me that I am no longer subject to backup withholding.
3) I am a U.S. person (including a U.S. resident alien).

THIS AGREEMENT CONTAINS A PRE-DISPUTE ARBITRATION CLAUSE IN PARAGRAPH 31. BY SIGNING THIS AGREEMENT I ACKNOWLEDGE THAT THIS AGREEMENT CONTAINS A PRE-DISPUTE ARBITRATION CLAUSE AND THAT I HAVE RECEIVED, READ AND UNDERSTOOD THE TERMS THEREOF.

Interactive Brokers LLC Customer Agreement
Roth Individual Retirement Account

Article I

Customer is establishing a Roth individual retirement account under section 408A of the Internal Revenue Code to provide for his or her retirement and for the support of his or her beneficiaries after death.

Article II

Customer agrees that such individual retirement account shall be administered by Delaware Charter Guarantee & Trust Company doing business as Principal Trust Company ("Principal Trust Company" or "Trustee") who will act as Trustee with regard to this account.

Customer agrees that he or she has received, read and understands the documents included in the "Traditional, Rollover, Roth, or SEP Individual Retirement Account" Application Booklet ("the IRA Application Booklet") produced by Principal Trust Company that is distributed during the Interactive Brokers LLC ("IB") application process and is also available on IB's website. Included in the IRA Application Booklet are Principal Trust Company's Privacy Notice, Internal Revenue Service Opinion Letter and the Disclosure Statement for Self-Directed Individual Retirement Accounts. Customer acknowledges having received and read these documents.

Customer agrees to be bound by the following points included in the IRA Application Booklet:

I appoint Principal Trust Company to serve as Trustee. By making this appointment, I agree to and acknowledge the following:

- I have read and understand the Trust Agreement and Disclosure Statement included in the IRA Application Booklet and agree to abide by the terms of the plan documents listed above.
- I have read and understand the information provided in the Instructions included in the IRA Application Booklet regarding float.
- I understand Principal Trust Company is not an investment advisor and does not supervise or control my investment representative. Principal Trust Company does not endorse any particular investment. I agree to use independent judgment in making my investment decisions.
- I agree to resolve disputes with Principal Trust Company through binding arbitration. See Article 5.8G of the Trust Agreement included in the IRA Application Booklet.
- I certify that the social security number provided on the IB IRA Application is true and correct.

Article III

1. Customer Agreement: This Agreement ("Agreement") governs the relationship between Customer and Interactive Brokers LLC ("IB"). If this Agreement varies from the IB website, this Agreement controls. This Agreement cannot be amended or waived except in writing by an IB officer. Customer Service employees cannot amend or waive any part of this Agreement. Customer acknowledges that IB may modify this Agreement by sending notice of the revised Agreement by e-mail or upon Customer log-in. Customer's use of IB after such notice constitutes acceptance of the revised Agreement.

2. No Investment, Tax or Trading Advice: IB representatives are not authorized to provide investment, tax or trading advice or to solicit orders. Nothing on IB's website is a recommendation or solicitation to buy or sell securities, futures or other investments.

3. Responsibility for Customer Orders/Trades: Customer acknowledges that IB does not know whether someone entering orders with Customer's user name/password is Customer. Unless IB is notified and agrees, Customer will not allow anyone to access Customer's account. Customer is responsible for the confidentiality and use of Customer's user name/password and agrees to report any theft/loss of such user name/password, or any unauthorized access to Customer's account, immediately by telephone or electronically through the IB website. Customer remains responsible for all transactions entered using Customer's user name/password.

4. Order Routing: Unless otherwise directed, IB will select the market/dealer to which to route Customer's orders. For products traded at multiple markets, IB may provide "Smart Routing", which seeks the best market for each order through a computerized algorithm. Customer should choose Smart Routing if available. If Customer directs orders to a particular market, Customer assumes responsibility for knowing and trading in accordance with the rules and policies of that market (e.g., trading hours, order types, etc.). IB cannot guarantee execution of every order at the best posted price: IB may not have access to every market/dealer; other orders may trade ahead; market centers may not honor posted prices or may re-route orders for manual handling; or market rules, decisions or system failures may prevent/delay execution of Customer's orders or cause orders not to receive the best price.

5. Order Cancellation/Modification: Customer acknowledges that it may not be possible to cancel/modify an order and that Customer is responsible for executions notwithstanding a cancel/modify request.

6. Order Execution: IB shall execute Customer orders as agent, unless otherwise confirmed. IB can execute Customer orders as principal. IB may use another broker, or an affiliate, to execute orders, and they have benefit of all IB's rights hereunder. IB may decline any Customer order, or terminate Customer's use of IB's services at any time in IB's discretion. All transactions are subject to rules and policies of relevant markets and clearinghouses, and applicable laws and regulations. **IB IS NOT LIABLE FOR ANY ACTION OR DECISION OF ANY EXCHANGE, MARKET, DEALER, CLEARINGHOUSE OR REGULATOR.**

7. Confirmations:

A. Customer agrees to monitor each order until IB confirms execution or cancellation. Customer acknowledges that confirmations of executions or cancellations may be delayed or may be erroneous (e.g. due to computer system issues) or may be cancelled/adjusted by an exchange. Customer is bound by the actual order execution, if consistent with Customer's order. If IB confirms execution or cancellation in error and Customer delays reporting such error, IB reserves the right to remove the trade from the account or require Customer to accept the trade, in IB's discretion.

B. Customer agrees to notify IB immediately by telephone or electronically through the IB website if: i) Customer fails to receive an accurate confirmation of an execution or cancellation; ii) Customer receives a confirmation that is different than Customer's order; iii) Customer receives a confirmation for an order that Customer did not place; or iv) Customer receives an account statement, confirmation, or other information reflecting inaccurate orders, trades, balances, positions, margin status, or transaction history. Customer acknowledges that IB may adjust Customer's account to correct any error. Customer agrees to promptly return to IB any assets erroneously distributed to Customer.

8. <u>Proprietary Trading - Display of Customer Orders:</u> Subject to all laws and regulations, Customer authorizes IB to execute proprietary trades of itself and its affiliates, though IB may simultaneously hold unexecuted Customer orders for the same products at the same price.

9. <u>Customer Qualification:</u> Customer warrants that their application is true and complete; will promptly notify IB of any information changes; and authorizes IB to make any inquiry to verify information.

A. <u>Natural Persons:</u> Customer warrants that Customer is over 18; is under no legal incapacity; and has sufficient knowledge and experience to understand the nature and risks of the products to be traded.

B. <u>Organizations:</u> Customer and its authorized representatives warrant that Customer: (i) is authorized under its governing document(s) and in the jurisdictions in which it is organized and/or regulated to enter this Agreement and trade (including on margin if applicable); (ii) is under no legal incapacity; and (iii) that persons identified to enter orders have proper authority and have sufficient knowledge and experience to understand the nature and risks of the products to be traded.

C. <u>Trusts:</u> “Customer" refers to the Trust and/or Trustees. Trustee(s) represent(s) that there are no Trustees other than listed in the application and certifies(y) that IB may follow instructions from any Trustee and deliver funds, securities, or any other assets to any Trustee or on any Trustee's instructions, including delivering assets to a Trustee personally. IB, in its discretion, may require written consent of any or all Trustee(s) prior to following instructions of any Trustee. Trustee(s) has (have) the power under the Trust documents and applicable law to enter this Agreement, open the type of account applied for, and enter transactions and issue instructions. Such powers include, without limit, authority to buy, sell (including short), exchange, convert, tender, redeem and withdraw assets (including delivery of securities to/from the account) to trade securities on margin or otherwise (including purchase/sale of options), and trade futures and/or options on futures, for the Trust. Should only one Trustee execute this Agreement, Trustee represents that Trustee has the authority to execute this Agreement, without consent by the other Trustees. Trustee(s) certifies(y) that all transactions for this account will comply with the Trust documents and applicable law. Trustee(s), jointly and severally, shall indemnify IB and hold IB harmless from any claim, loss, expense or liability for effecting any transactions, and acting upon any instructions given by the Trustee(s).

D. <u>Regulated Persons and Entities:</u> Unless Customer notifies IB otherwise, Customer represents that Customer is not a broker-dealer; futures commission merchant; or affiliate, associated person or employee thereof. Customer agrees to notify IB immediately by telephone or electronically through the IB website if Customer becomes employed or associated with a broker-dealer or futures commission merchant.

10. <u>Joint Accounts:</u> Each joint account holder agrees that each joint holder has authority, without notice to the other, to: (i) buy/sell securities, futures or other products (including on margin); (ii) receive account confirmations and correspondence; (iii) receive and dispose of money, securities or other assets; (iv) enter, terminate, or agree to modify this Agreement; (v) waive any part of this Agreement; and (vi) deal with IB as if each joint holder was the sole holder. Notice to any joint holder constitutes notice to all joint holders. Each joint account holder is jointly and severally liable to IB for all account matters. IB may follow instructions of any joint holder and make delivery to any joint account holder individually of any account property.

Upon death of any joint holder, the surviving holder shall give IB notice by telephone or electronically through the IB website and IB may, before or after notice, initiate proceedings, require documents, retain assets and/or restrict transactions as it deems advisable to protect itself against any liability or loss. The estate of any deceased joint account holder shall be liable and each survivor will be liable, jointly and severally, to IB for any debt or loss in the account or upon liquidation of the account. Unless Customers indicate otherwise, IB may presume that account holders are joint tenants with rights of survivorship. Upon death of any joint holder, the account shall be vested in the surviving holders, without in any manner releasing the deceased joint holder's estate from liability.

11. <u>Margin:</u>

A. <u>Risk of Margin Trading:</u> Margin trading is highly risky and may result in a loss of funds greater than Customer has deposited in the account. Customer has read the “Disclosure of Risks of Margin Trading” provided separately by IB.

B. <u>Requirement to Maintain Sufficient Margin Continuously:</u> Margin transactions are subject to initial and maintenance margin requirements of exchanges, clearinghouses and regulators and also to any additional margin requirement of IB, which may be greater ("Margin Requirements"). **IB MAY MODIFY MARGIN REQUIREMENTS FOR ANY OR ALL CUSTOMERS FOR ANY OPEN OR NEW POSITIONS AT ANY TIME, IN IB'S SOLE DISCRETION.** Customer shall monitor their account so that at all times the account contains sufficient equity to meet Margin Requirements. IB may reject any order if the account has insufficient equity to meet

Margin Requirements, and may delay processing any order while determining margin status. Customer shall maintain, without notice or demand, sufficient equity at all times to continuously meet Margin Requirements. Formulas for calculating Margin Requirements on the IB website are indicative only and may not reflect actual Margin Requirements. Customers must at all times satisfy whatever Margin Requirement is calculated by IB.

C. IB Will Not Issue Margin Calls: IB does not have to notify Customer of any failure to meet Margin Requirements prior to IB exercising its rights under this Agreement. Customer acknowledges that IB generally will not issue margin calls; generally will not credit Customer's account to meet intraday or overnight margin deficiencies; and is authorized to liquidate account positions in order to satisfy Margin Requirements without prior notice.

D. Liquidation of Positions and Offsetting Transactions:

i. IF AT ANY TIME CUSTOMER'S ACCOUNT HAS INSUFFICIENT EQUITY TO MEET MARGIN REQUIREMENTS OR IS IN DEFICIT, IB HAS THE RIGHT, IN ITS SOLE DISCRETION, BUT NOT THE OBLIGATION, TO LIQUIDATE ALL OR ANY PART OF CUSTOMER'S POSITIONS IN CUSTOMER'S ACCOUNT, AT ANY TIME AND IN ANY MANNER AND THROUGH ANY MARKET OR DEALER, WITHOUT PRIOR NOTICE OR MARGIN CALL TO CUSTOMER. CUSTOMER SHALL BE LIABLE AND WILL PROMPTLY PAY IB FOR ANY DEFICIENCIES IN CUSTOMER'S ACCOUNT THAT ARISE FROM SUCH LIQUIDATION OR REMAIN AFTER SUCH LIQUIDATION. IB HAS NO LIABILITY FOR ANY LOSS SUSTAINED BY CUSTOMER IN CONNECTION WITH SUCH LIQUIDATIONS (OR IF THE IB SYSTEM DELAYS EFFECTING, OR DOES NOT EFFECT, SUCH LIQUIDATIONS) EVEN IF CUSTOMER RE-ESTABLISHES ITS POSITION AT A WORSE PRICE.

ii. IB may allow Customer to pre-request the order of liquidation in event of a margin deficiency, but such requests are not binding on IB and IB retains sole discretion to determine the assets to be liquidated and the order/manner of liquidation. IB may liquidate through any market or dealer, and IB or its affiliates may take the other side of the transactions consistent with laws and regulations. If IB liquidates any/all positions in Customer's account, such liquidation shall establish Customer's gain/loss and remaining indebtedness to IB, if any. Customer shall reimburse and hold IB harmless for all actions, omissions, costs, fees (including, but not limited to, attorney's fees), or liabilities associated with any such transaction undertaken by IB. If IB executes an order for which Customer did not have sufficient equity, IB has the right, without notice, to liquidate the trade and Customer shall be responsible for any resulting loss and shall not be entitled to any resulting profit.

iii. If IB does not, for any reason, liquidate under-margined positions, and issues a margin call, Customer must satisfy such call immediately by depositing funds. Customer acknowledges that even if a call is issued, IB still may liquidate positions at any time.

iv. Customer acknowledges that IB also has the right to liquidate all or part of Customer's positions without prior notice: (i) if any dispute arises concerning any Customer trade, (ii) upon any “Default” as described in 17 below, or (iii) whenever IB deems liquidation necessary or advisable for IB's protection.

12. Universal Accounts: An IB Universal Account is two underlying accounts, an SEC-regulated securities account and a CFTC-regulated commodity account. Customer authorizes transfers between the securities and commodity accounts to cover Margin Requirements and other obligations, and acknowledges IB may liquidate positions to cover obligations in the other account. **Customer authorizes IB to provide combined confirmations/statements for both accounts. Customer acknowledges that only assets in the securities account are covered by SIPC protection and excess coverage and not assets in the commodity account.**

13. Short Sales: Customer acknowledges that short sales must be done in a margin account, subject to Margin Requirements; that prior to selling short, IB must believe it can borrow stock for delivery; and that if IB cannot borrow stock (or re-borrow after a recall notice) IB may buy-in stock on Customer’s behalf, without notice to Customer, to cover short positions and Customer is liable for any losses/costs.

14. Event of Default: A "Default" occurs automatically, without notice upon: (i) Customer breach/repudiation of any agreement with IB; (ii) Customer failure to provide assurance satisfactory to IB of performance of an obligation, after request from IB in IB’s sole discretion; (iii) proceedings by/against Customer under any bankruptcy, insolvency, or similar law; (iv) assignment for the benefit of Customer’s creditors; (v) appointment of a receiver, trustee, liquidator or similar officer for Customer or Customer property; (vi) Customer representations being untrue or misleading when made or later becoming untrue; (vii) legal incompetence of Customer; (viii) proceeding to suspend Customer business or license by any regulator or organization; (ix) IB having reason to believe that any of the foregoing is likely to occur imminently.

Customer unconditionally agrees that, upon a Default, IB may terminate any or all IB's obligations to Customer and IB shall have the right in its discretion, but not the obligation, without prior notice, to liquidate all or any part of Customer's positions in any IB account, individual or joint, at any time and any manner and through any market or dealer. Customer shall reimburse and hold IB harmless for all actions, omissions, costs, fees (including, but not limited to, attorney's fees), or liabilities associated with any Customer Default or any transaction undertaken by IB upon Default.

15. Suspicious Activity: If IB in its sole discretion believes that a Customer account has been involved in any fraud or crime or violation of laws or regulations, or has been accessed unlawfully, or is otherwise involved in any suspicious activity (whether victim or perpetrator or otherwise), IB may suspend or freeze the account or any privileges of the account, may freeze or liquidate funds or assets, or may utilize any of the remedies in this Agreement for a “Default”.

16. Multi-Currency Function in IB Accounts: Customers may be able to trade products denominated in different currencies using a base currency chosen by Customer. Upon purchase of a product denominated in a different currency from the base currency, a margin loan is created to fund the purchase, secured by the assets in Customer’s accounts. If Customer maintains positions denominated in foreign currencies, IB will calculate Margin Requirements by applying exchange rates specified by IB. **IB WILL APPLY "HAIRCUTS" (A PERCENTAGE DISCOUNT ON THE FOREIGN CURRENCY EQUITY AMOUNT) TO REFLECT THE POSSIBILITY OF FLUCTUATING EXCHANGE RATES BETWEEN THE BASE CURRENCY AND THE FOREIGN CURRENCY. CUSTOMER MUST CLOSELY MONITOR MARGIN REQUIREMENTS AT ALL TIMES, PARTICULARLY FOR POSITIONS DENOMINATED IN FOREIGN CURRENCIES, BECAUSE FLUCTUATION IN THE CURRENCY AND THE VALUE OF THE UNDERLYING POSITION CAN CAUSE A MARGIN DEFICIT.**

17. Foreign Currency Exchange (“Forex”) Transactions:

A. HIGH RISKS OF FOREX TRADING: FOREX TRADING IS GENERALLY UNREGULATED, IS HIGHLY RISKY DUE TO THE LEVERAGE (MARGIN) INVOLVED, AND MAY RESULT IN LOSS OF FUNDS GREATER THAN CUSTOMER DEPOSITED IN THE ACCOUNT. Customer acknowledges the “Risk Disclosure Statement for Forex Trading and Multi-Currency Accounts” provided separately by IB.

B. For Forex transactions, IB generally will act as agent or riskless principal and charge a fee. IB may effect Forex transactions through an affiliate or third party, which may profit or lose from such transactions. Customer agrees that IB may transfer to or from Customer's regulated futures or securities account(s) from or to any of Customer's non-regulated Forex account any funds or assets that may be required to avoid margin calls, reduce debit balances or for any other lawful reason.

C. Netting: (i) Netting by Novation. Each Forex transaction between Customer and IB will immediately be netted with all then existing Forex transactions between Customer and IB for the same currencies to constitute one transaction. (ii) Payment Netting. If on any delivery date more than one delivery of a currency is due, each party shall aggregate the amounts deliverable and only the difference shall be delivered. (iii) Close-Out Netting. If Customer: (a) incurs a margin deficit in any IB account, (b) defaults on any obligation to IB, (c) becomes subject to bankruptcy, insolvency or other similar proceedings, or (d) fails to pay debts when due, IB has the right but not the obligation to close-out Customer's Forex transactions, liquidate all or some of Customer's collateral and apply the proceeds to any debt to IB. (iv) Upon Close-Out Netting or any “Default”, all outstanding Forex transactions will be deemed terminated as of the time immediately preceding the triggering event, petition or proceeding. (v) IB’s rights herein are in addition to any other rights IB has (whether by agreement, by law or otherwise).

D. Nothing herein constitutes a commitment of IB to offer Forex transactions generally or to enter into any specific Forex transaction. IB reserves the unlimited right to refuse any Forex order or to decline to quote a two-way market in any currency.

18. Commodity Options and Futures Not Settled in Cash: Customer acknowledges that: (A) commodity options cannot be exercised and must be closed out by offset; and (B) for futures contracts that settle not in cash but by physical delivery of the commodity (including currencies not on IB’s Deliverable Currency List), Customer cannot make or receive delivery. If Customer has not offset a commodity option or physical delivery futures position prior to the deadline on the IB website, IB is authorized to roll or liquidate the position or liquidate any position or commodity resulting from the option or futures contract, and Customer is liable for all losses/costs.

19. Commissions and Fees, Interest Charges, Funds: Commissions and fees are as specified on the IB website unless otherwise agreed in writing by an officer of IB. Customer acknowledges that IB deducts commissions/fees from Customer accounts, which will reduce account equity. Positions will be liquidated if commissions or other charges cause a margin deficiency. Changes to commissions/fees are effective immediately upon either of: posting on the IB website or email or other written notice to Customer. IB shall pay credit interest to and charge debit interest from Customer at interest rates and terms on the IB website. Customer funds will not be disbursed until after transactions are settled. Terms and conditions for deposit and withdrawal of funds (including holding periods) are as specified on the IB website.

20. Account Deficits: If a cash account incurs a deficit, margin interest rates will apply until the balance is repaid, and IB has the right, but not the obligation, to treat the account as a margin account. **Customer agrees to pay reasonable costs of collection for any unpaid Customer deficit, including attorneys' and collection agent fees.**

21. Risks of Foreign Markets; After Hours Trading: Customer acknowledges that trading securities, options, futures, currencies, or any product on a foreign market is speculative and involves high risk. There also are special risks of trading outside ordinary market hours, including risk of lower liquidity, higher volatility, changing prices, un-linked markets, news announcements affecting prices, and wider spreads. Customer represents that Customer is knowledgeable and able to assume these risks.

22. Knowledge of Securities, Warrants and Options; Corporate Actions: Customer acknowledges Customer’s responsibility for knowing the terms of any securities, options, warrants or other products in Customer’s account, including upcoming corporate actions (e.g., tender offers, reorganizations, stock splits, etc.). IB has no obligation to notify Customer of deadlines or required actions or dates of meetings, nor is IB obligated to take any action without specific written instructions sent by Customer to IB electronically through the IB website.

23. Quotes, Market Information, Research and Internet Links: Quotes, news, research and information accessible through IB (including through links to outside websites) ("Information") may be prepared by independent Providers. The Information is the property of IB, the Providers or their licensors and is protected by law. Customer agrees not to reproduce, distribute, sell or commercially exploit the Information in any manner without written consent of IB or the Providers. IB reserves the right to terminate access to the Information. None of the Information constitutes a recommendation by IB or a solicitation to buy or sell. Neither IB nor the Providers guarantee accuracy, timeliness, or completeness of the Information, and Customer should consult an advisor before making investment decisions. **RELIANCE ON QUOTES, DATA OR OTHER INFORMATION IS AT CUSTOMER'S OWN RISK. IN NO EVENT WILL IB OR THE PROVIDERS BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR INDIRECT DAMAGES ARISING FROM USE OF THE INFORMATION. THERE**

IS NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, REGARDING THE INFORMATION, INCLUDING WARRANTY OF MERCHANTIBILITY, WARRANTY OF FITNESS FOR A PARTICULAR USE, OR WARRANTY OF NON-INFRINGEMENT.

24. License to Use IB Software: IB grants Customer a non-exclusive, non-transferable license to use IB Software solely as provided herein. Title to IB Software and updates shall remain the sole property of IB, including all patents, copyrights and trademarks. Customer shall not sell, exchange, or transfer the IB Software to others. Customer shall not copy, modify, translate, decompile, reverse engineer, disassemble or reduce to a human readable form, or adapt, the IB Software or use it to create a derivative work, unless authorized in writing by an officer of IB. IB is entitled to immediate injunctive relief for threatened breaches of these undertakings.

25. LIMITATION OF LIABILITY AND LIQUIDATED DAMAGES PROVISION: CUSTOMER ACCEPTS THE IB SYSTEM "AS IS", AND WITHOUT WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, PURPOSE OR APPLICATION; TIMELINESS; FREEDOM FROM INTERRUPTION; OR ANY IMPLIED WARRANTIES ARISING FROM TRADE USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE. UNDER NO CIRCUMSTANCES SHALL IB BE LIABLE FOR ANY PUNITIVE, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL LOSS OR DAMAGES, INCLUDING LOSS OF BUSINESS, PROFITS OR GOODWILL. IB SHALL NOT BE LIABLE TO CUSTOMER BY REASON OF DELAYS OR INTERRUPTIONS OF SERVICE OR TRANSMISSIONS, OR FAILURES OF PERFORMANCE OF THE IB SYSTEM, REGARDLESS OF CAUSE, INCLUDING, BUT NOT LIMITED TO, THOSE CAUSED BY HARDWARE OR SOFTWARE MALFUNCTION; GOVERNMENTAL, EXCHANGE OR OTHER REGULATORY ACTION; ACTS OF GOD; WAR, TERRORISM, OR IB'S INTENTIONAL ACTS. CUSTOMER RECOGNIZES THAT THERE MAY BE DELAYS OR INTERRUPTIONS IN THE USE OF THE IB SYSTEM, INCLUDING, FOR EXAMPLE, THOSE CAUSED INTENTIONALLY BY IB FOR PURPOSES OF SERVICING THE IB SYSTEM. IN NO EVENT SHALL IB'S LIABILITY, REGARDLESS OF THE FORM OF ACTION AND DAMAGES SUFFERED BY CUSTOMER, EXCEED THE HIGHEST TOTAL MONTHLY COMMISSIONS PAID BY CUSTOMER TO IB OVER THE 6 MONTHS PRIOR TO ANY INCIDENT.

26. Customer Must Maintain Alternative Trading Arrangements: Computer-based systems such as those used by IB are inherently vulnerable to disruption, delay or failure. **CUSTOMER MUST MAINTAIN ALTERNATIVE TRADING ARRANGEMENTS IN ADDITION TO CUSTOMER'S IB ACCOUNT FOR EXECUTION OF CUSTOMER'S ORDERS IN THE EVENT THAT THE IB SYSTEM IS UNAVAILABLE.** By signing this Agreement, Customer represents that Customer maintains alternative trading arrangements.

27. IB and Its Affiliates: A copy of IB's audited financial statements shall be posted on the IB website and, upon request, mailed to Customer. Customers shall rely only on the financial condition of IB, and not on its affiliates, which are not liable for IB's acts and omissions.

28. DISCLOSURE STATEMENT: THIS STATEMENT IS FURNISHED TO YOU BECAUSE RULE 190.10(c) OF THE COMMODITY FUTURES TRADING COMMISSION REQUIRES IT FOR REASONS OF FAIR NOTICE UNRELATED TO IB'S CURRENT FINANCIAL CONDITION: (A) YOU SHOULD KNOW THAT IN THE UNLIKELY EVENT OF THIS COMPANY'S BANKRUPTCY, PROPERTY, INCLUDING PROPERTY SPECIFICALLY TRACEABLE TO YOU, WILL BE RETURNED, TRANSFERRED OR DISTRIBUTED TO YOU, OR ON YOUR BEHALF, ONLY TO THE EXTENT OF YOUR PRO RATA SHARE OF ALL PROPERTY AVAILABLE FOR DISTRIBUTION TO CUSTOMERS; (B) NOTICE CONCERNING THE TERMS FOR THE RETURN OF SPECIFICALLY IDENTIFIABLE PROPERTY WILL BE MADE BY PUBLICATION IN A NEWSPAPER OF GENERAL CIRCULATION. (C) THE COMMISSION'S REGULATIONS CONCERNING BANKRUPTCIES OF COMMODITY BROKERS CAN BE FOUND AT 17 CODE OF FEDERAL REGULATIONS PART 190.

29. Consent To Accept Electronic Records And Communications

IB provides electronic trade confirmations, account statements, tax information and other Customer records and communications (collectively, "Records and Communications") in electronic form. Electronic Records and Communications may be sent to Customer's Trader Workstation or to Customer's e-mail address, or for security purposes may be posted on the IB website, with a notification sent to customer to login and retrieve the Communication. By entering into this Agreement, Customer consents to the receipt of electronic Records and Communications. Such consent will apply on an ongoing basis and for every tax year unless withdrawn by Customer. Customer may withdraw such consent at any time by providing electronic notice to IB through the IB website. If Customer withdraws such consent, IB will provide required tax documents in paper form upon request by telephone or via the IB website. However, IB reserves the right to require Customer to close Customer's account.

In order to trade using the IB Trader Workstation ("TWS"), and to receive Records and Communications through the TWS, there are certain system hardware and software requirements, which are described on the IB Website at www.interactivebrokers.com. Since these requirements may change, Customer must periodically refer to the IB website for current system requirements. To receive electronic mail from IB, Customer is responsible for maintaining a valid Internet e-mail address and software allowing customer to read, send and receive e-mail. Customer must notify IB immediately of a change in Customer's e-mail address by using those procedures to change a Customer e-mail address that may be available on the IB website.

30. Miscellaneous:

A. This Agreement is governed by the laws of the State of New York, without giving effect to conflict of laws provisions. Courts of New York have exclusive jurisdiction over disputes relating to this Agreement, except when arbitration is provided. **IN ALL JUDICIAL ACTIONS, ARBITRATIONS, OR DISPUTE RESOLUTION METHODS, THE PARTIES WAIVE ANY RIGHT TO PUNITIVE DAMAGES.**

B. Customer agrees to the provision of this Agreement in English and represents that Customer understands its terms and conditions. This Agreement contains the entire agreement between the parties, who have made no other representations or warranties. If any provision of this Agreement is unenforceable, it shall not invalidate other provisions. Failure of IB to enforce any term or condition of this Agreement is not a waiver of the term/condition.

C. Customer consents to recording of all telephone conversations. Customer acknowledges the IBG Privacy Statement and consents to collection/use of Customer information as described therein.

D. Customer may not assign or transfer any rights or obligations hereunder without the prior written consent of IB. Upon notice to Customer IB may assign this Agreement to another broker-dealer or futures commission merchant. This Agreement shall inure to the benefit of IB's successors and assigns. IB may terminate this Agreement or its services to Customer at any time. Customer may close its account upon notice to IB electronically through the IB website, but only after all positions are closed and all other requirements specified on the IB website regarding account closure are satisfied.

31. <u>Mandatory Arbitration:</u>

A. This agreement contains a pre-dispute arbitration clause. By signing an arbitration agreement the parties agree as follows:

- **ALL PARTIES TO THIS AGREEMENT ARE GIVING UP THE RIGHT TO SUE EACH OTHER IN COURT, INCLUDING THE RIGHT TO A TRIAL BY JURY, EXCEPT AS PROVIDED BY THE RULES OF THE ARBITRATION FORUM IN WHICH A CLAIM IS FILED.**
- **ARBITRATION AWARDS ARE GENERALLY FINAL AND BINDING; A PARTY'S ABILITY TO HAVE A COURT REVERSE OR MODIFY AN ARBITRATION AWARD IS VERY LIMITED.**
- **THE ABILITY OF THE PARTIES TO OBTAIN DOCUMENTS, WITNESS STATEMENTS AND OTHER DISCOVERY IS GENERALLY MORE LIMITED IN ARBITRATION THAN IN COURT PROCEEDINGS.**
- **THE ARBITRATORS DO NOT HAVE TO EXPLAIN THE REASON(S) FOR THEIR AWARD.**
- **UNLESS, IN AN ELIGIBLE CASE, A JOINT REQUEST FOR AN EXPLAINED DECISION HAS BEEN SUBMITTED BY ALL PARTIES TO THE PANEL AT LEAST 20 DAYS PRIOR TO THE FIRST SCHEDULED HEARING DATE.**
- **THE PANEL OF ARBITRATORS WILL TYPICALLY INCLUDE A MINORITY OF ARBITRATORS WHO WERE OR ARE AFFILIATED WITH THE SECURITIES INDUSTRY.**
- **THE RULES OF SOME ARBITRATION FORUMS MAY IMPOSE TIME LIMITS FOR BRINGING A CLAIM IN ARBITRATION.**
- **IN SOME CASES, A CLAIM THAT IS INELIGIBLE FOR ARBITRATION MAY BE BROUGHT IN COURT.**
- **THE RULES OF THE ARBITRATION FORUM IN WHICH THE CLAIM IS FILED, AND ANY AMENDMENTS THERETO, SHALL BE INCORPORATED INTO THIS AGREEMENT.**

B. Customer agrees that any controversy, dispute, claim, or grievance between IB, any IB affiliate or any of their shareholders, officers, directors employees, associates, or agents, on the one hand, and Customer or, if applicable, Customer's shareholders, officers, directors employees, associates, or agents on the other hand, arising out of, or relating to, this Agreement, or any account(s) established hereunder in which securities may be traded; any transactions therein; any transactions between IB and Customer; any provision of the Customer Agreement or any other agreement between IB and Customer; or any breach of such transactions or agreements, shall be resolved by arbitration, in accordance with the rules then prevailing of any one of the following: (a) The Financial Industry Regulatory Authority; or (b) any other exchange of which IB is a member, as the true claimant-in-interest may elect. If Customer is the claimant-in-interest and has not selected an arbitration forum within ten days of providing notice of Customer's intent to arbitrate, IB shall select the forum. The award of the arbitrators, or a majority of them, shall be final, and judgment upon the award rendered may be entered in any court, state or federal, having jurisdiction.

C. No person shall bring a putative or certified class action to arbitration, nor seek to enforce any pre-dispute arbitration agreement against any person who has initiated in court a putative class action; or who is a member of a putative class who has not opted out of the class with respect to any claims encompassed by the putative class action until:

  - **the class certification is denied; or**
  - **the class is decertified; or**
  - **the customer is excluded from the class by the court. Such forbearance to enforce an agreement to arbitrate shall not constitute a waiver of any rights under this Agreement except to the extent stated herein.**

CERTIFICATION FOR U.S. TAXPAYERS ONLY:

Under penalties of perjury, I certify that:
1) The number provided is my correct taxpayer identification number and
2) I am not subject to backup withholding because: a) I am exempt from backup withholding, or b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends or the IRS has notified me that I am no longer subject to backup withholding.
3) I am a U.S. person (including a U.S. resident alien).

THIS AGREEMENT CONTAINS A PRE-DISPUTE ARBITRATION CLAUSE IN PARAGRAPH 31. BY SIGNING THIS AGREEMENT I ACKNOWLEDGE THAT THIS AGREEMENT CONTAINS A PRE-DISPUTE ARBITRATION CLAUSE AND THAT I HAVE RECEIVED, READ AND UNDERSTOOD THE TERMS THEREOF.

Principal Trust Company

A member of

Principal Financial Group

Mailing Address:
P.O. Box 8963
Wilmington, DE 19899-8963
800-209-9010 Fax: 302-999-9554

DISCLOSURE STATEMENT FOR TRADITIONAL IRA, SEP-IRA and SIMPLE IRA

This Disclosure Statement provides you, and your beneficiaries after your death, a summary of the basic rules and regulations governing your Delaware Charter Guarantee & Trust Company d/b/a Principal Trust Company (Principal Trust Company) Self-Directed traditional, SEP or SIMPLE Individual Retirement Account (IRA). It also contains important federal tax and legal information. However, the applicable Self-Directed Individual Retirement Trust Agreement (Trust Agreement) for your IRA type (traditional, SEP or SIMPLE) will govern your IRA. If there is a discrepancy between the Trust Agreement and Disclosure Statement, the Trust Agreement will control.

Principal Trust Company cannot give tax or financial advice. We strongly encourage you to consult with your tax or legal advisor before you establish an IRA.

When used in this document, the words you and your refer to the person for whom the IRA is established. We, us, and our refer to Principal Trust Company as trustee of your IRA.

Roth IRAs are described in a separate disclosure statement.

Your Right to Revoke Your IRA

You may revoke your IRA within seven days of the date you establish the IRA. If you revoke your IRA, we will return all of your funds, without adjustment for items such as sales commissions, administrative expenses (including the acceptance fee), or fluctuation in market value.

Your notice of revocation must be put in writing, signed by you, and delivered to us.

The notice may be mailed to us at the following address:

IRA Processor
Principal Trust Company
P.O. Box 8963
Wilmington, DE 19899-8963

You may also send the notice by courier at the following address:

IRA Processor
Principal Trust Company
1013 Centre Road
Wilmington, DE 19805

If you mail the notice, we will use the date of the postmark (or the date of certification or registration for certified or registered mail) as the date of the notice. You may call us at (800) 209-9010 or (302) 995-2131 if you have questions.

A. Traditional IRA Contributions – General Rules

Annual contributions to your traditional IRA must be in the form of cash, checks, money orders, or electronic fund transfers. (You cannot contribute other assets, except in a transfer or a rollover as described in Sections G and H.) Traditional IRA contributions are subject to the following limitations and restrictions:

1. **Contribution Eligibility**

   You may establish a traditional IRA if you (or your spouse, if filing a joint return) receive taxable compensation for the year and you were not age 70½ by the end of the calendar year.

2. **Annual Contribution Limits**

   The maximum amount you may contribute to all of your traditional and Roth IRAs for a year is the lesser of the maximum contribution limit in effect for the taxable year, as described below, or 100% of your compensation. If you are age 50 or older by the end of the applicable year, the annual contribution limit is increased, as described below (subject to the 100% of compensation limit). You may make these extra "catch-up" contributions regardless of your past contribution history.

3. **Maximum Annual Contribution Limits**

The maximum contribution limit is as follows:

Tax Year	Maximum Annual Contribution	Maximum Annual Contribution Age 50 or Older
2008	$5,000	$6,000
2009	$5,000	$6,000

For years after 2009, the contribution limit will be adjusted by the Secretary of Treasury for cost-of-living increases. The adjustments will be in multiples of $500.

You may contribute less than the maximum contribution for a year.

4. **Compensation**

For purposes of the contribution limits, Compensation includes wages, salaries, tips, professional fees, bonuses, and other amounts derived from or received for personal services, commissions, and self-employment (earned) income. When determining compensation for self-employed individuals, any amounts taken as a deduction for contributions made to a self-employed retirement plan must be subtracted from net earnings. Compensation also includes any taxable alimony and separate maintenance payments you receive under a divorce decree or separate maintenance.

Compensation includes combat-zone compensation that is excluded from income for federal income tax purposes. (You may be able to make an additional contribution to your IRA by May 28, 2009, if you received nontaxable combat pay in 2004 or 2005.) Beginning January 1, 2009, compensation also includes certain differential wage payments (or military supplemental pay) paid by an employer to an individual while on active duty for a period of more than 30 days.

Compensation does not include earnings and profits from property, interest and dividend income, pension or annuity income, or deferred income.

5. **No Contributions After Age 70½**

Contributions may not be made to your traditional IRA for the year in which you reach age 70½ or any later year. You attain age 70½ on the date that is six calendar months after the 70th anniversary of your birth.

6. **Additional Contribution for Employer Bankruptcies**

If you participated in a 401(k) plan and the employer that maintained the plan went into bankruptcy, you may be able to contribute an additional $3,000 to your traditional IRA for taxable years through 2009, if the following conditions are met:

a. You must have been a participant in a 401(k) plan under which the employer matched at least 50% of your contributions to the plan with stock of the company;

b. You must have been a participant in the 401(k) plan six months before your employer filed for bankruptcy;

c. Your employer (or a controlling corporation) must have been a debtor in a bankruptcy case in a preceding year; and

d. Your employer, or another person, must have been subject to indictment or conviction based on business transactions related to the bankruptcy.

If you make these additional contributions, you are not eligible to make catch-up IRA contributions for that year, even if you are age 50 or older.

7. **Spousal IRA Limit**

If you are married and you file a joint federal income tax return, you may also contribute to your spouse's traditional IRA. The contribution may not exceed the contribution limit in effect for the tax year and the combined IRA contribution for you and your spouse may not exceed 100% of your combined compensation.

However, if you and your spouse did not live together at any time during the year and did not file a joint federal income tax return for that year, you and your spouse will be treated as unmarried for purposes of the IRA contribution limits for that year.

8. **Qualified Reservist Contribution**

If you received a qualified reservist distribution from an IRA or from a Code section 401(k) or 403(b) plan or a similar arrangement, you may be able to repay to an IRA the amount of the distribution. You must make the repayment during the two-year period after your active duty period ends. Your qualified reservist repayment is not subject to the annual contribution limits. You may not deduct the repayment, which will be treated as a non-deductible IRA contribution.

9. **Due Date for Contributions**

Contributions may be made at any time during the year or by the due date for filing your federal tax return for that year, not including extensions. For most taxpayers, the due date will be April 15 of the following year. If an amount is contributed to your traditional IRA between January 1 and April 15, you must inform us for which year (the current or prior year) the contribution is for, otherwise we will assume and report to the IRS, that the contribution is for the year in which it was received in our office.

10. **Corrective Withdrawals**

You may make a tax-free withdrawal of any contribution you make to your traditional IRA for a year if you withdraw the contribution, together with any earnings on it, by the due date (including extensions) for filing your federal income tax return.

The amounts that you withdraw cannot be deducted on your tax return or reported as a nondeductible contribution. The contribution you withdraw is not included in your income as an IRA distribution, but you must include any earnings on the contribution as ordinary income for the year you made the contribution. The earnings also are subject to a 10% penalty tax on early distribution if you are under age 59½, unless an exception applies. See Section P.

11. **Direct Deposit of Tax Refunds**

You may have your tax refund directly deposited to a traditional IRA, or SEP-IRA, but not a SIMPLE IRA.

12. **Responsibility of the Trustee Regarding Contributions**

You must tell us how all contributions are to be invested. All contributions received will be held and administered by us pursuant to the terms of the Trust Agreement. We are not responsible for the computation and collection of any contributions under the IRA.

13. **Tax Saver's Credit**

You may be able to take a nonrefundable tax credit up to $1,000 per year for contributions made to your traditional IRA and certain other plans. The credit is in addition to any deduction from gross income that is otherwise allowed for the contribution. To be eligible for the credit, you must be age 18 or older, not a full time student and not listed as a dependent on another taxpayer's return.

The tax credit generally equals your "percentage rate" times your "qualified retirement savings contributions." Qualified retirement savings contributions include your traditional IRA contributions and contributions to certain other plans. But certain distributions from such plans reduce your qualified retirement savings contributions for the year. In addition, the total contribution taken into account for this credit is $2,000.

The percentage rate for the credit is based on your MAGI and is subject to phase-outs, as listed under the following table:

MAGI Phase-Outs				
	Married Filing Joint MAGI	**Head of Household MAGI**	**Single, Married Filing Separately, or Qualifying Widow(er) MAGI**	**Percentage Rate**
	$0 and $33,000	$0 and $24,750	$0 and $16,500	50%
	$33,001 and $36,000	$24,751 and $27,000	$16,501 and $18,000	20%
	$36,001 and $55,500	$27,001 and $41,625	$18,001 and $27,750	10%
2009	Over $55,500	Over $41,625	Over $27,750	No Credit Available

For years after 2009, the MAGI phase-outs are subject to cost-of-living adjustments.

The requirements for this tax credit are very complex. You should consult with your tax adviser about your situation.

B. Deductible Contributions – Traditional IRA

Contributions to your traditional IRA may be deductible on your federal income tax return, nondeductible or a combination of both. You should consult with your tax advisor to determine if any portion of your traditional IRA contribution is deductible.

1. **Limitations and Restrictions on Deductibility of Contributions**

If you (and your spouse) are not an active participant (as defined below) for the year, your entire traditional IRA contribution may be made as a tax deductible contribution.

If you or your spouse were covered by an employer-sponsored retirement plan at any time during the year, you may not be able to deduct all of your contribution(s). Your deduction may be reduced or eliminated depending on your income and tax filing status. If you (or your spouse) are an active participant and your MAGI is below the applicable phase-out range for the year, you may contribute the maximum amount of tax deductible contributions to your traditional IRA for that year. If you (or your spouse) are an active participant and your MAGI is above the applicable phase-out range for the year you may not make any tax deductible contributions to your traditional IRA, but may still make nondeductible contributions for that year.

If you (or your spouse) are an active participant and your MAGI is within the applicable phase-out range for the year, part of your traditional IRA contribution will be deductible. You are required to calculate your deduction limit - the amount of the contribution that is tax deductible. If you are married, the deduction limit needs to be calculated for each spouse separately.

2. **Phase-Out Example**

John, 37, is an unmarried active participant who made $62,000 (MAGI) in 2009. His MAGI was within the applicable phase-out range for the year ($55,000 to $65,000). To calculate his tax deductible contribution, John first subtracts the lower number of the phase-out range (here $55,000) from his MAGI ($62,000), resulting in his "excess MAGI" ($7,000).

Next, John applies the following formula:

$$\frac{\$10{,}000 - \text{Excess MAGI}}{\$10{,}000} \times \text{Maximum Contribution} = \text{Deduction Limit}$$

The deduction limit is rounded down to the next lower multiple of $10 (ex. $938 is rounded down to $930).

For John, in 2009:

$$\frac{\$10{,}000 - \$7{,}000}{\$10{,}000} \times \$5{,}000 = \$1{,}500$$

Therefore, John may deduct $1,500 of his 2009 traditional IRA contribution and the remaining $3,500 will be nondeductible.

Note that for an active participant who files a joint return, the phase-out range is $20,000, and $20,000 replaces $10,000 in the formula above.

Be sure to use the correct phase-out range for your tax filing and plan participation status. In addition, the deduction limit cannot exceed 100% of your compensation, or 100% of your combined compensation if you and your spouse file a joint federal income tax return.

Phase-Out Ranges/Filing Status				
Tax Year	**Single, or Head of Household – Active Participant**	**Married-Joint Return – Active Participant**	**Married-Separate Return – Active Participant**	**Married, Filing Jointly, Not a Participant in an Employer Plan, but Spouse is**
2008	$53,000 and $63,000	$85,000 and $105,000	$0 and $10,000	$159,000 and $169,000
2009	$55,000 and $65,000	$89,000 and $109,000	$0 and $10,000	$166,000 and $176,000
For years after 2009, the MAGI thresholds are subject to cost-of living adjustments. If you are not above the income level that would totally eliminate a deductible contribution, there is a $200 minimum deduction.				

3. **Active Participant**

You are an active participant for a year if you are covered by an employer-sponsored retirement plan for any part of the year. You are covered by an employer-sponsored retirement plan if your employer or union has a retirement plan under which money is added to your account or you are eligible to earn retirement credits. For example, if you are covered under a profit sharing plan, certain government plans, a salary reduction arrangement (such as a 401(k) or 403(b)), SEP-IRA, an ESOP, a pension or a plan which promises you a retirement benefit which is based on the number of years of service you have with the employer, you are likely to be an active participant. Your Form W-2 for the year should indicate whether you are a participant.

You are an active participant even if your retirement benefit is not vested. You are also an active participant if you make required contributions or voluntary contributions to an employer-sponsored retirement plan. You may be an active participant even if you were only with the employer for part of the year.

However, receiving benefits from a former employer's retirement plan, from social security or railroad retirement does not in itself, make you an active participant.

4. MAGI

"MAGI" for purposes of determining your tax deductible traditional IRA contributions means your adjusted gross income for a year for federal income tax purposes, plus the amounts you deducted for student loan interest, foreign earned income and housing costs, employer paid adoption expenses, qualified tuition and related expenses, and certain qualified savings bond interest amounts. In addition, MAGI for traditional IRA purposes is also computed before deducting any traditional IRA contributions you make for the year.

C. Nondeductible Contributions – Traditional IRA

You may make nondeductible contributions to your traditional IRA, subject to the following:

1. Nondeductible Amount

Although your deduction for traditional IRA contributions may be reduced or eliminated, as described above, you may make contributions up to the annual limit, or spousal limit if applicable. The difference between your total allowable limit and your traditional IRA deduction is your nondeductible contribution. You may also elect to treat an otherwise deductible contribution as nondeductible, based on how you complete your federal tax return.

2. Investment Earnings

The investment earnings on your nondeductible contributions are not taxed until distributed from your traditional IRA.

3. Reporting Nondeductible Contributions

If you make a nondeductible contribution to a traditional IRA, you must report the amount of the nondeductible contribution to the IRS on Form 8606, as part of your tax return for the year. Failures to properly complete and file the Form 8606 may result in IRS penalties.

D. SEP-IRA Contributions

A simplified employer pension (SEP) is a retirement plan that permits your employer (or you, if self-employed) to contribute to your traditional IRA. (SEP contributions cannot be made to Roth IRAs or SIMPLE IRAs.)

1. Limits on Employee Contributions

For 2008, your employer may contribute up to $46,000, or if less, 25% of your compensation. However, compensation in excess of $230,000 is disregarded. In 2009, these amounts will be $49,000 and $245,000 respectively and will be adjusted by the Secretary of Treasury for cost-of-living increases thereafter.

2. Eligibility

The eligibility requirements for contributions are described in your employer's SEP plan document. Note, however, the IRS limits which employers may sponsor a SEP Plan. Unlike regular traditional IRA contributions, SEP-IRA contributions may be made to your traditional IRA even if you are over age 70½.

3. Effect on Other IRA Contributions

Even if your employer contributes to your traditional IRA through a SEP plan, you will still be able to contribute to traditional and/or Roth IRAs for yourself (and your spouse, subject to the limitations discussed above). The deductibility of your traditional IRA contributions, however, may be limited, since you would be an active participant. Your employer's SEP contributions and your traditional IRA contributions may be combined in the same account.

On the other hand, if your employer makes a contribution to an IRA for you that is not part of a SEP or SIMPLE plan, then the regular traditional IRA contribution limits apply to the total contributions made by you and your employer.

4. SAR-SEP Contributions

Some SEP plans allow participants to make pre-tax salary reduction contributions, or SAR-SEP contributions, to their SEP-IRAs. To offer this salary reduction feature, the SEP plan had to include the SAR-SEP before January 1, 1997 and satisfy other requirements. If you are eligible to make SAR-SEP contributions, you will receive additional information.

5. General Rules

Like other traditional IRA contributions, SEP- IRA contributions and any earnings are excluded from your taxable income until you withdraw them from the IRA. However, you can not deduct your employer's contributions on your federal income tax return. Withdrawals from a SEP-IRA are subject to the same rules as withdrawals from traditional IRAs.

E. SIMPLE IRA Contribution

SIMPLE IRAs hold employer tax-deductible contributions and employee pre-tax contributions to a Savings Incentive Match Plan for Employees, a SIMPLE IRA plan.

1. **Eligibility**

   Only certain employers are eligible to establish a SIMPLE IRA Plan.

   a. **Eligible Employers**

      SIMPLE IRA plans are only for small employers – an employer with 100 or fewer employees in the previous calendar years who were paid $5,000 or more in total pay from the employer. (There are certain additional rules that may apply.) The employer determines if the company is eligible to establish a SIMPLE IRA plan. An employer may have a SIMPLE IRA plan only if it has no other retirement plan at any time when the SIMPLE IRA plan is in operation. "Retirement plans" for this purpose include 401(k), profit sharing, pension, and other kinds of retirement plans that receive tax benefits.

   b. **Eligible Employees**

      Generally, all of the employer's employees must participate in the SIMPLE IRA plan. However, the employer may decide to exclude:

      - an employee who did not receive at least $5,000 in pay from the employer in at least two prior calendar years (not necessarily consecutive).
      - an employee who is not reasonably expected to receive at least $5,000 in pay from the employer for the current calendar year.
      - union-represented employees, provided that there was good faith bargaining over the issue of retirement benefits.
      - employees who are nonresident aliens and receive no U.S. source income.

   The summary description of your employer's SIMPLE IRA plan will indicate whether these groups of employees will be included or excluded from its SIMPLE IRA plan.

2. **Employee Contributions**

   If you are an eligible employee, you may elect to have a percentage of your pre-tax pay contributed by your employer to your SIMPLE IRA, up to a maximum annual salary deferral of $11,500 for 2009. After 2009, the maximum amount will be adjusted for cost-of-living increases. If you are age 50 or over by the end of the year, you may elect to have your pre-tax pay reduced by an additional amount of $2,500 for 2009. After 2009, the additional amount will be adjusted for cost-of-living increases.

   You elect the desired percentage of pay to contribute on a salary reduction agreement available from your employer. Salary reductions may be made only from pay you earn after signing the salary reduction agreement.

3. **Employer Contributions**

   For each year that it operates a SIMPLE IRA plan, your employer must make contributions on behalf of eligible participants. Your employer may choose either matching or nonelective contributions for a particular year. Your employer must notify you of the contribution approach it has elected for a particular calendar year.

   a. **Matching Contributions**

      If your employer makes matching contributions, you must make salary reduction contributions from your own pay in order to receive matching contributions from your employer. Your employer will match your contributions, dollar for dollar, up to a cap of 1% to 3% of your pay for the calendar year. Your employer decides the cap (subject to certain IRS requirements).

   b. **Non-Elective Contribution**

      If your employer decides to make non-elective contributions, it must contribute 2% of your pay for the calendar year provided that you receive $5,000 or more in pay from the employer for the calendar year, whether or not you make salary deferral contributions.

   For this purpose, your pay is subject to an IRA limit. The limit is $245,000 for 2009. This limit is indexed for future cost-of-living changes.

F. Payments from your IRA

You have a non-forfeitable right to your IRA at all times. You may request payment from your IRA at any time. Your IRA will be subject to federal income taxation at the time of distribution, unless you complete a rollover, as described in Section H.

1. **Taxation of Benefits**

The federal income taxation of your traditional IRA or SEP-IRA distribution depends on the types of contributions made to the IRA (tax deductible, nondeductible or both).

a. **Tax Deductible Contributions Only**

If the entire balance of all of your IRAs (other than Roth IRAs) consists of tax deductible contributions, rollovers of pre-tax contributions made to a retirement plan and account earnings, then all benefits paid from your IRA are taxable as ordinary income when received.

b. **Tax Deductible and Nondeductible Contributions**

If you made any nondeductible contributions to your IRAs, or you rolled over to your IRA after-tax contributions that you made to a retirement plan, then each distribution from your IRA will consist of a nontaxable portion (the return of nondeductible contributions) and a taxable portion (the return of any deductible contributions, pre-tax rollover contributions and account earnings). You may not take a distribution which is entirely tax-free. A special formula is used to determine the taxable amount of the distribution, as described in IRS Publication 590. You should consult with your tax advisor to determine the proper tax treatment of your distribution.

c. **No Special Treatment for Lump Sum Distributions**

The above taxation rules apply to all types of distribution, including lump-sum distributions. IRA distributions do not qualify for the special income tax rules (10-year averaging or long term capital gain treatment) that apply to certain lump-sum distributions from qualified retirement plans.

d. **Transfer to a Health Savings Account**

If you are eligible to make health savings account (HSA) contributions, you may qualify to make a tax-free transfer from your traditional IRA to your HSA, a "qualified HSA funding distribution." Qualified HSA funding distributions cannot be made from nondeductible IRA contributions, SEP-IRAs or SIMPLE IRAs. The maximum qualified HSA funding distribution that you may make is your annual HSA contribution limit, based on your coverage level (self-only or family) at the time of the transfer. If you cease to be an "eligible individual" under the HSA rules within the 12-month period following your qualified HSA funding distribution, the amount transferred to the HSA will be subject to income tax and a 10% penalty tax (unless you cease to be an eligible individual due to your death or because you became disabled as defined by Sec. 72(m)(7) of the Internal Revenue Code). Generally, you may only make one qualified HSA funding distribution in your lifetime. The qualified HSA funding distribution must be made in a trustee-to-trustee transfer from your traditional IRA to the HSA (the amounts cannot be paid to you). Additional rules apply. You should consult with an accountant, lawyer or other qualified tax advisor about your situation.

e. **Federal Withholding**

Depending on the payment form you elected, generally all distributions from your IRA will be subject to federal income tax withholding. For non-periodic payments (lump sum amounts), the withholding rate is generally 10%. For periodic payments, the normal wage withholding rates generally apply. You may be able to elect out of withholding, as described on the applicable distribution form.

f. **Qualified Charitable Distribution**

For 2008 and 2009, if you are age 70½ or older, you may qualify to make a tax-free distribution of up to $100,000 per year from your IRA to a qualifying charity. The distribution must be paid to the qualifying charity directly by the IRA trustee, and can count towards any required minimum distribution you may need to receive for the year. Additional rules apply. The requirements for qualified charitable distributions are very complex, as are the potential effects of such a distribution on your current income tax and future financial situation. You should consult with an accountant, lawyer or other qualified tax advisor about your situation.

2. **Payments Prior to Age 59½**

If you request payment prior to age 59½, you must include the reason for the distribution so that proper tax reporting can be made. In addition, an additional 10% early distribution tax penalty (25% from a SIMPLE IRA, in the first two years of plan participation) may result, unless an exception applies. See Section P.

3. **Payments After Age 70½/Required Minimum Distributions (RMD)**

Federal tax rules require that benefit payments from your traditional, SEP and SIMPLE IRAs begin no later than the April 1 following the calendar year in which you reach age 70½--your required beginning date. If you do not receive the entire balance of your traditional, SEP or SIMPLE IRA by the April 1 date, you must have started receiving payments each year that satisfy the federal required minimum distribution rules by that date. The required minimum distribution for any year after your 70½ year must be made by December 31 of that later year. For example, if you were born on May 3, 1940, you reach age 70½ on November 3, 2010. You must receive an RMD payment for 2010 from your IRA by April 1, 2011. Your RMD for 2011 must be paid by December 31, 2011.

a. Calculating Your RMD

The amount that must be distributed each year, the RMD amount, beginning with the calendar year for which distributions are required and continuing through the year of death, is obtained by dividing the IRA account balance on December 31 of the previous year by the distribution period using the Uniform Lifetime Table in Q&A-2 of Section 1.401(a)(9)-9 of the Treasury Regulations, using your age on your birthday in the applicable distribution year.

However, if your sole designated beneficiary is your surviving spouse and such spouse is more than 10 years younger than you, the distribution period is determined under the Joint and Last Survivor Table in Q&A-3 of Section 1.401(a)(9)-9 using the ages as of your and your spouse's birthdays in the applicable distribution year.

b. Penalty For Failure to Take RMD

If in any taxable year after you turn age 70½ you fail to withdraw the required minimum distribution from the IRA, a 50% nondeductible penalty may be imposed by the IRS on the difference between the amount that should have been distributed and the amount actually distributed.

c. General Rules

If you have multiple IRAs, you must determine the RMD amount for each IRA, however the minimum amounts can be totaled and the total taken from any one or more of the IRAs. Any distributions in excess of the required minimum payment for one year cannot be used as a credit when figuring a subsequent year's RMD. An annual RMD must be satisfied before you can roll over any portion of your IRA account.

d. Default Distribution Methodology

If you do not commence distributions by your required beginning date, we may do any of the following:

- assume you are taking your RMD from another IRA and make no payment until you make a request,
- pay your entire IRA to you in a single sum payment, or
- follow a course of action permitted under the trust agreement.

We will not be liable for any penalties or taxes incurred due to your failure to take your RMD.

e. RMDs After Your Death

An RMD is required for the year of your death, under the rules described above. RMDs required by beneficiaries in future years are described in Section M.

f. Special Rule for 2009

You are not required under federal law to take a minimum distribution for 2009, due to relief enacted by Congress in late 2008. However, if your initial minimum distribution is for 2008 and was not paid in 2008 (since it is not due until April 1, 2009), the 2008 minimum distribution must still be taken.

g. Roth IRAs

The RMD rules described in this Section F do not apply to Roth IRAs – your Roth IRAs are not subject to lifetime RMDs. In addition, Roth IRA accounts and distributions are also disregarded for purposes of determining RMDs from your traditional, SEP and SIMPLE IRAs.

G. Transfers of IRA Assets

1. Trustee to Trustee Transfer

You may transfer assets in your IRA from one trustee directly to another. The transfer is not a rollover and is therefore not subject to the one-year waiting period that applies to rollovers as described below. There is no dollar limit on the amount you transfer or how often you can make a transfer.

The transfer is tax-free if it is between traditional IRAs (or between a SEP-IRA or, after two years of participation, a SIMPLE IRA and a traditional IRA), or between SIMPLE IRAs. However, a transfer of a traditional IRA, SEP-IRA or SIMPLE IRA to a Roth IRA is a conversion (as discussed in Section I) and subject to tax.

2. Limitation on Transfers of SIMPLE IRAs

For the first two years that you participate in your employer's SIMPLE plan, you may only transfer your SIMPLE IRA to another SIMPLE IRA. After you have completed two years of participation, you may transfer your SIMPLE IRA to a traditional IRA tax-free, or, subject to tax, to a Roth IRA.

3. Transfers Incident to Divorce

If you are the spouse or former spouse of an IRA Account Holder and you receive a transfer of an interest in that IRA under a divorce decree (or related document), the transfer is not a distribution and is tax-free. Upon the transfer, the IRA will be treated as your IRA and you will be subject to taxation upon distribution.

H. Rollovers of IRA Assets

Distributions from your IRA or other retirement programs typically are subject to taxation, as described in Section F above. You may be able to defer taxes on the distributions by completing a "rollover". A rollover is a tax-free movement from one retirement program to another. The rollover rules are complex. You should consult with your tax advisor about your situation.

You may roll assets into or out of your IRA subject to the following rules:

1. **Timing**

   Generally, you must make a rollover contribution within 60 days of the date you receive a distribution from an IRA or your employer's plan. If you do not make the rollover within this 60-day window, the distribution will be subject to income tax, as described in this disclosure statement, or for retirement plan distributions, in accordance with the information you received at distribution. The IRS may waive the 60-day requirement in the event of a casualty, disaster or another event beyond your reasonable control, as provided in IRS Revenue Procedure 2003-16.

2. **No Tax Deduction**

   Generally, you do not include the amount rolled over in your income and you cannot take a tax deduction for the year the rollover was completed. However, a conversion from a traditional, SEP or SIMPLE IRA to a Roth IRA is subject to tax.

3. **Rollover From an IRA to an IRA**

   a. **Types of IRAs**

      You may complete a tax-free rollover between traditional IRAs, between SIMPLE IRAs or from a SEP-IRA to a traditional IRA. In addition, after two years of participation in your employer's SIMPLE plan, you may roll over your SIMPLE IRA to a traditional IRA.

   b. **Eligible Rollover Distribution**

      Most distributions from your traditional (or SEP-IRA or SIMPLE IRA) are eligible for rollover to a traditional IRA. However, a distribution will not qualify for rollover if it is an RMD payment, a corrective distribution, or a payment in a series of substantially equal annual or more frequent distributions made over your life or life expectancy, over the joint life or life expectancy of you and your beneficiary, or over a period of 10 years or more.

   c. **Waiting Period Between Rollovers**

      You may take a distribution of assets from a traditional IRA and make a rollover contribution of all or part of the assets to another traditional IRA. You are limited to one such rollover in any twelve consecutive month period. The one-year period begins on the date you receive the IRA distribution, not on the date you rolled it over into another IRA. This rule applies to each separate IRA you own. However, this rule does not apply to conversions to a Roth IRA or a recharacterization.

   d. **Partial Rollovers**

      If you withdraw assets from your IRA, you can roll over part of the withdrawal tax free and keep the remainder of the assets. The amount you keep may be subject to taxation and, if the assets are taken as an early distribution, an additional 10% (or 25%, for certain SIMPLE IRA distributions) penalty tax, unless an exception applies.

   e. **Rollover of Securities**

      For rollovers between IRAs, you must roll over to the new IRA the same securities or other property you received from your old IRA. For example, if you received stock from your old IRA, you must use the same stock for the contribution to your new IRA. The IRA custodian may, in its sole discretion, refuse to accept particular securities or property if sound administration or custody of the investment is not feasible, the investment presents burdensome valuation problems, or is otherwise prohibited by law.

4. **Rollover From an Employer Plan to an IRA**

   a. **Types of Plans**

      You can rollover into a traditional or SEP-IRA all or part of an eligible rollover distribution you receive from a qualified plan, annuity plan, 403(b) or certain governmental 457 plans. (A rollover from an employer plan CANNOT be made to a SIMPLE IRA.)

   b. **Ineligible Rollovers**

      You may not roll over the following types of distributions to your traditional or SEP-IRA: required minimum distributions; corrective distributions of excess contributions or deferrals; hardship distributions; and payments that are part of a series of equal payments over a period of ten years or more, or over your life expectancy, or over the joint life expectancy of you and your designated beneficiary. In addition, you may not roll over to your traditional or SEP-IRA any "designated Roth contributions" made to a 401(k) or 403(b) plan.

c. Rollover by Spouse Beneficiary

If you are the beneficiary of a participant's account in an employer plan and you are the spouse of the deceased participant, you may be permitted to roll over the assets into your traditional or SEP-IRA.

d. Rollover by Non-Spouse Beneficiary

If you are the beneficiary of a participant's account in an employer plan and you are not the spouse of the deceased participant, you may be permitted to roll over the assets into an inherited IRA. The rollover must be accomplished by a direct trustee-to-trustee transfer and the deceased participant's plan must permit this type of rollover.

e. Rollover by Alternate Payee

If you are the alternate payee under a qualified domestic relations order and are eligible to receive a distribution from an employer plan, you may be permitted to roll over the assets into a traditional IRA.

f. Rollover of Property

If you receive an eligible distribution from an employer plan that consists of property other than cash, you may be permitted to roll over the property into your IRA. You may also sell the property and roll over the cash proceeds into your IRA. The gain or loss on the sale of the stock is not recognized if the rollover is for the entire amount.

g. After-Tax Amounts

You may roll after-tax contributions, other than designated Roth contributions, to a traditional IRA. However, after-tax contributions cannot be rolled from an IRA back to an employer plan.

h. Partial Rollover

If you prefer, you may roll over part of the distribution tax-free and keep the rest of it. The amount you keep is generally subject to the normal taxation rules for such plan payments in the year it is paid to you. It does not qualify for special averaging or long-term capital gain treatment. Any taxable amount you keep may be subject to an additional 10% penalty tax if you receive it before age 59½, unless an exception applies. Also, 20% of any taxable amount that is not transferred in a direct rollover will be withheld and applied against your taxes.

5. Rollover from an IRA to an Employer Plan

a. Types of Plans

Subject to the employer plan's rules, you can rollover an eligible rollover distribution from a traditional or SEP-IRA into a qualified plan, annuity plan, 403(b) or certain governmental 457 plans. In addition, after two years of participation in your employer's SIMPLE plan, you may roll over your SIMPLE IRA distribution to such plans.

b. Eligible Rollover Distributions

You may not rollover the following types of distributions to an employer plan: required minimum distributions; corrective distributions of excess contributions; and payments that are part of a series of equal payments over a period of ten years or more, or over your life expectancy, or over the joint life expectancy of you and your designated beneficiary.

c. Limits On After-Tax Amounts

Nondeductible IRA contributions (or after-tax contributions to an employer's plan that were previously rolled to your IRA) cannot be rolled from the IRA to an employer plan.

d. Partial Rollovers

If you withdraw assets from your IRA, you can roll over part of the withdrawal tax free and keep the remainder of the assets. The amount you keep may be subject to taxation and, if the assets are taken as an early distribution, an additional 10% penalty tax, unless an exception applies.

e. Waiting Period Between Rollover Distributions

The 12-month limit on rollover distributions discussed above in Section H.3.c. also applies to rollovers from an IRA to an employer's plan.

f. Plans Rules Will Apply

Employer plans are not required to accept rollovers from IRAs. Distributions that are rolled over to an eligible retirement plan will become subject to that plan's rules, including the rules on form of assets acceptable (cash or property), investment and withdrawals. Consult the plan trustee or custodian for more information.

I. Conversions

1. **Conversion from a Traditional, SEP or SIMPLE IRA to a Roth IRA**

   Any or all of a traditional, SEP or SIMPLE IRA may be converted to a Roth IRA unless (i) your MAGI for the year the contribution is distributed from the traditional, SEP or SIMPLE IRA exceeds $100,000 or (ii) you are married, lived with your spouse at some time during the taxable year, and file a separate tax return. Any required minimum distribution you receive from an IRA or an eligible retirement plan is disregarded for purposes of determining whether you are eligible to make a conversion to a Roth IRA.

   However, a SIMPLE IRA cannot be converted to a Roth IRA until you have two years of participation in your employer's SIMPLE plan.

   You may make the conversion by instructing the custodian or trustee to change the designation of your traditional, SEP, or SIMPLE IRA to a Roth IRA, if the Roth IRA is offered by the same custodian or trustee. Otherwise, you may convert by making a rollover or transfer from a traditional, SEP or SIMPLE IRA to a Roth IRA. The amount of the conversion, minus any return of basis, is taxable as ordinary income in the year the conversion occurs. (If you make the conversion by rollover, the tax is imposed for the year the rollover distribution occurs.) The 10% penalty tax on early withdrawals does not apply to such conversions.

   Caution: Any withdrawal of conversion amounts from your Roth IRA within the 5-year period beginning on the first day of the taxable year in which the contribution is made would be subject to the 10% penalty tax on early distributions for the entire amount of the conversion and earnings attributable to the withdrawal, if no exception applies.

2. **Upcoming Change in Rules**

   Effective January 1, 2010, individuals are allowed to convert a traditional IRA to a Roth IRA regardless of a participant's gross income or filing status. The law eliminates the requirement that married taxpayers must file joint returns and removes the $100,000 MAGI limit on the conversion from a traditional IRA to a Roth IRA. Participants who perform a conversion in 2010 are given an option to include the taxable amount in their gross income and spread it out over a two-year period, with the first year beginning 2011.

3. **Reconversion**

   You cannot convert and reconvert an amount during the same tax year or, if later, during the 30-day period following a recharacterization. If you reconvert during either of these periods it will be a failed conversion. A failed conversion is includible in income and is subject to penalties.

J. Recharacterizations

A recharacterization will permit you to treat a contribution made to one type of IRA as having been made to a different type of IRA. Recharacterizations are subject to the following rules:

1. **Trustee-to-Trustee Transfer**

   To recharacterize a contribution or a conversion contribution, you must have the contribution transferred from the first IRA (the one to which the contribution was originally made), to the second IRA in a trustee-to-trustee transfer.

2. **Timing**

   If the transfer is made by the due date (including extensions) for your tax return for the year during which the contribution was made, you may elect to treat the contribution as having been originally made to the second IRA instead of the first IRA. If you have already filed your income tax return for the year, you must file an amended tax return for the year of the contribution by the filing deadline for amended returns.

3. **Previous Tax-Free Transfers**

   An amount that was previously moved in a tax-free transfer, such as a rollover, generally cannot be recharacterized. However, if you mistakenly roll over or transfer an amount from a traditional IRA to a SIMPLE IRA, you can later recharacterize the amount as a contribution to another traditional IRA.

4. **Recharacterizing Employer Contributions**

   You may not recharacterize employer contributions (including elective deferrals) under a SEP or SIMPLE IRA as contributions to another IRA.

5. **How to Recharacterize**

   You must notify both the trustee of the first IRA and the trustee of the second IRA that you have elected to treat the contribution as if you made it to the second IRA. You must make the notification, in a form acceptable to us, by the date of the transfer.

6. Reporting a Recharacterization

You must report the recharacterization on Form 8606.

K. Designation of Beneficiary

You may designate any person or entity to be your beneficiary to receive your IRA upon your death, subject to the following rules:

1. Designation of Beneficiary

You may designate a beneficiary on the IRA application.

2. Modification of Beneficiary Designation

You may modify the beneficiary designation by completing a beneficiary form. Changes to the beneficiary designation must be received by us (or our designated agent) during your lifetime.

3. No Beneficiary Designation

If you have not designated a beneficiary prior to your death or your designation is not effective for any reason, the beneficiary will be your surviving spouse, or if none, the beneficiary will be your estate.

4. Beneficiary May Designate Own Beneficiary

Upon your death, your designated beneficiary may designate his or her own beneficiary to receive any remaining assets in the IRA.

5. Effect of Divorce

If your designated beneficiary is your spouse and you divorce, your ex-spouse will remain as your designated beneficiary until you revise your beneficiary designation. Changes to the beneficiary designation must be received by us during your lifetime.

L. Inherited IRA

Your beneficiary will inherit your IRA at your death.

1. Tax Effect

Your beneficiary must include any taxable distribution in gross income. Certain distributions are required, as described in Section M below.

2. IRA Inherited From Spouse

If you inherit a traditional, SEP or SIMPLE IRA from your spouse you may:

a. Treat the IRA as your own by designating yourself as the Account Holder (you will not be treated as a beneficiary for purposes of the IRA rules);

b. Treat it as your own by rolling it over into your traditional IRA, or to the extent it is taxable, into a qualified employer plan, qualified employee annuity plan, tax-sheltered annuity plan, or eligible deferred compensation plan; or

c. Treat yourself as the beneficiary rather than treating the IRA as your own.

3. IRA Inherited From Non-Spouse

If you inherit an IRA from someone other than your spouse, you may not treat the IRA as your own. You cannot rollover any amounts in or out of the IRA, or make contributions to the IRA. However, you can make a trustee-to trustee transfer as long as the IRA into which the amounts are being moved is set up and maintained in the name of the deceased IRA Account Holder for the benefit of you as the beneficiary.

4. Separate Accounts

If you name multiple beneficiaries, they may each establish separate accounts for their portion of the IRA.

5. Non-Spouse Beneficiary under an Employer's Plan

You may also establish an inherited traditional IRA to receive a direct trustee-to-trustee transfer of amounts inherited under an employer's retirement plan. This type of inherited IRA is subject to special required minimum distribution rules, as described in Section M.

6. Minor or Disabled Beneficiaries

If the beneficiary designated to receive payments is a minor child or declared incapacitated or incompetent by the court, we may follow the direction of a court appointed guardian or legally appointed representative, including payment and investment direction. We will not be liable for any loss which may result from any investment, liquidation, or distribution made by us in good faith under this paragraph.

7. **Investment Control**

See Section R. Following your death, your beneficiary will have investment responsibility.

M. Required Minimum Distributions (RMD) for Beneficiaries

The beneficiary of your traditional, SEP or SIMPLE IRA is required to take certain distributions, to avoid additional tax penalties. The rules that apply depend on when you die – before or after your required beginning date.

1. **Death Before Your Required Beginning Date**

If you die before your required beginning date, the April 1 of the year following the year you reach age 70½, your beneficiary must direct that payment of his/her benefits be made or started no later than December 31 of the year following the year of your death with annual distributions of at least the required minimum distribution described below (the "life expectancy rule"). If, however, there is no designated beneficiary (as defined below) or your designated beneficiary is not an individual, the entire balance of the IRA must be paid by December 31 of the year in which occurs the fifth anniversary of your death (the "5-year rule").

Special Rule 2009. Your beneficiary is not required under federal law to take a required minimum distribution for 2009, due to relief enacted by Congress in late 2008. In addition, if in 2009 a beneficiary is satisfying the required minimum distribution rules by taking full distribution of his or her interest by the end of the calendar year containing the fifth anniversary of the Participant's death, the beneficiary may now take the full distribution over a six year period.

Special rules apply if your surviving spouse is your sole designated beneficiary. In this case, your surviving spouse may wait until the December 31 of the year you would have reached age 70½ to start receiving traditional, SEP or SIMPLE IRA RMD payments. If your surviving spouse is your sole beneficiary and dies after you but before his or her payments are required to begin, subsequent payments to the surviving spouse's beneficiaries will be made as if the surviving spouse had been you.

Under the life expectancy rule, the yearly required minimum distribution for each designated beneficiary is calculated by dividing the IRA account balance as of the close of business on December 31 of the previous year by the applicable distribution period. The applicable distribution period depends on the beneficiary's identity.

If your surviving spouse is the sole designated beneficiary of your IRA, the distribution period is the life expectancy listed in "Table 1 (Single Life Expectancy)" for the spouse's age as of the spouse's birthday in the year for which the distribution is being made. Table I can be located in IRS Publication 590. (Special rules apply to the minimum distributions after the death of your surviving spouse.)

If the designated beneficiary is an individual other than your spouse, the distribution period for the year following the year of your death is the life expectancy listed in "Table I (Single Life Expectancy)" for the beneficiary's age as of his or her birthday in that year, reduced by one for each subsequent year.

Special Rules for Inherited IRAs Established by a Non-Spouse Beneficiary with Inherited Funds Transferred from an Eligible Retirement Plan. The yearly required minimum distribution from this type of inherited IRA depends on the eligible retirement plan's rules for determining required minimum distributions and, in some cases, when the non-spouse beneficiary made the direct rollover to the inherited IRA.

If the eligible retirement plan uses the life expectancy rule to determine required minimum distributions for beneficiaries, then the yearly required minimum distribution for the non-spouse beneficiary is calculated by dividing the IRA account balance as of the close of business on December 31 of the previous year by the applicable distribution period. The applicable distribution period is the beneficiary's life expectancy listed in "Table 1 (Single Life Expectancy)" for the beneficiary's age as of his or her birthday in the calendar year immediately following the calendar year of death of the plan participant, reduced by one for each subsequent year.

If the eligible retirement plan uses the 5-year rule to determine required minimum distributions for beneficiaries, then if the non-spouse beneficiary made the rollover to the inherited IRA before the end of the calendar year immediately following the calendar year in which the death of the plan participant occurred, the beneficiary can elect to have required minimum distributions from the inherited IRA determined under the life expectancy rule or the 5-year rule. However, if the non-spouse beneficiary made the rollover to the inherited IRA in the second through fourth calendar years following the calendar year in which the death of the plan participant occurred, the beneficiary must use the 5-year rule under the inherited IRA.

2. **Death After Your Required Beginning Date**

If your death occurs on or after your required beginning date, the April 1 of the year following the year you reach 70½, the beneficiary of your IRA must receive payment for each year following the year of your death.

Special Rule for 2009. Your beneficiary is not required under federal law to take a required minimum distribution for 2009, due to relief enacted by Congress in late 2008.

The following rules also apply to an inherited IRA established by a non-spouse beneficiary with inherited funds transferred from an eligible retirement plan when the plan participant died after his/her required beginning date under the retirement plan. In that case, references below to "you" and "your" refer to the employer-sponsored retirement plan participant and to "beneficiary" refer to the individual who inherited the funds and made the transfer to the inherited IRA.

The yearly required minimum distribution for each designated beneficiary is calculated by dividing the IRA account balance as of the close of business on December 31 of the previous year by the applicable distribution period. The applicable distribution period depends on the beneficiary's identity.

If your surviving spouse is the sole designated beneficiary of your IRA, the distribution period is the life expectancy listed in "Table 1 (Single Life Expectancy)" for the spouse's age as of the spouse's birthday in the year for which the distribution is being made. Table 1 can be located in IRS Publication 590. (Special rules apply to the minimum distributions after the death of your surviving spouse.)

If the designated beneficiary is an individual other than your spouse, the distribution period of the year following the year of your death is the life expectancy listed in "Table 1 (Single Life Expectancy)" for the beneficiary's age as of his or her birthday in that year, reduced by one for each subsequent year.

However, if your remaining life expectancy for a given year is greater than the life expectancy of your designated beneficiary for that year (as calculated above), the required minimum payment to your beneficiary is determined by using your remaining life expectancy. Your remaining life expectancy is calculated by using your age as of your birthday in the year of your death and referring to "Table 1 (Single Life Expectancy)". This amount is reduced by one for each subsequent year.

If your beneficiary is not an individual (for example, if the beneficiary is your estate or a charity) or if you have not designated beneficiary, required minimum payments are determined using your life expectancy, as described above.

3. **Designated Beneficiary**

   Under the RMD rules, your "designated beneficiary" is determined based on the remaining beneficiaries of your IRA as of the September 30th of the year following the year of your death. Any beneficiary who was a beneficiary on your date of death, but is not a beneficiary as of the September 30th of the year following your death (for example due to receiving payout of the complete benefit due to such beneficiary), is not taken into account for RMD purposes.

4. **Penalty For Failure to Take RMD**

   If in any taxable year after your death, your designated beneficiary fails to withdraw the required minimum distribution from the IRA, a 50% nondeductible penalty may be imposed by the IRS on the difference between the amount that should have been distributed and the amount actually distributed.

N. Federal Estate and Gift Tax

You should consult with your tax or legal advisor regarding federal estate and gift tax matters.

1. **Federal Estate Tax**

   Your IRA is fully includible in your gross estate and subject to federal estate taxes, just as any other asset. However, for a death in 2008, there is no federal estate tax if your total estate and prior taxable gifts do not exceed $2,000,000 (for a death in 2009, $3,500,000).

2. **Gift Tax**

   The gift tax exclusion for distributions is applicable to an IRA. In addition, the designation of a beneficiary of an IRA is not considered a gift tax transfer of property for federal gift tax purposes.

O. Prohibited Transactions

A prohibited transaction is any improper use of your IRA and includes direct or indirect transactions between you, your beneficiaries or your family members and your IRA.

1. **Examples**

   Prohibited transactions include borrowing money from your IRA; selling property to your IRA; buying property from your IRA; receiving unreasonable compensation for managing your IRA; and using your IRA as security for a loan.

2. Effect on IRA

If a prohibited transaction occurs in a year, the IRA will lose its tax-deferred status and you will be required to include the value of the account on the first day of the year in your income for the year the tax-deferred status was lost (other than any non-deductible contributions). If you pledge your IRA as security for a loan, the portion of your IRA that was pledged must be included in your income for the year it was pledged (other than non-deductible contributions). You may also be subject to other taxes including an additional 10% penalty tax on the taxable amount if you are under age 59 ½, unless an exception applies.

P. Additional Taxes

1. Early Distributions

Early distributions are amounts distributed from your traditional, SEP or SIMPLE IRA before you attain age 59 ½. A 10% additional tax will apply to certain distributions made before you attain age 59½, unless an exception applies. In addition, if you take a distribution from your SIMPLE IRA in the first two years after the date of the first contribution under your employer's SIMPLE plan, the penalty is 25% instead of 10%.

Generally, you will not pay the additional tax for a distribution made:

a. to pay unreimbursed expenses exceeding 7.5% of your adjusted gross income for your medical care (or that of your spouse or dependents).

b. to pay medical insurance premiums after losing your job in certain situations.

c. after your disability. You are considered disabled for purposes of the exception if you cannot do any substantial gainful activity because of your physical or mental condition, which is expected to be of long-continued or indefinite duration or lead to death.

d. after your death.

e. as part of a series of substantially equal periodic payments for your lifetime or the lifetimes of you and your beneficiary.

f. to pay certain qualified first-time homebuyer amounts (limited to $10,000 in your lifetime).

g. to pay for certain qualified higher education expenses for you, your spouse, and you or your spouse's children and grandchildren.

h. to the IRS due to a tax levy.

i. under special disaster relief, such as qualified hurricane distributions.

j. as qualified reservist distributions under Code section 72(t)(2).

You should consult with your tax advisor to see if your distribution qualifies for one of these exemptions to the early distribution penalty tax, as many special rules apply.

2. Tax on Excess Contributions

An excess contribution is one that exceeds the annual amount you are allowed to contribute to all of your traditional and Roth IRAs. If the excess contributions for a year are not withdrawn by the date your return for the year is due, you are subject to a 6% tax. You must pay the 6% tax each year on excess amounts that remain in your IRA at the end of the year.

You may correct the excess contribution and avoid the 6% tax by withdrawing the amount of the excess and any earnings before the tax-filing deadline (including extensions) for the tax year the contribution was made. You also must include the withdrawn earnings in your gross income for the year in which you contributed. You are responsible for computing the earnings and providing the figure to us on your completed distribution form. You may also owe the IRS a 10% premature distribution penalty tax on the earnings, even if you removed them before the tax-filing deadline.

If you fail to meet the timely correction deadline, you must pay a penalty tax of 6% of the excess contribution for the year of the contribution. You will also have to pay the 6% penalty tax for each later year, if an excess is still in the IRA at the end of that year. The excess may be eliminated by either: (i) making reduced IRA contributions in future years (but not past years), or (ii) withdrawing the excess contribution from the IRA.

You should consult with your tax advisor about the tax consequences of late correction. If the excess in your IRA is the result of an attempted rollover and the excess occurred because the retirement plan provided you with incorrect information regarding your rollover amounts, you may withdraw the excess amount. You may have to amend your income tax return for the year in which the excess contribution occurred. Any excess withdrawn as a result of incorrect rollover information should not be included in your gross income for the year of the withdrawal.

3. **Reporting**

   You must file a Form 5329 with Form 1040 if you owe the additional tax on early distributions or the tax on excess contributions.

Q. Financial Disclosure

1. **Available Assets**

   The amount of money that will be available at any period of time depends on:

   a. the amount of contributions;

   b. total years of participation;

   c. earnings, including interest, dividends, realized and unrealized gains, and losses; and

   d. expenses incurred for brokerage commissions and applicable trustee's fees.

   Due to the many kinds of investments that you may choose, neither a guaranteed return nor a projected amount can be furnished.

2. **Fees**

   We charge annual and other fees for your IRA. Please refer to the current fee schedule. If you fail to pay our compensation, taxes, and/or expenses within a reasonable time after demand for payment is made, we reserve the right to charge the expenses to the Trust and liquidate such assets of the Trust as needed to satisfy the demand. The custodian will collect all fees, expenses, and taxes as directed by us. Such collection of fees by the custodian may be made without your approval or direction. We reserve the right to revise the fee schedules and will provide sufficient advance written or electronic notice of any revision to you. Brokerage commissions are considered a separate cost and are in addition to the above fees charged by the Trustee. Questions about brokerage commissions should be discussed with your broker or account executive before any orders are executed.

3. **Annual Earnings**

   To compute annual earnings: Compare the year-end market value to the prior year's market value; add any interest or dividends earned for your total account.

R. Investments

1. **Investment Responsibility**

   It is your responsibility to select and direct the investments of the Trust, either in person or through a broker, account executive or investment advisor, according to the procedures currently in effect. The investments you choose must conform to the Trust Agreement. Investments that do not generate confirmations must be accompanied by additional written instructions. It is your responsibility to make sure that the investments you select do not cause the IRA to participate in a prohibited transaction, such as by extending credit to the IRA or engaging in a "call" transaction.

2. **Impermissible Investments**

   No part of your IRA may be invested in the following:

   a. Collectibles within the meaning of section 408(m) except for certain coins and bullion defined in section 408(m)(3). Any impermissible investments in collectibles will be treated as a distribution.

   b. Life insurance contracts or commingled with other property, except in a common trust or common investment fund, described in section 408(a)(5).

   Other types of investments may also be prohibited or limited, as provided in the Trust Agreement.

3. **Investment Information**

   Although the brokerage firm may provide investment information to you, any information provided to you by the brokerage firm should not serve as a primary basis for your investment decisions. Any questions concerning the authority of your broker should be directed to the brokerage firm. The broker is not an employee of Principal Trust Company, and Principal Trust Company does not supervise or control the activity of the broker. It is our understanding that you will exercise independent judgment when you make your investment decisions.

4. **Investment Performance**

   No projection of the growth in value of your IRA can reasonably be made or guaranteed. The value of your IRA and the growth in value of the IRA is dependent solely on the performance of the investments chosen by you.

S. Duties Not Assigned

We will not be responsible for voting proxies, receiving or mailing proxy materials, filing reports, returns or disclosures with any government agency unless we are required to do so under applicable law. Proxies and proxy material that are received by us will be destroyed.

T. Additional Information

1. **State Laws**

   The tax laws of certain states and local governments may be different from the federal tax laws for IRAs. State and local laws are not covered in this disclosure statement.

2. **Definition of Spouse**

   The term "spouse" as used in this disclosure statement is defined according to applicable law.

3. **Legal Incapacity**

   If you (or after your death, your beneficiary) is legally incapacitated, then we may require that any and all rights that the incapacitated individual could exercise under the Trust Agreement or at law be exercised by the incapacitated individual's representative. We may rely on the authority and direction of such representative for all action taken with respect to the IRA.

4. **IRS Information**

   The IRS has a number of helpful Publications on IRAs, including IRS Publication 590, IRS Publication 575 and IRS Publication 939. These publications are available at any IRS district office, on line at www.irs.gov or by calling 1-800-TAX-FORM.

5. **Legal and Tax Advice**

   You are responsible for determining the legal and tax implications of (i) the type of IRA you have selected, (ii) your eligibility to contribute to, or receive contributions under, such IRA, (iii) the amount of contributions made to the IRA and whether such contributions are deductible, (iv) the tax treatment of any withdrawals from your IRA, and (v) any other tax treatment. We have not, and may not, provide you with legal or tax advice.

6. **Written Notices**

   Any required notice regarding the trust will be considered effective when we (or our designated agent) mail it to the last address of the intended recipient which is contained in our records. We may provide notice to you in another format, including but not limited to electronic mail. Any electronic notice will be deemed effective when transmitted to the last e-mail or other electronic address in our records. You acknowledge that any notice provided electronically to you (or your beneficiary) will be deemed to have been provided in writing for purposes of this IRA and applicable federal and state laws. Any notice to be given to us must be provided in writing and will be considered effective when we actually receive it. You and/or your beneficiaries must notify us (or our designated agent) of any change of address in a manner acceptable to us.

7. **Future Amendments**

   We may make any amendments to the Trust Agreement we deem advisable, including but not limited to, changes that are required to keep your IRA in compliance with applicable laws. You will be notified of any such amendments.

Principal Trust Company

A member of

Principal Financial Group

Mailing Address:
P.O. Box 8963
Wilmington, DE 19899-8963
800-209-9010 Fax: 302-999-9554

DISCLOSURE STATEMENT FOR ROTH IRA

This Disclosure Statement provides you, and your beneficiaries after your death, a summary of the basic rules and regulations governing your Delaware Charter Guarantee & Trust Company d/b/a Principal Trust Company (Principal Trust Company) Self-Directed Roth Individual Retirement Account (IRA). It also contains important federal tax and legal information. However, the applicable Self-Directed Individual Retirement Trust Agreement (Trust Agreement) for your Roth IRA will govern your IRA. If there is a discrepancy between the Trust Agreement and Disclosure Statement, the Trust Agreement will control.

Principal Trust Company cannot give tax or financial advice. We strongly encourage you to consult with your tax or legal advisor before you establish an IRA.

When used in this document, the words *you* and *your* refer to the person for whom the IRA is established. *We*, *us*, and *our* refer to Principal Trust Company as trustee of your IRA.

Traditional, SEP and SIMPLE IRAs are described in a separate disclosure statement.

Your Right to Revoke Your IRA

You may revoke your IRA within seven days of the date you establish the IRA. If you revoke your IRA, we will return all of your funds, without adjustment for items such as sales commissions, administrative expenses (including the acceptance fee), or fluctuation in market value.

Your notice of revocation must be put in writing, signed by you, and delivered to us.

The notice may be mailed to us at the following address:

IRA Processor
Principal Trust Company
P.O. Box 8963
Wilmington, DE 19899-8963

You may also send the notice by courier at the following address:

IRA Processor
Principal Trust Company
1013 Centre Road
Wilmington, DE 19805

If you mail the notice, we will use the date of the postmark (or the date of certification or registration for certified or registered mail) as the date of the notice. You may call us at (800) 209-9010 or (302) 995-2131 if you have questions.

A. Roth Contributions – General Rules

Annual contributions to your Roth IRA must be in the form of cash, checks, money orders, or electronic fund transfers. (You cannot contribute other assets, except in a transfer or a rollover as described in Sections D and E.) Roth IRA contributions are subject to the following limitations and restrictions:

1. **Contribution Eligibility**

   You may establish a Roth IRA if you (or your spouse, if filing a joint return) receive taxable compensation for the year and meet the income restrictions described in Section B. There is no age limit.

2. **Annual Contribution Limits**

   If you are eligible to make Roth IRA contributions, the maximum amount you may contribute to all of your traditional and Roth IRAs for a year is the lesser of the maximum contribution limit in effect for the taxable year, as described below, or 100% of your compensation. If you are age 50 or older by the end of the applicable year, the annual contribution limit is increased, as described below (subject to the 100% of compensation limit). You may make these extra "catch-up" contributions regardless of your past contribution history.

3. **Maximum Annual Contribution Limits**

   The maximum contribution limit is as follows:

Tax Year	Maximum Annual Contribution	Maximum Annual Contribution Age 50 or Older
2008	$5,000	$6,000
2009	$5,000	$6,000

For years after 2009, the contribution limit will be adjusted by the Secretary of Treasury for cost-of-living increases. The adjustments will be in multiples of $500.

You may contribute less than the maximum contribution for a year.

4. Compensation

For purposes of the contribution limits, Compensation includes wages, salaries, tips, professional fees, bonuses, and other amounts derived from or received for personal services, commissions, and self-employment (earned) income. When determining compensation for self-employed individuals, any amounts taken as a deduction for contributions made to a self-employed retirement plan must be subtracted from net earnings. Compensation also includes any taxable alimony and separate maintenance payments you receive under a divorce decree or separate maintenance.

Compensation includes combat-zone compensation that is excluded from income for federal income tax purposes. (You may be able to make an additional contribution to your IRA by May 28, 2009, if you received nontaxable combat pay in 2004 or 2005.) Beginning January 1, 2009, compensation also includes certain differential wage payments (or military supplemental pay) paid by an employer to an individual while on active duty for a period of more than 30 days.

Compensation does not include earnings and profits from property, interest and dividend income, pension or annuity income, or deferred income. In addition, compensation does not include any income from converting a traditional IRA to a Roth IRA.

5. Additional Contribution for Employer Bankruptcies

If you participated in a 401(k) plan and the employer that maintained the plan went into bankruptcy, you may be able to contribute an additional $3,000 to your Roth IRA for taxable years through 2009, if the following conditions are met:

a. You must have been a participant in a 401(k) plan under which the employer matched at least 50 percent of your contributions to the plan with stock of the company;
b. You must have been a participant in the 401(k) plan six months before your employer filed for bankruptcy;
c. Your employer (or a controlling corporation) must have been a debtor in a bankruptcy case in a preceding year; and
d. Your employer, or another person, must have been the subject to indictment or conviction based on business transactions related to the bankruptcy.

If you make these additional contributions, you are not eligible to make catch-up IRA contributions for that year, even if you are age 50 or older.

6. Spousal IRA Limit

If you are married and you file a joint federal income tax return, you may also contribute to your spouse's Roth IRA, if you satisfy the income restrictions in Section B. The contribution may not exceed the contribution limit in effect for the tax year and the combined IRA contribution for you and your spouse may not exceed 100% of your combined compensation.

However, if you and your spouse did not live together at any time during the year and did not file a joint federal income tax return for that year, you and your spouse will be treated as unmarried for purposes of the IRA contribution limits for that year.

7. Special Rules

Certain special rules apply that may allow you to make additional contributions to your Roth IRA:

a. If you received (i) a military death gratuity (under 10 United States Code 1477) or (ii) Servicemembers' Group Life Insurance payments, you may contribute such amounts to your Roth IRA, even if you are not otherwise eligible to make Roth IRA contributions due to your income or the annual contribution limits. The contribution must be made to the Roth IRA within one year after the payment was made, with certain exceptions. The amount contributed cannot exceed the total of such amounts you received in the last 12 months, reduced by amounts so received that were contributed to another Roth IRA or a Coverdell Education Savings Account.
b. Certain payments by a commercial passenger airline carrier to its employees or former employees who participated in the carrier's defined benefit pension plan may be contributed to a Roth IRA, even if the employee is not otherwise eligible to make Roth IRA contributions due to the income or annual contribution limits.

These special rules are also subject to additional requirements and limitations. You should consult with your tax or legal advisor to see if you are eligible.

8. **Due Date for Contributions**

Contributions may be made at any time during the year or by the due date for filing your federal tax return for that year, not including extensions. For most taxpayers, the due date will be April 15 of the following year. If an amount is contributed to your traditional IRA between January 1 and April 15, you must inform us for which year (the current or prior year) the contribution is for, otherwise we will assume and report to the IRS, that the contribution is for the year in which it was received in our office.

9. **Corrective Withdrawals**

You may make a tax-free withdrawal of any contribution you make to your Roth IRA for a year if you withdraw the contribution, together with any earnings on it, by the due date (including extensions) for filing your federal income tax return.

The contribution you withdraw is not included in your income as an IRA distribution, but you must include any earnings on the contribution as ordinary income for the year you made the contribution. The earnings also are subject to a 10% penalty tax on early distribution if you are under age 59½, unless an exception applies. See Section M.

10. **Responsibility of the Trustee Regarding Contributions**

You must tell us how all contributions are to be invested. All contributions received will be held and administered by us pursuant to the terms of the Trust Agreement. We are not responsible for the computation and collection of any contributions under the IRA.

12. **Tax Saver's Credit**

You may be able to take a nonrefundable tax credit up to $1,000 per year for contributions made to your Roth IRA and certain other plans. To be eligible for the credit, you must be age 18 or older, not a full time student and not listed as a dependent on another taxpayer's return.

The tax credit generally equals your "percentage rate" times your "qualified retirement savings contributions". Qualified retirement savings contributions include your Roth IRA contributions and contributions to certain other plans. But certain distributions from such plans reduce your qualified retirement savings contributions for the year. In addition, the total contribution taken into account for this credit is $2,000.

The percentage rate for the credit is based on your modified adjusted gross income ("MAGI"), as defined in the tax code, and is subject to phase-outs, as listed under the following table:

MAGI Phase-Outs				
	Married Filing Joint MAGI	**Head of Household MAGI**	**Single, Married Filing Separately, or Qualifying Widow(er) MAGI**	**Percentage Rate**
	$0 and $33,000	$0 and $24,750	$0 and $16,500	50%
	$33,001 and $36,000	$24,751 and $27,000	$16,501 and $18,000	20%
	$36,001 and $55,500	$27,001 and $41,625	$18,001 and $27,750	10%
2009	Over$55,500	Over $41,625	Over $27,750	No Credit Available

For years after 2009, the MAGI phase-outs are subject to cost-of-living adjustments.

The requirements for this tax credit are very complex. You should consult with your tax adviser about your situation.

B. Income Limitations on Roth IRA Contributions

Federal law limits your ability to make Roth IRA contributions if your compensation is within (or above) certain income levels. Depending on your compensation and tax filing status, you may not be able to make a Roth IRA contribution or may only be able to make a limited contribution (less than the maximum annual contribution limit stated in Section A above).

1. **Income Phase-Out**

If your compensation is within the income phase-out for your tax filing status for the year, you will only be able to make a partial Roth IRA contribution for the year. For 2009, the compensation phase-out ranges are as follows:

a. Single/Head of Household Filers. $105,000 to $120,000

b. Married Filing Jointly/Qualifying Widow(er) Filers. $166,000 to $176,000

c. Married Filing Separately. $0 to $10,000

For years after 2009, the compensation phase-out ranges are subject to cost-of-living adjustments.

2. **Phase-Out Example**

John, 37 and unmarried, made $117,000 (compensation) in 2009. His compensation was within the applicable phase-out range for the year ($105,000 to $120,000), so his Roth IRA contribution is limited. To calculate his allowable Roth IRA contribution, John first subtracts the lower number of phase-out range (here $105,000) from his compensation ($117,000), resulting in his "excess compensation" ($12,000).

Next, John applies the following formula:

$$\$5{,}000 - \frac{\text{Excess Compensation}}{\$15{,}000} \times \$5{,}000 = \text{Maximum allowable Roth IRA contributions}$$

(If John was eligible to make catch-up contributions, $6,000 would replace $5,000 in the formula above. In future years, if the maximum annual IRA contribution limit increases, the increased number would be used in this formula.)

The maximum allowable Roth IRA contribution is rounded down to the next lower multiple of $10 (ex. $938 is rounded down to $930). If the final result is between $0 and $200, the maximum allowable Roth IRA contribution is $200.

For John, in 2009:

$$\$5{,}000 - \frac{\$12{,}000}{\$15{,}000} \times \$5{,}000 = \$1{,}000$$

Therefore, John may make a $1,000 Roth IRA contribution in 2009. If he wished to make additional IRA contributions, they would have to be traditional IRA contributions.

Note that for filers other than single and head of household filers, the phase-out range is $10,000 and $10,000 replaces $15,000 in the formula above. Be sure to use the correct phase-out range for your tax filing status.

3. **Compensation Below Phase-Out Range**

If your compensation is below the phase-out range for your tax filing status for the year, you may make the full Roth IRA contribution otherwise allowed in Section A above.

4. **Compensation Above Phase-Out Range**

If your compensation is above the phase-out range for your tax filing status for the year, you may not make Roth IRA contributions for the year, except as may otherwise be provided in Section A above.

C. Payments from your Roth IRA

You have a non-forfeitable right to your Roth IRA at all times. You may request payment from your IRA at any time. The federal income taxation of your Roth IRA distribution depends on when and why you are taking a distribution.

1. **Distributions of Roth IRA Contributions**

You have already paid federal income tax on your Roth IRA contributions. As such, distributions of those Roth IRA contributions are not taxable.

2. **Qualified Distributions of Earnings on Your Roth IRA Contributions**

The earnings on your Roth IRA contributions will be subject to income tax, unless they are paid as a "qualified distribution". To be a qualified distribution, the following must be satisfied:

a. **5-Year Holding Period**

You must have satisfied the 5-year holding period before the distribution. The 5-year holding period begins on the first day of the first tax year for which a contribution is made to any Roth IRA maintained for your benefit, including the first tax year in which a conversion contribution is made. If the contribution for a year is made by the due date for filing your tax return (without extensions), the first year of the holding period is the tax year to which the contribution relates, not the year in which it is actually made. (If you make the conversion by rollover, the holding period begins with the year the rollover distribution occurs.)

The 5-year holding period is not recalculated at your death, but continues through the period that the Roth IRA is held by your beneficiary. The holding period for an inherited Roth IRA is determined separately from the holding period for the beneficiary's other Roth IRAs. However, if a surviving spouse beneficiary treats a Roth IRA as his/her own, the spouse's five-year holding period is the earlier of the expiration of the holding period on the inherited Roth IRA or the expiration of the holding period on the spouse's own Roth IRAs.

b. **Timing of the Distribution**

The distribution is made:

- after you reach age 59½,
- after your death,
- after your disability (as defined Section M),
- for first-time homebuyer expenses for you, your spouse, or any child, grandchild, parent, grandparent, or other ancestor of your or your spouse. This is limited to $10,000. Certain other limitations apply.

3. **Non-Qualified Distributions of Earnings on Your Roth IRA Contributions**

If your distribution of Roth IRA earnings is not a "qualified distribution", then those earnings are taxable as ordinary income in the year received. In addition, an additional 10% early distribution tax penalty may result, unless an exception applies. See Section M. However, federal tax rules established an order of priority for amounts withdrawn. Withdrawals from Roth IRAs are treated as coming from regular contributions first, including any amounts rolled into the IRA in a qualified distribution from a designated Roth contribution account. Next, they are treated as coming from conversion contributions on a first-in-first-out basis. When the total amount withdrawn exceeds the amount of contributions to all of your Roth IRAs, the withdrawal will be attributed to investment earnings subject to ordinary income tax as a non-qualified distribution.

4. **Payments of Converted Amounts**

Amounts that were converted from a traditional IRA to a Roth IRA are subject to special rules. If you withdraw amounts that you converted during the 5-year period beginning on the first day of the taxable year in which the conversion was made, the withdrawal will be subject to the 10% early distribution tax penalty, unless an exception applies. See Section M.

5. **No Required Minimum Distributions**

Roth IRAs are not subject to the lifetime RMD rules that apply to traditional IRAs. However, following your death, your beneficiaries are required to take RMD payments, as described in Section J.

6. **No Special Treatment for Lump Sum Distributions**

The above taxation rules apply to all types of distribution, including lump-sum distributions. IRA distributions do not qualify for the special income tax rules (10-year averaging or long term capital gain treatment) that apply to certain lump-sum distributions from qualified retirement plans.

7. **Transfer to a Health Savings Account**

If you are eligible to make health savings account (HSA) contributions, you may qualify to make a tax-free transfer from your Roth IRA (or traditional IRA) to your HSA, a "qualified HSA funding distribution." The maximum qualified HSA funding distribution that you may make is your annual HSA contribution limit, based on your coverage level (self-only or family) at the time of the transfer. If you cease to be an "eligible individual" under the HSA rules within the 12-month period following your qualified HSA funding distribution, the amount transferred to the HSA will be subject to income tax and a 10% penalty tax (unless you cease to be an eligible individual due to your death or because you became disabled as defined by Sec. 72(m)(7) of the Internal Revenue Code). Generally, you may only make one qualified HSA funding distribution in your lifetime. The qualified HSA funding distribution must be made in a trustee-to-trustee transfer from your IRA to the HSA (the amounts cannot be paid to you). Additional rules apply. You should consult with an accountant, lawyer or other qualified tax advisor about your situation.

8. **Qualified Charitable Distribution**

For 2008 and 2009, if you are age 70½ or older, you may qualify to make a tax-free distribution of up to $100,000 per year from your IRA to a qualifying charity. The distribution must be paid to the qualifying charity directly by the IRA trustee, and can count towards any required minimum distribution you may need to receive for the year. Additional rules apply. The requirements for qualified charitable distributions are very complex, as are the potential effects of such a distribution on your current income tax and future financial situation. You should consult with an accountant, lawyer or other qualified tax advisor about your situation.

D. Transfers of Roth IRA Assets

1. **Trustee to Trustee Transfer**

You may transfer assets in your Roth IRA from one trustee directly to another. The transfer is not a rollover and is therefore not subject to the one-year waiting period that applies to rollovers as described below. There is no dollar limit on the amount you transfer or how often you can make a transfer.

The transfer is tax-free if it is between Roth IRAs. However, a transfer of a traditional IRA, SEP-IRA or SIMPLE IRA to a Roth IRA is a conversion (as discussed in Section F) and subject to tax.

2. **Limitation on Transfers of SIMPLE IRAs**

   For the first two years that you participate in your employer's SIMPLE plan, you may only transfer your SIMPLE IRA to another SIMPLE IRA. After you have completed two years of participation, you may transfer your SIMPLE IRA to a Roth IRA, subject to tax.

3. **Transfers Incident to Divorce**

   If you are the spouse or former spouse of an IRA Account Holder and you receive a transfer of an interest in that IRA under a divorce decree (or related document), the transfer is not a distribution and is tax-free. Upon the transfer, the IRA will be treated as your IRA and you will be subject to taxation upon distribution, as described above.

E. Rollovers of IRA Assets

Distributions from your Roth IRA may be subject to taxation, as described in Section C above. You may be able to defer taxes on the distributions by completing a "rollover". A rollover is a tax-free movement from one retirement program to another. The rollover rules are complex. You should consult with your tax advisor about your situation.

You may roll assets into or out of your Roth IRA subject to the following rules:

1. **Timing**

   Generally, you must make a rollover contribution within 60 days of the date you receive a distribution from the Roth IRA or your employer's plan. If you do not make the rollover within this 60-day window, the distribution will be subject to income tax, as described in this disclosure statement, or for retirement plan distributions, in accordance with the information you received at distribution. The IRS may waive the 60-day requirement in the event of a casualty, disaster or another event beyond your reasonable control, as provided in IRS Revenue Procedure 2003-16.

2. **No Tax Deduction**

   Generally, you do not include the amount rolled over in your income and you cannot take a tax deduction for the year the rollover was completed. However, a conversion from a traditional, SEP or SIMPLE IRA to a Roth IRA is subject to tax.

3. **Rollover From a Roth IRA to a Roth IRA**

   You may complete a tax-free rollover between Roth IRAs, subject to the following rules.

   a. **Eligible Rollover Distribution**

      Most distributions from your Roth IRA are eligible for rollover to another Roth IRA. However, a distribution will not qualify for rollover if it is a corrective distribution.

   b. **Waiting Period Between Rollovers**

      You may take a distribution of assets from a Roth IRA and make a rollover contribution of all or part of the assets to another Roth IRA. You are limited to one such rollover in any twelve consecutive month period. The one-year period begins on the date you receive the IRA distribution, not on the date you rolled it over into another IRA. This rule applies to each separate IRA you own. However, this rule does not apply to conversions to a Roth IRA or a recharacterization.

   c. **Partial Rollovers**

      If you withdraw assets from your Roth IRA, you can roll over part of the withdrawal tax free and keep the remainder of the assets. The amount you keep may be subject to taxation and, if the assets are taken as an early distribution, an additional 10% penalty tax, unless an exception applies.

   d. **Rollover of Securities**

      For rollovers between IRAs, you must roll over to the new IRA the same securities or other property you received from your old IRA. For example, if you received stock from your old IRA, you must use the same stock for the contribution to your new IRA. The IRA custodian may, in its sole discretion, refuse to accept particular securities or property if sound administration or custody of the investment is not feasible, the investment presents burdensome valuation problems, or is otherwise prohibited by law.

4. **Rollover From an Employer Plan to a Roth IRA**

   You may complete a tax-free rollover from an employer plan to a Roth IRA, subject to the following rules.

   a. **Designated Roth Contributions**

      You may rollover designated Roth contributions from an employer plan to a Roth IRA. Qualified employer plans and tax-sheltered annuities may allow participants to designate certain deferrals as "designated Roth contributions," which are similar to Roth IRA contributions, but some different rules apply. Distributions of designated Roth contributions may be rolled over to a Roth IRA or to another employer plan that accepts such rollovers, subject to certain limitations. However, if you roll designated Roth contributions into a Roth IRA, the amounts become subject to the Roth IRA rules, including the Roth IRA 5-year holding period requirement, even if you had previously satisfied the 5-year holding period under the eligible retirement plan. For example, you establish your first Roth IRA to hold a qualified distribution of designated Roth contributions from your employer's retirement plan. Even though you had previously satisfied the 5-year holding period under your employer's retirement plan, you must now satisfy the Roth IRA 5-year holding period before you may receive a qualified distribution from your Roth IRA.

b. Amounts other than Designated Roth Contributions

You may qualify to complete a direct employer plan to Roth IRA conversion of amounts other than designated Roth contributions. See Section F.

c. Eligible Rollover Distributions

You may not roll over the following types of distributions to your Roth IRA: required minimum distributions; corrective distributions of excess contributions or deferrals; hardship distributions; and payments that are part of a series of equal payments over a period of ten years or more, or over your life expectancy, or over the joint life expectancy of you and your designated beneficiary.

d. Rollover by Spouse Beneficiary

If you are the beneficiary of a participant's account in an employer plan and you are the spouse of the deceased participant, you may be permitted to roll over the designated Roth contributions into your Roth IRA.

e. Rollover by Non-Spouse Beneficiary

If you are the beneficiary of a participant's account in an employer plan and you are not the spouse of the deceased participant, you may be permitted to roll over any designated Roth contributions into an inherited Roth IRA. The rollover must be accomplished by a direct trustee-to-trustee transfer and the deceased participant's plan must permit this type of rollover.

f. Rollover by Alternate Payee

If you are the alternate payee under a qualified domestic relations order and are eligible to receive a distribution of designated Roth contributions from an employer plan, you may be permitted to roll over the assets into a Roth IRA.

g. Rollover of Property

If you receive an eligible distribution of designated Roth contributions from an employer plan that consists of property other than cash, you may be permitted to roll over the property into your IRA. You may also sell the property and roll over the cash proceeds into your Roth IRA. The gain or loss on the sale of the stock is not recognized if the rollover is for the entire amount.

h. After-Tax Amounts

You may roll after-tax contributions, other than designated Roth contributions, to a traditional IRA. A rollover of after-tax amounts to a Roth IRA is a taxable conversion, as described in Section F.

i. Partial Rollover

If you prefer, you may roll over part of the distribution tax-free and keep the rest of it. The amount you keep is generally subject to the normal taxation rules for such plan payments in the year it is paid to you. It does not qualify for special averaging or long-term capital gain treatment. Any taxable amount you keep may be subject to an additional 10% penalty tax if you receive it before age 59½, unless an exception applies. Also, 20% of any taxable amount that is not transferred in a direct rollover will be withheld and applied against your taxes.

5. Rollover from an IRA to an Employer Plan

You cannot complete a rollover from a Roth IRA to an employer plan under federal law.

F. Conversions

1. Conversion from a Traditional, SEP or SIMPLE IRA to a Roth IRA

Any or all of a traditional, SEP or SIMPLE IRA may be converted to a Roth IRA unless (i) your modified adjusted gross income for the year the contribution is distributed from the Traditional, SEP or SIMPLE IRA exceeds $100,000 or (ii) you are married, lived with your spouse at some time during the taxable year, and a file a separate tax return. Any required minimum distribution you receive from an IRA or an eligible retirement plan is disregarded for purposes of determining whether you are eligible to make a conversion to a Roth IRA.

However, a SIMPLE IRA cannot be converted to a Roth IRA until you have two years of participation in your employer's SIMPLE plan.

You may make the conversion by instructing the custodian or trustee to change the designation of your traditional, SEP, or SIMPLE IRA to a Roth IRA, if the other IRA is offered by the same custodian or trustee. Otherwise, you may convert by making a rollover or transfer from a traditional, SEP or SIMPLE IRA to a Roth IRA. The amount of the conversion, minus any return of basis, is taxable as ordinary income in the year the conversion occurs. (If you make the conversion by rollover, the tax is imposed for the year the rollover distribution occurs.) The 10% penalty tax on early withdrawals does not apply to such conversions.

2. **Direct Plan to Roth IRA Conversion**

   Any or all of an eligible rollover distribution (other than from a designated Roth contribution account) from an eligible retirement plan may be converted directly to a Roth IRA unless (i) your modified adjusted gross income for the year the contribution is distributed from the plan exceeds $100,000 or (ii) you are married, lived with your spouse at some time during the taxable year, and a file a separate tax return. Any required minimum distribution you receive from an IRA or an eligible retirement plan is disregarded for purposes of determining whether you are eligible to make a direct conversion to a Roth IRA.

   The amount of the conversion, minus any return of your tax basis, is taxable as ordinary income in the year the conversion occurs. (If you make the conversion by rollover, the tax is imposed for the year the rollover distribution occurs.) The 10% penalty tax on early withdrawals does not apply to such conversions.

3. **Special Conversion Rules**

   Any withdrawal of conversion amounts from your Roth IRA within the 5-year period beginning on the first day of the taxable year in which the contribution is made would be subject to the 10% penalty tax on early distributions for the entire amount of the conversion and earnings attributable to the withdrawal, if no exception applies.

4. **Upcoming Change in Rules**

   Effective January 1, 2010, individuals are allowed to convert a traditional IRA to a Roth IRA or complete a direct plan to Roth IRA conversion, regardless of a participant's gross income or filing status. The law eliminates the requirement that married taxpayers must file joint returns and removes the $100,000 modified adjusted gross income limit on the conversion from a traditional IRA to a Roth IRA. Participants who perform a conversion in 2010 are given an option to include the taxable amount in their gross income and spread it out over a two-year period, with the first year beginning in 2011.

5. **Reconversion**

   You cannot convert and reconvert an amount between IRA types during the same tax year or, if later, during the 30-day period following a recharacterization. If you reconvert during either of these periods it will be a failed conversion. A failed conversion is includible in income and is subject to penalties.

G. Recharacterizations

A recharacterization will permit you to treat a contribution made to one type of IRA as having been made to a different type of IRA (such as Roth IRA to traditional IRA or vice versa). Recharacterizations are subject to the following rules:

1. **Trustee-to-Trustee Transfer**

   To recharacterize a contribution or a conversion contribution, you must have the contribution transferred from the first IRA (the one to which the contribution was originally made), to the second IRA in a trustee-to-trustee transfer.

2. **Timing**

   If the transfer is made by the due date (including extensions) for your tax return for the year during which the contribution was made, you may elect to treat the contribution as having been originally made to the second IRA instead of the first IRA. If you have already filed your income tax return for the year, you must file an amended tax return for the year of the contribution by the filing deadline for amended returns.

3. **Previous Tax-Free Transfers**

   An amount that was previously moved in a tax-free transfer, such as a rollover, generally cannot be recharacterized.

4. **Recharacterizing Employer Contributions**

   You may not recharacterize employer contributions (including elective deferrals) under a SEP or SIMPLE IRA as contributions to a Roth IRA.

5. **How to Recharacterize**

   You must notify both the trustee of the first IRA and the trustee of the second IRA that you have elected to treat the contribution as if you made it to the second IRA. You must make the notification, in a form acceptable to us, by the date of the transfer.

6. **Reporting a Recharacterization**

   You may be required to report the recharacterization on IRS Form 8606.

H. Designation of Beneficiary

You may designate any person or entity to be your beneficiary to receive your IRA upon your death, subject to the following rules:

1. **Designation of Beneficiary**

   You may designate a beneficiary on the IRA application.

2. **Modification of Beneficiary Designation**

   You may modify the beneficiary designation by completing a beneficiary form. Changes to the beneficiary designation must be received by us (or our designated agent) during your lifetime.

3. **No Beneficiary Designation**

   If you have not designated a beneficiary prior to your death or your designation is not effective for any reason, the beneficiary will be your surviving spouse, or if none, the beneficiary will be your estate.

4. **Beneficiary May Designate Own Beneficiary**

   Upon your death, your designated beneficiary may designate his or her own beneficiary to receive any remaining assets in the IRA.

5. **Effect of Divorce**

   If your designated beneficiary is your spouse and you divorce, your ex-spouse will remain as your designated beneficiary until you revise your beneficiary designation. Changes to the beneficiary designation must be received by us during your lifetime.

I. Inherited IRA

Your beneficiary will inherit your IRA at your death.

1. **Tax Effect**

   Your beneficiary must include any taxable distribution in gross income. Certain distributions are required, as described in Section J below.

2. **IRA Inherited From Spouse**

   If you inherit a Roth IRA from your spouse you may:

   a. Treat the IRA as your own by designating yourself as the Account Holder (you will not be treated as a beneficiary for purposes of the IRA rules);
   b. Treat it as your own by rolling it over into your Roth IRA; or
   c. Treat yourself as the beneficiary rather than treating the IRA as your own.

3. **IRA Inherited From Non-Spouse**

   If you inherit an IRA from someone other than your spouse, you may not treat the IRA as your own. You cannot rollover any amounts in or out of the IRA, or make contributions to the IRA. However, you can make a trustee-to trustee transfer as long as the IRA into which the amounts are being moved is set up and maintained in the name of the deceased IRA Account Holder for the benefit of you as the beneficiary.

4. **Separate Accounts**

   If you name multiple beneficiaries, they may each establish separate accounts for their portion of the IRA.

5. **Non-Spouse Beneficiary under an Employer's Plan**

   You may also establish an inherited Roth IRA to receive a direct trustee-to-trustee transfer of amounts inherited under an employer's retirement plan. This type of inherited IRA is subject to special required minimum distribution rules, as described in Section J.

6. **Minor or Disabled Beneficiaries**

   If the beneficiary designated to receive payments is a minor child or declared incapacitated or incompetent by the court, we may follow the direction of a court appointed guardian or legally appointed representative, including payment and investment direction. We will not be liable for any loss which may result from any investment, liquidation, or distribution made by us in good faith under this paragraph.

7. **Investment Control**

   See Section O. Following your death, your beneficiary will have investment responsibility.

J. Required Minimum Distributions (RMD) for Beneficiaries

The beneficiary of your Roth IRA is required to take certain distributions, to avoid additional tax penalties.

1. **Required Minimum Distributions**

   If you die before your required beginning date, the April 1 of the year following the year you reach age 70½, your beneficiary must direct that payment of his/her benefits be made or started no later than December 31 of the year following the year of your death with annual distributions of at least the required minimum distribution described below (the "life expectancy rule"). If, however, there is no designated beneficiary (as defined below) or your designated beneficiary is not an individual, the entire balance of the IRA must be paid by December 31 of the year in which occurs the fifth anniversary of your death (the "5-year rule").

   Special Rule 2009. Your beneficiary is not required under federal law to take a required minimum distribution for 2009, due to relief enacted by Congress in late 2008. In addition, if in 2009 a beneficiary is satisfying the required minimum distribution rules by taking full distribution of his or her interest by the end of the calendar year containing the fifth anniversary of the Participant's death, the beneficiary may now take the full distribution over a six year period.

   Special rules apply if your surviving spouse is your sole designated beneficiary. In this case, your surviving spouse may wait until the December 31 of the year you would have reached age 70½ to start receiving Roth IRA RMD payments. If your surviving spouse is your sole beneficiary and dies after you but before his or her payments are required to begin, subsequent payments to the surviving spouse's beneficiaries will be made as if the surviving spouse had been you.

   Under the life expectancy rule, the yearly required minimum distribution for each designated beneficiary is calculated by dividing the IRA account balance as of the close of business on December 31 of the previous year by the applicable distribution period. The applicable distribution period depends on the beneficiary's identity.

   If your surviving spouse is the sole designated beneficiary of your IRA, the distribution period is the life expectancy listed in "Table 1 (Single Life Expectancy)" for the spouse's age as of the spouse's birthday in the year for which the distribution is being made. Table I can be located in IRS Publication 590. (Special rules apply to the minimum distributions after the death of your surviving spouse.)

   If the designated beneficiary is an individual other than your spouse, the distribution period for the year following the year of your death is the life expectancy listed in "Table I (Single Life Expectancy)" for the beneficiary's age as of his or her birthday in that year, reduced by one for each subsequent year.

2. **Special Rules for Inherited IRAs Established by a Non-Spouse Beneficiary with Inherited Funds Transferred from an Eligible Retirement Plan**

   The yearly required minimum distribution from this type of inherited IRA depends on the eligible retirement plan's rules for determining required minimum distributions and, in some cases, when the non-spouse beneficiary made the direct rollover to the inherited Roth IRA.

   If the eligible retirement plan uses the life expectancy rule to determine required minimum distributions for beneficiaries, then the yearly required minimum distribution for the non-spouse beneficiary is calculated by dividing the IRA account balance as of the close of business on December 31 of the previous year by the applicable distribution period. The applicable distribution period is the beneficiary's life expectancy listed in "Table 1 (Single Life Expectancy)" for the beneficiary's age as of his or her birthday in the calendar year immediately following the calendar year of death of the plan participant, reduced by one for each subsequent year.

   If the eligible retirement plan uses the 5-year rule to determine required minimum distributions for beneficiaries, then if the non-spouse beneficiary made the rollover to the inherited IRA before the end of the calendar year immediately following the calendar year in which the death of the plan participant occurred, the beneficiary can elect to have required minimum distributions from the inherited IRA determined under the life expectancy rule or the 5-year rule. However, if the non-spouse beneficiary made the rollover to the inherited Roth IRA in the second through fourth calendar years following the calendar year in which the death of the plan participant occurred, the beneficiary must use the 5-year rule under the inherited Roth IRA.

3. **Designated Beneficiary**

   Under the RMD rules, your "designated beneficiary" is determined based on the remaining beneficiaries of your IRA as of the September 30th of the year following the year of your death. Any beneficiary who was a beneficiary on your date of death, but is not a beneficiary as of the September 30th of the year following your death (for example due to receiving payout of the complete benefit due to such beneficiary), is not taken into account for RMD purposes.

4. **Penalty For Failure to Take RMD**

   If in any taxable year after your death, your designated beneficiary fails to withdraw the required minimum distribution from the IRA, a 50% nondeductible penalty may be imposed by the IRS on the difference between the amount that should have been distributed and the amount actually distributed. We will not be liable for any penalties or taxes incurred due to your beneficiary's failure to take an RMD.

K. Federal Estate and Gift Tax.

You should consult with your tax or legal advisor regarding federal estate and gift tax matters.

1. **Federal Estate Tax**

   Your IRA is fully includible in your gross estate and subject to federal estate taxes, just as any other asset. However, for a death in 2008, there is no federal estate tax if your total estate and prior taxable gifts do not exceed $2,000,000 (for a death in 2009, $3,500,000).

2. **Gift Tax**

   The gift tax exclusion for distributions is applicable to an IRA. In addition, the designation of a beneficiary of an IRA is not considered a gift tax transfer of property for federal gift tax purposes.

L. Prohibited Transactions

A prohibited transaction is any improper use of your IRA and includes direct or indirect transactions between you, your beneficiaries or your family members and your IRA.

1. **Examples**

   Prohibited transactions include borrowing money from your IRA; selling property to your IRA; buying property from your IRA; receiving unreasonable compensation for managing your IRA; and using your IRA as security for a loan.

2. **Effect on IRA**

   If a prohibited transaction occurs in a year, the IRA will lose its tax-deferred status and you will be required to include the value of the account on the first day of the year in your income for the year the tax-deferred status was lost (other than any non-deductible contributions). If you pledge your IRA as security for a loan, the portion of your IRA that was pledged must be included in your income for the year it was pledged (other than non-deductible contributions). You may also be subject to other taxes including an additional 10% penalty tax on the taxable amount if you are under age 59 ½, unless an exception applies.

M. Additional Taxes

1. **Early Distributions**

   Early distributions are amounts distributed from your Roth IRA before you attain age 59½. Taxable earnings paid to you prior to attaining age 59½ will be subject to an additional 10% tax, unless an exception applies.

   Generally, you will not pay the additional tax for a distribution made:

   a. to pay unreimbursed expenses exceeding 7.5% of your adjusted gross income for your medical care (or that of your spouse or dependents).
   b. to pay medical insurance premiums after losing your job in certain situations.
   c. after your disability. You are considered disabled for purposes of the exception if you cannot do any substantial gainful activity because of your physical or mental condition, which is expected to be of long-continued or indefinite duration or lead to death.
   d. after your death.
   e. as part of a series of substantially equal periodic payments for your lifetime or the lifetimes of you and your beneficiary.
   f. to pay certain qualified first-time homebuyer amounts (limited to $10,000 in your lifetime).
   g. to pay for certain qualified higher education expenses for you, your spouse, and your or your spouse's children and grandchildren.
   h. to the IRS due to a tax levy.
   i. under special disaster relief, such as qualified hurricane distributions.
   j. as qualified reservist distributions under Code section 72(t)(2).

   You should consult with your tax advisor to see if your distribution qualifies for one of these exemptions to the early distribution penalty tax, as many special rules apply.

2. **Tax on Excess Contributions**

   An excess contribution is one that exceeds the annual amount you are allowed to contribute to all of your traditional and Roth IRAs. If the excess contributions for a year are not withdrawn by the date your return for the year is due, you are subject to a 6% tax. You must pay the 6% tax each year on excess amounts that remain in your IRA at the end of the year.

   You may correct the excess contribution and avoid the 6% tax by withdrawing the amount of the excess and any earnings before the tax-filing deadline (including extensions) for the tax year the contribution was made. You also must include the withdrawn earnings in your gross income for the year in which you contributed. You are responsible for computing the earnings and providing the figure to us on your completed distribution form. You may also owe the IRS a 10% premature distribution penalty tax on the earnings, even if you removed them before the tax-filing deadline.

If you fail to meet the timely correction deadline, you must pay a penalty tax of 6% of the excess contribution for the year of the contribution. You will also have to pay the 6% penalty tax for each later year, if an excess is still in the IRA at the end of that year. The excess may be eliminated by either: (i) making reduced IRA contributions in future years (but not past years), or (ii) withdrawing the excess contribution from the IRA.

You should consult with your tax advisor about the tax consequences of late correction. If the excess in your IRA is the result of an attempted rollover and the excess occurred because the retirement plan provided you with incorrect information regarding your rollover amounts, you may withdraw the excess amount. You may have to amend your income tax return for the year in which the excess contribution occurred. Any excess withdrawn as a result of incorrect rollover information should not be included in your gross income for the year of the withdrawal.

3. Reporting

You must file a Form 5329 with Form 1040 if you owe the additional tax on early distributions or the tax on excess contributions.

N. Financial Disclosure

1. Available Assets

The amount of money that will be available at any period of time depends on:

a. The amount of contributions;

b. Total years of participation;

c. Earnings, including interest, dividends, realized and unrealized gains, and losses; and

d. Expenses incurred for brokerage commissions and applicable trustee's fees.

Due to the many kinds of investments that you may choose, neither a guaranteed return nor a projected amount can be furnished.

2. Fees

We charge annual and other fees for your IRA. Please refer to the current fee schedule. If you fail to pay our compensation, taxes, and/or expenses within a reasonable time after demand for payment is made, we reserve the right to charge the expenses to the Trust and liquidate such assets of the Trust as needed to satisfy the demand. The custodian will collect all fees, expenses, and taxes as directed by us. Such collection of fees by the custodian may be made without your approval or direction. We reserve the right to revise the fee schedules and will provide sufficient advance written or electronic notice of any revision to you. Brokerage commissions are considered a separate cost and are in addition to the above fees charged by the Trustee. Questions about brokerage commissions should be discussed with your broker or account executive before any orders are executed.

3. Annual Earnings

To compute annual earnings: Compare the year-end market value to the prior year's market value; add any interest or dividends earned for your total account.

O. Investments

1. Investment Responsibility

It is your responsibility to select and direct the investments of the Trust, either in person or through a broker, account executive or investment advisor, according to the procedures currently in effect. The investments you choose must conform to the Trust Agreement. Investments that do not generate confirmations must be accompanied by additional written instructions. It is your responsibility to make sure that the investments you select do not cause the IRA to participate in a prohibited transaction, such as by extending credit to the IRA or engaging in a "call" transaction.

2. Impermissible Investments

No part of your IRA may be invested in the following:

a. Collectibles within the meaning of section 408(m) except for certain coins and bullion defined in section 408(m)(3). Any impermissible investments in collectibles will be treated as a distribution.

b. Life insurance contracts or commingled with other property, except in a common trust or common investment fund, described in section 408(a)(5).

Other types of investments may also be prohibited or limited, as provided in the Trust Agreement.

3. **Investment Information**

   Although the brokerage firm may provide investment information to you, any information provided to you given by the Brokerage Firm should not serve as a primary basis for your investment decisions. Any questions concerning the authority of your broker should be directed to the brokerage firm. The broker is not an employee of Principal Trust Company, and Principal Trust Company does not supervise or control the activity of the broker. It is our understanding that you will exercise independent judgment when you make your investment decisions.

4. **Investment Performance**

   No projection of the growth in value of your IRA can reasonably be made or guaranteed. The value of your IRA and the growth in value of the IRA is dependent solely on the performance of the investments chosen by you.

P. Duties Not Assigned

We will not be responsible for voting proxies, receiving or mailing proxy materials, filing reports, returns or disclosures with any government agency unless we are required to do so under applicable law. Proxies and proxy material that are received by us will be destroyed.

Q. Additional Information

1. **State Laws**

   The tax laws of certain states and local governments may be different from the federal tax laws for IRAs. State and local laws are not covered in this disclosure statement.

2. **Definition of Spouse**

   The term "spouse" as used in this disclosure statement is defined according to applicable law.

3. **Legal Incapacity**

   If you (or after your death, your beneficiary) is legally incapacitated, then we may require that any and all rights that the incapacitated individual could exercise under the Trust Agreement or at law be exercised by the incapacitated individual's representative. We may rely on the authority and direction of such representative for all action taken with respect to the IRA.

4. **IRS Information**

   The IRS has a number of helpful Publications on IRAs, including IRS Publication 590, IRS Publication 575 and IRS Publication 939. These publications are available at any IRS district office, on line at www.irs.gov or by calling 1-800-TAX-FORM.

5. **Legal and Tax Advice**

   You are responsible for determining the legal and tax implications of (i) the type of IRA you have selected, (ii) your eligibility to contribute to, or receive contributions under, such IRA, (iii) the amount of contributions made to the IRA and whether such contributions are deductible, (iv) the tax treatment of any withdrawals from your IRA, and (v) any other tax treatment. We have not, and may not, provide you with legal or tax advice.

6. **Written Notices**

   Any required notice regarding the trust will be considered effective when we (or our designated agent) mail it to the last address of the intended recipient which is contained in our records. We may provide notice to you in another format, including but not limited to electronic mail. Any electronic notice will be deemed effective when transmitted to the last e-mail or other electronic address in our records. You acknowledge that any notice provided electronically to you (or your beneficiary) will be deemed to have been provided in writing for purposes of this IRA and applicable federal and state laws. Any notice to be given to us must be provided in writing and will be considered effective when we actually receive it. You and/or your beneficiaries must notify us (or our designated agent) of any change of address in a manner acceptable to us.

7. **Future Amendments**

   We may make any amendments to the Trust Agreement we deem advisable, including but not limited to, changes that are required to keep your IRA in compliance with applicable laws. You will be notified of any such amendments.

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Principal Trust Company

A member of

Principal Financial Group

Mailing Address:
P.O. Box 8963
Wilmington, DE 19899-8963
800-209-9010 Fax: 302-999-9554

Self-Directed Individual Retirement Trust Agreement

Article I
Introduction

The purpose of this Trust is to establish a Traditional IRA under Internal Revenue Code ("Code") Section 408(a) or a Roth IRA under Code Section 408A to provide benefits for an individual or their beneficiaries upon their retirement, disability, or death. At no time shall the account be operated as both a Roth IRA and a Traditional IRA.

Article II
Definitions

As used in both the Traditional IRA and Roth IRA Self-Directed Individual Retirement Trust Agreement, the following terms shall have the meanings set forth below, unless a different meaning is plainly required by the context:

2.1 **Act** means the Employee Retirement Income Security Act of 1974, as amended.

2.2 **Account Holder** means the individual whose name appears on the Trustee accepted application and for whom contributions have been received by this Trust.

2.3 **Application** means the Application through which the Account Holder adopts this Trust, as may be amended from time to time, and thereby agrees to be bound by all terms and conditions of this Agreement.

2.4 **Beneficiary** means the person(s) or entity (entities) properly designated by the Account Holder in the Application or in a form acceptable to the Trustee.

2.5 **Brokerage Firm** means the investment agent selected in the application or through other means acceptable to the Trustee.

2.6 **Code** means the Internal Revenue Code of 1986, as amended.

2.7 **Compensation** means wages, salaries, professional fees, or other amounts derived from or received for personal services actually rendered. This includes but is not limited to commissions paid salespersons, compensation for services on the basis of a percentage of profits, commissions on insurance premiums, tips, and bonuses. It also includes earned income, as defined in Code Section 401(c)(2) (reduced by the deduction the self-employed individual takes for contributions made to a self-employed retirement plan). For purposes of this definition, Code Section 401(c)(2) shall be applied as if the term trade or business, for purposes of Code Section 1402 included service described in subsection (c)(6). Compensation does not include amounts derived from or received as earnings or profits from property (including but not limited to interest and dividends) or amounts not includible in gross income. Compensation also does not include any amount received as a pension or annuity or as deferred compensation. Compensation does include any amount includible in the Account Holder's gross income under Code Section 71 with respect to a divorce or separation instrument described in subparagraph (A) of Section 71(b)(2).

With respect to Roth IRAs, in the case of a married individual filing a joint return, the greater compensation of his or her spouse is treated as his or her own compensation, but only to the extent that such spouse's compensation is not being used for purposes of the spouse making a contribution to a Roth IRA or a deductible contribution to a non-Roth IRA.

2.8 **Conversion Contribution** means a rollover contribution described in Section 408(d) of the Code from a Traditional IRA, SEP, or SIMPLE IRA to a Roth IRA.

2.9 **Designated Beneficiary** means the beneficiary whose life expectancy is used to determine the amount of the required distribution, in accordance with Code Section 408(a)(6) and Treasury Regulation Section 1.408-8.

2.10 **Disability** means the Account Holder's inability to engage in any substantial, gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or to be of a long-continued and indefinite duration and as further described in Code Section 72(m)(7).

2.11 **Individual Retirement Account** means an account established under section 408(a) of the Code.

2.12 **Internal Revenue Service (IRS)** means the agency responsible for administering and enforcing internal revenue laws, determination of pension plan qualification and exempt organization status, preparation and issuance of ruling and regulations to interpret the provisions of the Internal Revenue Code, and other responsibilities.

2.13 **Modified Adjusted Gross Income (MAGI)** means income as defined in Code Section 408A(c)(3)(C)(i) and does not include any amount included in adjusted gross income as a result of a rollover from a non-Roth IRA (a conversion).

2.14 **Recharacterization** means treating a contribution made to one IRA as having been made to a different type of IRA.

2.15 **Reconversion** means recharacterizing a conversion contribution as a contribution to a Traditional IRA, then converting the Traditional IRA to a Roth IRA again. Conversions can be reconverted one time during the calendar year during which they were made.

2.16 **Regulations** mean Federal Income Tax regulations, as amended from time to time.

2.17 **Required Beginning Date** means the date at which payments must be made from the account.

2.18 **Roth IRA** means an individual retirement account as defined in Section 408A of the Code.

2.19 **Spousal IRA** means an IRA funded by a married taxpayer for his or her spouse if the taxable compensation of the non-working spouse is less than that of the working spouse and the taxpayer files a joint return.

2.20 **SIMPLE** means a Savings Incentive Match Plan for Employees as defined in Section 408(p) of the Code.

2.21 **SEP** means a Simplified Employee Pension as defined in Sections 408(j) and 408(k) of the Code.

2.22 **Traditional IRA** means an IRA as defined in Section 408(a) of the Code.

2.23 **Trust Year** is the calendar year from January first (1st) to December thirty-first (31st).

2.24 **Trustee** means the Delaware Charter Guarantee & Trust Company d/b/a Principal Trust Company (Principal Trust Company) and any successor Trustee under the trust.

2.25 **Trust** means this Trust established hereunder as it may be amended from time to time, including the Application, which is part of the Trust.

2.26 **Trust Agreement** means this document which establishes and sets forth the material terms of the Self-Directed Individual Retirement Trust Agreement.

Article III
Roth IRAs

The references to IRAs in this Article refer only to Roth IRAs unless noted otherwise.

3.1 Eligibility

A. An eligible individual is any person who received compensation for services (including earned income of a self-employed individual) during the taxable year **and** has a modified adjusted gross income (MAGI) which is less than the amount allowed for their filing status for purposes of contributing to a Roth IRA.

B. As a condition of participation, the Account Holder is required to consent to the terms and conditions of this Trust, as may be amended from time to time. Agreement need not be in writing.

3.2 Contributions

A. Each taxable year, the Account Holder may contribute on a periodic basis to this Trust an amount not to exceed the lesser of three thousand dollars ($3,000) or one-hundred percent (100%) of compensation, or the applicable statutory limit. A qualified rollover contribution or recharacterization (as described in Section 3.3 and 3.4 does not apply toward the contribution limit).

If the Account Holder is under age 50, the applicable amount is $3,000 for any taxable year beginning in 2002 through 2004, $4,000 for any taxable year beginning in 2005 through 2007 and $5,000 for any taxable year beginning in 2008 and years thereafter.

If the Account Holder is 50 or older, the applicable amount is $3,500 for any taxable year beginning in 2002 through 2004, $4,500 for any taxable year beginning in 2005 through 2007 and $6,000 for any taxable year beginning 2008 and years thereafter.

After 2008, the limits in the paragraphs above will be adjusted by the Secretary of the Treasury for cost-of-living increases under Code Section 219(b)(5)(C). Such adjustments will be in multiples of $500.

B. The contribution limit is reduced in 2009 if the Account Holder's filing status is:

C. Married filing a joint return *and* the MAGI is between $166,000 and $176,000.

D. Married filing separately and the Account Holder and spouse lived together during the year *and* the MAGI is between $0 and $10,000.

E. Single, head of household or married filing separately and the Account Holder did not live with their spouse at any time during the year *and* the MAGI is between $105,000 and $120,000.

F. If the Account Holder's contribution limit is reduced because of MAGI the maximum regulation contribution is rounded up to the next $10. If the contribution limit is greater than $0, but less than $200, the amount is rounded up to $200.

G. Contributions to this Roth IRA are also reduced by the amount of contributions made to a Traditional IRA.

H. For purposes of Sections 3.1(A) above, MAGI has the same meaning as defined in Code Section 408A(c)(3)(C)(i). MAGI does not include amounts includible in Adjusted Gross Income because of a conversion from a Traditional IRA.

I. A regular contribution to a Traditional IRA or a SIMPLE plan may be recharacterized as a regular contribution to this Roth IRA subject to the terms and limitations in Treasury Regulation Section 1.408A-5 and Section 3.4 below.

J. No amounts made under a SIMPLE plan established by an employer under Code Section 408(p) or a SEP established by an employer under Code Section 408(j) or (k) will be accepted into this Trust.

K. No amounts attributable to an employer contribution to a SIMPLE plan can be converted to a Roth IRA during the 2-year period beginning on the date the Account Holder first participated in the SIMPLE.

L. Contributions may be made after age 70½.

3.3 Rollovers

A. This Trust will accept rollovers from other Roth IRAs provided they are deposited within 60 days of the date distributed from the previous Roth IRA as permitted under applicable laws. A qualified rollover is one that meets the requirements of Section 408(d)(3) of the Code, except the one rollover per twelve consecutive months rule does not apply if the rollover is from an IRA other than a Roth IRA.

B. Rollover Contributions from a non-Roth IRA cannot be made if:

- You and your spouse's MAGI is more than $100,000,
- You are married and filing a separate return, or
- You are not married and your MAGI is in excess of $100,000

The $100,000 limit shall apply in the year that the assets are distributed from the Traditional IRA and not the date they are deposited into the Roth IRA. For the purposes of this Section 3.3 (B), a husband and wife are not treated as married for a taxable year if they have lived apart at all times during that taxable year and file separate returns for that taxable year.

C. Conversion amounts must be qualified rollover contributions under Code Section 408A(e), and therefore, must satisfy Code Section 408(d)(3).

D. Any amount converted from a non-Roth IRA to a Roth IRA will be treated as a distribution from the non-Roth IRA and a rollover to the Roth IRA regardless of the actual means by which the assets are converted.

E. Amounts held in a SEP or SIMPLE plan may be converted. In the case of a SIMPLE plan, the conversion may be done only after the expiration of the two-year period as described in Code Section 72(t)(6). No SEP or SIMPLE contributions can be made to a Roth IRA. Amounts held in retirement plans other than IRAs cannot be converted directly to a Roth IRA.

3.4 Recharacterizations

A. On or before the due date for filing taxes, plus extensions, an Account Holder may recharacterize IRA contributions, including Roth IRA Conversion Contributions by means of a Trustee transfer. Recharacterized amounts will be treated as if they were made to the transferee plan and not the transferor plan if such recharacterizations are made in compliance with Code Section 408A(d)(6), Treasury Regulation Section 1.408A-5, and other applicable laws or regulations.

B. **Beginning January 1, 2000,** amounts that are transferred from a Traditional IRA to a Roth IRA by means of a recharacterization may not be converted before the later of the beginning of the taxable year following the taxable year in which the amount was converted to a Roth IRA or the end of the 30-day period beginning on the day on which the Account Holder recharacterizes the amount from the Roth IRA back to the Traditional IRA.

A Reconversion made before the later of the beginning of the next taxable year or the end of the 30-day period is treated as a failed Reconversion. For this purpose only, a failed Conversion Contribution that is the result of a failure to satisfy the statutory requirements for a Conversion contribution is treated as a Conversion contribution in determining when the Account Holder can make a Reconversion.

3.5 Distributions

A. The Account Holder is not required to take distributions from his or her Roth IRA during their lifetime. The Beneficiary must take distributions as outlined in Paragraphs F through K of this Section 3.5.

B. Distributions that are not included in income are:

- Qualified distributions,
- Due to return of excess,
- Rolled over to another Roth IRA.

A qualified distribution is a distribution of assets that have been in the account for five years **and:**

- Made on or after the date you reach age 59½,
- Made because you are disabled,
- Made to a beneficiary or your estate after your death, or
- Meets the requirements for the purchase of a first home.

C. Withdrawals of excess contributions and the earnings on them before the due date of your tax return (including extensions) are not qualified distributions. The earnings are taxable in the year for which the contribution was made and may be subject to a 10 percent early distribution penalty.

D. Distributions that are not qualified distributions may be partially taxable. The tax treatment of these withdrawals and the earnings thereon must be withdrawn according to the order and aggregation rules as outlined in Code Section 408A(d)(F)(4).

E. The taxable portion of other withdrawals that are not qualified distributions are subject to the additional tax on premature distributions, unless one of the exceptions applies.

F. Upon the death of the Account Holder, his or her entire interest will be distributed at least as rapidly as follows:

1. If the designated Beneficiary is someone other than the Account Holder's surviving spouse, the entire interest will be distributed, starting by December 31 of the calendar year following the calendar year of the Account Holder's death, over the remaining life expectancy of the designated Beneficiary, with such life expectancy determined using the age of the Beneficiary as of his or her birthday in the year following the year of the Account Holder's death, or, if elected, in accordance with paragraph F.3 below.
2. If the Account Holder's sole designated Beneficiary is the Account Holder's surviving spouse, the entire interest will be distributed, starting by December 31 of the calendar year following the calendar year of the Account Holder's death (or by December 31 of the calendar year in which the Account Holder would have attained age 70½, if later), over such spouse's life, or, if elected, in accordance with paragraph F.3 below. If the surviving spouse dies before distributions are required to begin, the remaining interest will be distributed, starting by the end of the calendar year following the calendar year of the spouse's death, over the spouse's designated Beneficiary's remaining life expectancy determined using such Beneficiary's age as of his or her birthday in the year following the death of the spouse, or, if elected, will be distributed in accordance with paragraph F.3 below. If the surviving spouse dies after distributions are required to begin, any remaining interest will be distributed over the spouse's remaining life expectancy determined using the spouse's age as of his or her birthday in the year of the spouse's death.

3. If there is no designated Beneficiary, or if applicable by operation of paragraph F.1 or F.2 above, the entire interest will be distributed by December 31 of the calendar year containing the fifth anniversary of the Account Holder's death (or of the spouse's death in the case of the surviving spouse's death before distributions are required to begin under paragraph F.2 above).

4. The amount to be distributed each year under paragraph F.1 or F.2 is the quotient obtained by dividing the value of the Roth IRA as of the end of the preceding year by the remaining life expectancy specified in such paragraph. Life expectancy is determined using the Single Life Table in Q&A-1 of Section 1.401(a)(9)-9 of the Treasury Regulations. If distributions are being made to a surviving spouse as the sole designated Beneficiary, such spouse's remaining life expectancy for a year is the number in the Single Life Table corresponding to such spouse's age in the year. In all other cases, remaining life expectancy for a year is the number in the Single Life Table corresponding to the Beneficiary's age in the year specified in paragraph F.1 or F.2 and reduced by 1 for each subsequent year.

5. The value of the Roth IRA includes the amount of any outstanding rollover, transfer, and recharacterization under Q&As-7 and –8 of Section 1.408-8 of the Treasury Regulations.

G. If the Beneficiary has not made an election by December 31 of the year following the year of the Account Holder's death, the Trustee reserves the right to distribute the assets in any one of the following ways:

- Pay the entire value of the account to the Beneficiary in a lump sum, or
- Pay the entire value of the account by December 31 of the fifth year following the year of the Account Holder's death, or
- Pay the amount over the life expectancy of the Beneficiary.

In the case of a payment made over the Beneficiary's life expectancy, the amount shall be figured using the Beneficiary's age on December 31 of the year distributions will begin and using the fair market value of the account on December 31 of the year prior to the year distributions will begin. Life expectancy shall be determined using the Single Life Table in Q&A-1 of Section 1.401(a) (9)-9 of the Treasury Regulations. If the Beneficiary is the Account Holder's spouse, the life expectancy will be recalculated and is irrevocable when payment has been made.

H. If a distribution to a Beneficiary is not a qualified distribution, it is generally included in the Beneficiary's income in the same manner as a distribution to the Account Holder when the Account Holder was alive (See Section 3.5(D) above).

I. Distributions from other Roth IRAs cannot be substituted for payments from this Roth IRA unless the other IRA was inherited from the same decedent.

J. If the Account Holder had converted funds to which four-year averaging applies and such Account Holder dies before all such amounts have been included in income, the Beneficiary will include all remaining amounts in gross income for the taxable year that includes the Account Holder's date of death.

K. If the sole Beneficiary of the account is the Account Holder's spouse, the account will be treated as if the surviving spouse elected to treat it as his or her own in the event that the surviving spouse fails to take a distribution by the required time or makes a contribution, rollover, or conversion to the account.

Article IV
Traditional IRAs

References to IRAs in this Article refer only to Traditional IRAs unless noted otherwise.

4.1 Eligibility

A. An eligible individual is any person who received Compensation for services (including earned income of a self-employed individual) during the taxable year and is under age 70½. An individual making a rollover contribution (as permitted by Code Sections 402(c), 402(e)(6), 403(a)(4), 403(b)(8), 403(b)(10), 408(d)(3), and 457(e)(16) or an employer contribution to a Simplified Employee Pension as defined in Code Section 408(k) is also an eligible individual.

B. As a condition of participation, the Account Holder will be required to consent to the terms and conditions of this Trust, as may be amended from time to time. Consent need not be in writing.

4.2 Contributions

A. Except in the case of a rollover contribution as described in Code Section(s) 402(c), 402(e)(6), 403(a)(4), 403(b)(8), 403(b)(10), 408(d)(3), and 457(e)(16) or an employer contribution to a SEP as described in Code Section 408(k), no contributions will be accepted unless they are in cash, and the total of such contributions does not exceed $3,000 for any taxable year beginning in 2002 through 2004; $4,000 for any taxable year beginning in 2005 through 2007; and $5,000 for any taxable year beginning in 2008 and years thereafter.

After 2008, the limit will be adjusted by the Secretary of the Treasury for cost-of-living increases under Code Section 219(b)(5)(C). Such adjustments will be in multiples of $500.

In the case of an individual who is 50 or older, the annual cash contribution limit is increased by $500 for any taxable year beginning in 2002 through 2005 and $1,000 for any taxable year beginning in 2006 and years thereafter.

In the case of a SEP contribution for 2009, the amount cannot exceed the lesser of 25 percent of compensation, or $49,000 or such limits as prescribed by law. In general, you cannot consider the part of an employee's compensation that exceeds the statutory limit as adjusted when figuring the contribution limit for that employee. That means the contribution amount for an employee subject to the $245,000 compensation cap is $49,000.

No contributions will be accepted under a SIMPLE IRA Plan established by any employer pursuant to Code Section 408(p). Also, no transfer or rollover of funds attributable to contributions made by a particular employer under its SIMPLE IRA Plan will be accepted from a SIMPLE IRA, that is, an IRA used in conjunction with a SIMPLE IRA Plan, prior to the expiration of the 2-year period beginning on the date the employee first participated in that employer's SIMPLE IRA Plan.

B. No contributions can be made to this Trust in or after the taxable year during which the Account Holder reaches age 70½.

4.3 Rollovers

A. The Trustee may accept additional cash contributions on behalf of the Account Holder for a tax year of the Account Holder. The total cash contributions are limited as described in Section 4.2 above unless the contribution is a rollover as described in Code Sections 402(c) (but only after December 31, 1992) 402(e)(6), 403(a), 403(b)(8), 403(b)(10), 408(d)(3), and 457(e)(16) or an employer contribution to a SEP described in Code Section 408(k).

B. If this Trust or an employee's IRA forming part of the employer's retirement trust has been disqualified because the individual and/or the Beneficiary engaged in a prohibited transaction as defined in Section 406 of the Act, then such employee's account may not be rolled over to another IRA.

C. Only cash or property from a plan as described above may be rolled over from such plan to this Trust.

4.4 Distributions

A. Amounts distributed from a Traditional IRA and not rolled over into another trust as described in Code Section 408(d)(3), are subject to a 10 percent non-deductible penalty tax as described in Code Section 72(t)(2).

There are exceptions to the tax as described in Code Section 72(t)(2)(a). Those exceptions are distributions that are made:

- After attainment of age 59½,
- After the death of the Account Holder,
- Due to disability as defined in Code Section 72(m)(7),
- As part of a series of substantially equal and periodic payments that are not less frequently than annually and made over the life expectancy of the Account Holder or the Account Holder and their Beneficiary,
- Due to dividends paid by a corporation described in Code Section 404(k)
- On account of a levy under Code Section 6331
- Distributions made under Code Section 72(t)(2)(B) (certain medical expenses), Code Section 72(t)(2)(C) (qualified domestic relation orders), and 72(t)(2)(D) (distributions to unemployed individuals for health insurance premiums) may be exempt from the ten percent (10%) penalty.

B. Notwithstanding any provision of this Trust Agreement to the contrary, the distribution of an Account Holder's interest will be made in accordance with the minimum distribution requirements of Code Sections 408(a)(6) or 408(b)(3) and the regulations thereunder, including the incidental death benefit provision of Treasury Regulation Section 1.401(a)(9)-2 which is herein incorporated by reference. If distributions are made from an annuity contract purchased from an insurance company, distributions thereunder must satisfy the requirements of Q&A-4 of Section 1.409(a)(9)-6T of the Temporary Treasury Regulations, rather than sections C, E, and K below.

C. The Account Holder's entire interest in the Traditional IRA must be distributed or begin to be distributed by the Account Holder's Required Beginning Date (which is April 1 of the year following the calendar year in which the Account Holder reaches age 70½) and over the life of such Account Holder or the lives of such Account Holder and his or her designated Beneficiary. A distribution must be made on or before December 31 for each succeeding year.

D. The Account Holder may elect to receive a distribution of the balance of the Trust at any time, upon written notice to the Trustee. This is true even if distributions have begun in accordance with one of the above options.

E. The amount that must be distributed each year, beginning with the calendar year for which distributions are required and continuing through the year of death, is obtained by dividing the IRA account balance on December 31 of the previous year by the distribution period in the Uniform Lifetime Table in Q&A-2 of Section 1.401(a)(9)-9 of the Treasury Regulations, using the Account Holder's age as of his or her birthday in the year. However, if the Account Holder's sole designated Beneficiary is his or her surviving spouse and such spouse is more than 10 years younger than the Account Holder, then the distribution period is determined under the Joint and Last Survivor Table in Q&A-3 of Section 1401(a)(9)-9 using the ages as of the Account Holder's and spouse's birthdays in the year.

F. If in any taxable year after the Account Holder turns age 70½ and fails to withdraw the required minimum distribution from the IRA, a 50 percent non-deductible penalty may be imposed by the IRS on the difference between the amount that should have been distributed and the amount actually distributed.

G. If an Account Holder has multiple IRAs, then the Account Holder must determine the required minimum distribution amount for each IRA, however the minimum amounts can be totaled together and the total taken from any one or more of the IRAs in accordance with Q&A-9 of section 1.408-8 of the Treasury Regulations.

H. If the Account Holder fails to receive any of the distributions described above before the first day of April following the calendar year in which the age of 70½ is reached, then the Trustee reserves the right to pay out the balance of the account in a single sum payment.

I. Distributions in excess of the required minimum payment cannot be used as a credit when figuring a subsequent year's required minimum distribution.

J. Life expectancy is determined in accordance with section 4.4E above. If the Account Holder fails to make an election by the time distributions are required to begin, life expectancy will be recalculated annually. Such elections will be irrevocable by the Account Holder and will apply to all subsequent years. The life expectancy of a non-spouse Beneficiary may not be recalculated. Instead, life expectancy will be calculated using the attained age of such Beneficiary during the calendar year in which the Account Holder attains age 70½. Payments for subsequent years will be calculated based on such life expectancy reduced by one for each calendar year that has elapsed since the calendar year life expectancy was first calculated.

K. If the Account Holder dies before the entire interest in the IRA is distributed, the remaining interest will be distributed as follows:

a. Death on or after Required Beginning Date: If the Account Holder dies on or after the Required Beginning Date, the remaining portion of his or her interest will be distributed as least as rapidly as follows:

1. If the designated Beneficiary is someone other than the Account Holder's surviving spouse, the remaining interest will be distributed over the remaining life expectancy of the designated Beneficiary, with such life expectancy determined using the Beneficiary's age as of his or her birthday in the year following the year of the Account Holder's death, or over the period described in paragraph (a)(3) below if longer.

2. If the Account Holder's sole designated Beneficiary is the Account Holder's surviving spouse, the remaining interest will be distributed over such spouse's life or over the period described in paragraph (a)(3) below if longer. Any interest remaining after such spouse's death will be distributed over such spouse's remaining life expectancy using the spouse's age as of his or her birthday in the year of the spouse's death, or, if the distributions are being made over the period described in paragraph (a)(3) below, over such period.

3 If there is no designated Beneficiary, or if applicable by operation of paragraph (a)(1) or (a)(2) above, the remaining interest will be distributed over the Account Holder's remaining life expectancy determined in the year of the Account Holder's death.

4. The amount to be distributed each year under paragraphs (a)(1), (2), or (3), beginning with the calendar year following the calendar year of the Account Holder's death, is the quotient obtained by dividing the value of the IRA as of December 31 of the preceding year by the remaining life expectancy specified in such paragraph. Life expectancy is determined using the Single Life Table in Q&A-1 of Section 1.401(a)(9)-9 of the Treasury Regulations. If distributions are being made to a surviving spouse as the sole designated Beneficiary, such spouse's remaining life expectancy for a year is the number in the Single Life Table corresponding to such spouse's age in the year. In all other cases, remaining life expectancy for a year is the number in the Single Life Table corresponding to the Beneficiary's or Account Holder's age in the year specified in paragraphs (a)(1), (2), or (3) and reduced by 1 for each subsequent year.

b. Death before Required Beginning Date: If the Account Holder dies before the Required Beginning Date, the entire remaining interest must be distributed at least as rapidly as follows:

1. If the designated Beneficiary is someone other than the Account Holder's surviving spouse, the entire interest will be distributed, starting by December 31 of the calendar year following the year of the Account Holder's death, over the remaining life expectancy of the designated Beneficiary, with such life expectancy determined using the age of the Beneficiary as of his or her birthday in the year following the year of the Account Holder's death, or, if elected, in accordance with paragraph (b)(3) below.

2. If the Account Holder's sole designated beneficiary is the Account Holder's surviving spouse, the entire interest will be distributed, starting by December 31 of the calendar year following the calendar year of the Account Holder's death (or by December 31 of the calendar year in which the Account Holder would have attained age 70½ if later), over such spouse's life, or, if elected, in accordance with paragraph (b)(3) below. If the surviving spouse dies before distributions are required to begin, the remaining interest will be distributed, starting by December 31 of the calendar year following the calendar year of the spouse's death, over the spouse's designated Beneficiary's remaining life expectancy determined using such Beneficiary's age as of his or her birthday in the year following the death of the spouse, or, if elected, will be distributed in accordance with paragraph (b)(3) below. If the surviving spouse dies after distributions are required to begin, any remaining interest will be distributed over the spouse's remaining life expectancy determined using the spouse's age as of his or her birthday in the year of the spouse's death.

3. If there is no designated Beneficiary, or if applicable by operation of paragraph (b)(1) or (b)(2) above, the entire interest will be distributed by December 31 of the calendar year containing the fifth anniversary of the Account Holder's death (or of the spouse's death in the case of the surviving spouse's death before distributions are required to begin under paragraph (b)(2) above).

4. The amount to be distributed each year under paragraph (b)(1) or (2) is the quotient obtained by dividing the value of the IRA as of December 31 of the preceding year by the remaining life expectancy specified in such paragraph. Life expectancy is determined using the Single Life Table in Q&A-1 of Section 1.401(a)(9)-9 of the Treasury Regulations. If distributions are being made to a surviving spouse as the sole designated Beneficiary, such spouse's remaining life expectancy for a year is the number in the Single Life Table corresponding to such spouse's age in the year. In other cases, remaining life expectancy for a year is the number in the Single Life Table corresponding to the Beneficiary's age in the year specified in paragraph (b)(1) or (2) and reduced by 1 for each subsequent year.

c. The value of the IRA includes the amount of any outstanding rollover, transfer, and recharacterization under Q&As-7 and –8 of section 1.408-8 of the Treasury Regulations.

d. If the sole designated Beneficiary is the Account Holder's surviving spouse, the spouse may elect to treat the IRA as his or her own IRA. This election will be deemed to have been made if such surviving spouse makes a contribution to the IRA or fails to take required distributions as a Beneficiary.

L. If the Beneficiary has not made an election by December 31 of the year following the year of the Account Holder's death, the Trustee reserves the right to distribute the assets in any one of the following ways:

- Pay the entire value of the account to the Beneficiary in a lump sum, or
- Pay the entire value of the account by December 31 of the fifth year following the year of the Account Holder's death, or
- Pay the amount over the life expectancy of the Beneficiary.

In the case of a payment made over the Beneficiary's life expectancy, the amount shall be figured using the Beneficiary's age on December 31 of the year distributions will begin and using the fair market value of the account on December 31 of the year prior to the year distributions will begin. If the Beneficiary is the Account Holder's spouse, the life expectancy will be recalculated and is irrevocable when payment has been made.

M. Distributions under these Paragraphs B through M are considered to have begun if the distributions are made because the Account Holder has reached his or her Required Beginning Date. If the Account Holder received distributions before the Required Beginning Date and the Account Holder dies, distributions will not be considered to have begun.

Article V
Traditional and Roth IRAs

The following provisions apply to <u>both</u> Traditional IRAs and Roth IRAs

5.1 Contributions

A. Contributions must be made in cash. The Account Holder will specify the investment to be made for all such contributions. All contributions received, together with the income therefrom, and any other increment thereon will be held, and administered by the Trustee pursuant to the terms of this Trust without distinction between principal and income and without liability for the payment of interest thereon. The Trustee will not be responsible for the computation and collection of any contributions under the Trust and will be under no duty to determine whether the amount of any contributions is in accordance with the Trust.

B. Except in the case of a rollover contribution as described in Sections 3.3 (Roth IRA) and 4.3, (Traditional IRA), Conversion Contributions as described in Section 3.2 and Recharacterizations as described in Section 3.4, the Trustee will accept only cash and will not accept contributions on behalf of the Account Holder in excess of $3,000 or such limits as may be prescribed by law for any taxable year. In the case of a SEP as described in Code Section 408(k), the Trustee will not accept employer contributions on behalf of the Account Holder in excess of $49,000 or such limits as may be prescribed by law for that taxable year.

C. Contributions made to this Trust by the Account Holder will be made to, or for the account, not later than April 15 of the year following the year to which the contribution relates. Contributions by an employer to a SEP must be made no later than three and one half months after the close of the Trust year.

D. Contributions made to this Trust by or for the Account Holder will be fully vested and nonforfeitable at all times. Neither the Account Holder nor the Beneficiary may pledge, sell, or transfer any part of the account, except as provided by law and this Trust Agreement.

E. The Account Holder will direct the Trustee with respect to the investment of all contributions and the earnings thereon under the Trust. Such direction will be limited to securities obtainable through the brokerage firm designated in the Application (or any other stockbroker selected by the Account Holder and approved by the Trustee) for reinvestment in accordance with the instructions of the Account Holder. Notwithstanding the above, the Account Holder may direct contributions and earnings to be placed in a savings account or a Certificate of Deposit with an institution approved by the Trustee. The Trustee in its discretion reserves the right to return contributions received without the proper investment instructions to the payer or deposit such contributions to a money market account of the Trustee's choice. See Section 5.5 below for Investments and Administration.

F. If the Account Holder makes a contribution to this Trust which exceeds the lesser of one hundred percent (100%) of compensation or three thousand dollars ($3,000), or the lesser of twenty five percent (25%) of compensation or forty-nine thousand dollars ($49,000) if a SEP, or such limits as may be prescribed by law and it is deemed that any portion of such contribution which exceeds these limits is not deductible for federal income tax purposes, then the non-deductible portion may be withdrawn by the Account Holder. Such withdrawal must be made prior to the date on which the Account Holder is required to file his or her federal income tax return.

G. Any income earned on the non-deductible portion of such contributions must be withdrawn by the Account Holder at the same time as indicated in paragraph F, above.

5.2 Rollovers

A. Partial rollovers from this Trust to another IRA meeting the requirements of Code Section 408(a) or to an Annuity contract meeting the requirements of Code Section 408(b), or a Roth IRA meeting the requirements of Code Section 408A, are permitted to be made once a year.

B. The Account Holder may rollover or transfer the entire interest to another Individual Retirement Trust meeting the requirements of Code Section 408(a) or to an Annuity contract meeting the requirements of Code Section 408(b), or a Roth IRA meeting the requirements of Code Section 408A.

C. The above described rollover(s) must be completed within sixty (60) days after the day on which the Account Holder receives the payment or distribution of last asset in the account or in such time frames as prescribed by law.

5.3 Distributions

A. Subject to, and in accordance with other provisions in this Trust, the Trustee will from time to time on the written directions of the Account Holder make distributions out of the Trust to such individuals, in such manner, in such amounts, and for such purposes as may be specified in such written directions.

B. The Trustee will not be liable for the proper application of any part of the Trust if distributions are made in accordance with the written directions of the Account Holder as herein provided, nor will the Trustee be responsible for the adequacy of the Trust to meet and discharge any and all distributions and liabilities.

C. All requests for withdrawals will be in writing and in a form acceptable to the Trustee. A withholding election and the tax identification number of the recipient will be provided to the Trustee before the Trustee makes a payment. All payments are subject to applicable taxes and penalties. If no withholding election is provided to the Trustee, taxes will be withheld in accordance with applicable laws.

D. The Account Holder may transfer his or her interest in whole or in part, under a divorce decree, dissolution of marriage, or a written instrument incident to such divorce or dissolution. The Account Holder shall promptly notify the Trustee of such transfer by providing a certified copy of such decree or true copy of such written instrument to the Trustee.

5.4 Designation of Beneficiary

A. The Account Holder shall designate a Beneficiary on the IRA application. The Account Holder may change the Beneficiary designation by filing a written notice with the Trustee in such manner as the Trustee deems acceptable. Changes to the Beneficiary designation must be received by the Trustee during the Account Holder's lifetime and are considered valid when they have been received by the Trustee.

B. The Designated Beneficiary will be entitled to the Account Holder's entire interest in the event of the Account Holder's death before the complete distribution of the entire interest.

C. Unless the Account Holder designates in writing how distributions are to be paid, the interest in the account will be paid equally to all primary Beneficiaries, or contingent Beneficiaries if all primary Beneficiaries have died before the Account Holder.

D. If the designation of a Beneficiary has not been made by the Account Holder at the time of the Account Holder's death, the Beneficiary shall be the spouse of the Account Holder, or if there is no spouse living at the time of the Account Holder's death, the Beneficiary will be the estate of the Account Holder.

E. If the Beneficiary designated to receive payments is a minor child or declared incapacitated or incompetent by the court, the Trustee may make such payment to a court appointed guardian or legally appointed representative. The receipt of such payment by such individual shall be a full and complete discharge to the Trustee for any sums so paid.

F. If the Trustee is unable to make a payment to a Beneficiary within six months after any such payment is due because the Trustee cannot ascertain the whereabouts or the identity of the Beneficiary by mailing to the last known address shown on the Trustee's records and such Beneficiary has not written claim for such payment before the expiration of said six-month period, then the Trustee may deposit the Beneficiary's funds in a savings account or money market mutual fund established in the name of the Beneficiary.

G. Upon the death of the Account Holder, the Beneficiary may designate his or her own Beneficiary to receive any remaining assets in the account in the event the Beneficiary dies before a total distribution of the interest in the account occurs. Payments to the Beneficiary's Beneficiary must continue at least as rapidly as they would have been to the original Beneficiary.

H. A designated Beneficiary may disclaim his or her interest in the account provided the disclaimer is in a form acceptable to the Trustee and complies with Code Section 2518(b).

I. A Beneficiary is responsible for paying any fees, expenses, or taxes of the Trust in the same manner and time frame as if they were the original Account Holder.

J. If the designated Beneficiary of the account is the spouse and a partial transfer of the account is effected under Section 5.3(D), it is the responsibility of the Account Holder to send the Trustee a written beneficiary change notice if the Account Holder does not want the spouse to remain as the designated Beneficiary.

K. In the event of a dispute between two or more beneficiaries, the Trustee retains the right to apply to a court of competent jurisdiction for judicial settlement or to arbitration pursuant to Section 5.8(G). All fees and expenses incurred by the Trustee in connection with such action will be deducted from the assets of the Trust after reasonable notice is given to the beneficiaries. Such fees and expenses do not have to be approved by the court or an arbitrator.

5.5 Investments and Administration

The Trustee shall have the power and authority in the administration of this Trust to do all acts, including by way of illustration, but not in limitation of the powers conferred by law, the following:

A. Pursuant to the Account Holder's written directions (or those of the Account Holder's agent, if applicable) and notwithstanding any provision to the contrary in this Agreement, to invest and reinvest all or any part of the Trust in (i) cash, cash equivalents, exchange traded debt or equity securities (including options thereon and collectively defined as securities), mutual fund shares, savings media, and any other investment for the Trust under applicable law, to the extent they are not prohibited by Code Section 408(m) and the regulations thereunder, and (ii) with respect to which the Trustee agrees to provide Trust services. The allowable investments shall include, without limitation, any options on any security that may be held by the Trust under this Agreement and applicable law which is obtainable through the Brokerage Firm designated in the Application, either "over the counter" or on a recognized exchange. Any and all such investments and reinvestments must be acceptable to the Trustee without any duty on the part of the Trustee to diversify the investments or to make inquiry with regard to the investments or the written directions. The Trustee may absolutely rely on such written directions for the Account Holder that the Trustee believes to be genuine and will be fully protected in doing so;

B. To hold part or all of the Trust account uninvested or, pursuant to directions of the Account Holder to place the same in a savings account approved by the Trustee or purchase a Certificate of Deposit with an institution approved by the Trustee. However, the Trustee may, but need not, establish a program under which cash deposits in excess of a minimum set by it will periodically be invested in a savings account or money market mutual fund without direction of the Account Holder or his or her agent and the terms of any such program may be determined and altered at the discretion of the Trustee;

C. To employ suitable agents and counsel and to pay their reasonable expenses and compensations;

D. Pursuant to the Account Holder's written directions or agent, to write covered listed call options against existing positions and to liquidate or close such option contracts and the purchase of put options on existing long positions (the same securities cannot be used to simultaneously cover more than one position), to exercise conversion privileges or rights, to subscribe for additional securities and to make payments therefore;

E. Pursuant to the Account Holder or agent's written directions, and subject to Section 5.5(C), to consent to or participate in dissolutions, reorganizations, consolidations, mergers, sales, leases, mortgages, transfers or other changes affecting securities held by the Trustee;

F. To leave any securities or cash for safekeeping or on deposit, with or without interest, with such banks, brokers and other custodians as the Trustee may select, and to hold any securities in bearer form or in the name of the banks, brokers and other custodians or in the name of the Trustee without qualification or description or in the name of any nominee;

G. To invest contributions for Account Holder through the facilities of the Brokerage Firm designated in the Application (or equivalent facilities maintained by any other stockbroker or investment agent selected by the Account Holder and administratively pre-approved by the Trustee);

H. The Brokerage Firm named in the Application is designated by the Account Holder with authority to provide the Trustee with instructions, via confirmations or otherwise, implementing his or her directions to the Brokerage Firm to purchase and sell securities for his or her account. Before the entry of any orders to purchase or sell securities in this account, the Account Holder shall approve beforehand all such orders and direct the Brokerage Firm to implement his or her instructions. The Account Holder authorizes the Trustee to honor trades within his or her account without obligation to verify prior authorizations of such trades. The Brokerage Firm shall receive advices of available cash in this account and shall forward confirmation of purchases and sales to the Trustee. Selling short, and executing purchases in an amount greater than available cash are prohibited transactions. Investments in life insurance and collectibles are not permitted. No assets will be commingled. All investments outside of the brokerage account shall be accompanied by additional written instructions. Except as provided in Section 5.5(A), investments in offshore entities, foreign securities, and insurance contracts are not permitted under this Trust;

I. Except with respect to Paragraph R below and notwithstanding anything to the contrary contained in this Trust, the Trustee shall not make any investment or dispose of any investment held in the Trust, except upon the direction of the Account Holder or his or her agent;

J. The Trustee shall be under no duty to question any such direction of the Account Holder, to review any securities or other property held in the Trust, or to make suggestions to the Individual with respect to the investment, retention, or disposition of any assets held in the Trust. The Account Holder hereby agrees to indemnify the Trustee and hold it harmless from and against any claim or liability which may be asserted against the Trustee by reason of its acting or not acting pursuant to any direction from the Account Holder or failing to act in the absence of any such direction;

K. In accordance with Section 404(c) under the Act and being that the Account Holder exercises control over his or her assets in this Trust which provides for his or her account such Account Holder or their Beneficiary shall not be deemed to be a fiduciary by reason of such exercise, and no person who is otherwise a fiduciary shall be liable under this Trust for any loss, or by reason of any breach, which results from such Account Holder's exercise of control;

L. The Account Holder may appoint in writing an Investment Manager or Managers to manage (including power to acquire and dispose of) any assets of this Trust. Any such Investment Manager shall be registered as an Investment Adviser under the Investment Advisers Act of 1940 ("1940 Act"). If investment of the Trust is to be directed by an Investment Manager, the Account Holder shall deliver to the Trustee a copy of the instruments appointing the Investment Manager and evidencing the Investment Manager's acceptance of such appointment, an acknowledgment by the Investment Manager that it is a fiduciary of the Trust, and a certificate evidencing the Investment Manager's current registration under the 1940 Act. The Trustee shall be fully protected in relying upon such instruments and certificate until otherwise notified in writing by the Account Holder;

The Trustee shall follow the directions of the Investment Manager regarding the investment and reinvestment of the Trust, or such portion thereof as shall be under management by the Investment Manager. The Trustee shall be under no duty or obligation to review any investment to be acquired, held or disposed of pursuant to such directions nor to make any recommendations with respect to the disposition or continued retention of any such investment or the exercise or non-exercise of the powers. Therefore, and in accordance with Section 405 (d) (1) under the Act, the Trustee shall have no liability or responsibility for acting or not acting pursuant to the direction of, or failing to act in the absence of any direction from, the Investment Manager, unless the Trustee knows that by such action or failure to act it would be itself committing or participating in a breach of fiduciary duty by the Investment Manager. The Account Holder hereby agrees to indemnify the Trustee and hold it harmless from and against any claim or liability which may be asserted against the Trustee by reason of its acting or not acting pursuant to any direction from the Investment Manager or failing to act in the absence of any such direction.

The Investment Manager at any time and from time to time may issue orders for the purchase or sale of securities directly to a broker; and in order to facilitate such transaction, the Trustee upon written request shall execute and deliver appropriate trading authorizations. Written notification of the issuance of each such order shall be given promptly to the Trustee by the Investment Manager, and the execution of each such order shall be confirmed by written advice via confirms or otherwise to the Trustee by the broker.

In the event that an Investment Manager should resign or be removed by the Account Holder, the Account Holder shall manage the investments pursuant to the terms of this Trust unless and until the Trustee shall be notified of the appointment of another Investment Manager with respect thereto as provided in this Paragraph L.

The Trustee shall be under no duty to question any such direction of the Account Holder or Investment Manager to review any securities or other property held in the Trust or to make suggestions to the Account Holder or Investment Manager with respect to the investment, retention, or disposition of any assets held in the Trust;

M. Notwithstanding anything herein contained to the contrary, the Trustee shall not lend any part of the corpus or income of the Trust to: pay any compensation for personal services rendered to the Trust; to make any part of its services available on a preferential basis to, or acquire for the Trust any property, other than cash, from or sell any property to any Account Holder, or to any member of an Account Holder's family, or to a corporation controlled by any Account Holder through the ownership, directly or indirectly, of 50 percent or more of the total combined voting power of all classes of stock entitled to vote or 50 percent or more of the total value of shares of all classes of stock of such corporation;

All contributions made by the Account Holder and all investments made with such contributions and the earnings thereon shall be credited to an account maintained for the Account Holder by the Trustee. Such account shall reflect the amounts contributed by the Account Holder;

N. Within ninety (90) days from the close of each Trust Year, the Trustee shall render an accounting, valuing the assets at fair market value, to the Account Holder. The accounting may consist of copies of regularly issued broker-dealer statements to the Trustee and copies of mutual fund, insurance company, and other investment summary account statements supplied to the Trustee. The Account Holder must file any exceptions or objections to the accounting with the Trustee in writing, within sixty (60) days of the mailing of such accounting. In the absence of such filing, the Account Holder shall be deemed to have approved such account; and in such case, or upon the written approval of the Account Holder of any such account, the Trustee shall be released, relieved and discharged with respect to all matters and things set forth in such account as though such account had been settled by the decree of a court of competent jurisdiction. No person other than the Account Holder may require an accounting or bring any action against the Trustee with respect to the Trust or its actions as Trustee.

The Trustee shall have the right at any time to apply to a court of competent jurisdiction for judicial settlement of its accounts for determination of any questions of construction, which may arise, or for instructions. The only necessary party defendant to such action shall be the Account Holder, except that the Trustee may, if it so elects, bring in as a party defendant any other person or persons;

O. The Trustee shall be fully protected in acting upon any instrument, certificate, or paper believed by it to be genuine and to be signed or presented by the Account Holder or such proper person or persons, and the Trustee shall be under no duty to make any investigation or inquiry as to any statement contained in any such writing but may accept the same as conclusive evidence of the truth and accuracy of the statements therein contained;

P. The Trustee shall be under no duty to question any direction of an Account Holder or his or her agent with respect to any investments, to review or monitor any securities or other property held in Trust, or to make suggestions to the Account Holder or his or her agent with respect to investment. The Trustee will not be liable for any loss that may result by reason of investments made in accordance with the directions of an Account Holder or his or her agent;

Q. Whenever the services of a stockbroker or a dealer are required, the Trustee shall retain the Brokerage Firm designated by the Account Holder in the Application. If no Brokerage Firm is currently selected, the Trustee may, in its discretion, appoint another stockbroker or dealer to handle investments in securities under the Trust;

R. The surviving spouse and/or Beneficiary shall be bound by this Section 5.5, including the indemnification provisions in paragraphs J and L above regarding investments and administration of their interest. Provided, however, should the Beneficiary be a minor or, in the discretion of the Trustee, of unsound mind, the Trustee may liquidate the interest of such Beneficiary and hold such interest in an interest bearing account or money market account until distributed;

S. To not vote in person or by proxy upon securities held by the Trustee and destroy such proxies if received by the Trustee.

5.6 Trustee Compensation

A. The Trustee shall be paid such reasonable compensation as shall from time to time be communicated to the Account Holder by the Trustee, and such compensation shall be chargeable to the Account Holder. The Account Holder hereby covenants and agrees to pay the same.

B. The Trustee shall charge the Account Holder any taxes paid by it which may be imposed upon the Trust or the income thereof or upon which the Trustee is required to pay, as well as all expenses of administration of the Trust, including but not limited to transaction costs, distributions, postage, commissions, fees, and reasonable attorney fees. The Account Holder hereby covenants and agrees to pay the same.

C. In the event the Account Holder shall at any time fail to pay the Trustee's compensation, taxes, and expenses within a reasonable time after demand for such payment has been made by the Trustee on the Account Holder, the Trustee will charge the Trust such compensation, taxes and expenses and may liquidate assets of the Trust for such purposes, as in its sole discretion, it shall determine. The custodian will and hereby agrees to collect such compensation, taxes and expenses for the Trustee as so directed by the Trustee in writing.

D. Notwithstanding any other provision contained in this Trust Agreement, all payments under this Section 5.6 and the liquidation of assets to obtain funds therefore may be made without the approval or direction of the Account Holder. If the Trust is not sufficient to satisfy the Trustee's compensation, fees, taxes, and expenses, then the Trustee will charge the Account Holder for such unpaid compensation, fees, taxes, and expenses.

5.7 Amendment and Termination

A. Each Account Holder who adopts this Trust delegates to the Trustee the power to amend this Trust, including any retroactive amendments, by submitting a copy of such amendments to each Account Holder, but only after receiving:

1. A favorable ruling or determination letter from the Commissioner of IRS that the Trust, as amended, continues to meet the requirements of Code Section 408, or 408A
2. Each Account Holder shall be deemed to have consented to any and all such amendments. In addition, the Trustee may amend the fee schedule from time to time with advance notice to the Account Holder and is not required to seek approval from the IRS.

The Account Holder shall be permitted to revoke this Trust in writing within a period not to exceed seven (7) days after the date that the Account Holder adopted this Trust. In the event of such revocation, the Trustee will return the entire account plus any Trustee compensation, taxes and expenses as soon as practical.

B. Neither the Account Holder nor the Trustee shall have the right to amend or terminate this Trust in such a manner as would cause or permit all or part of the entire interest of the Account Holder to be diverted for purposes other than their exclusive benefit or that of their Beneficiary. No Account Holder shall have the right to sell, assign, discount, or pledge as collateral for a loan any asset of this Trust.

C. An Account Holder shall have the right to terminate or partially terminate this Trust, at any time and from time to time, by delivering to the Trustee a signed copy of a statement of termination.

D. Either the Trustee or the Account Holder may terminate this Trust upon thirty (30) days written notice to the other. Upon resignation or removal of the Trustee, the Account Holder shall appoint a successor trustee that shall have the same powers and duties as are conferred upon the Trustee hereunder and in default thereof, such successor trustee may be appointed by a court of competent jurisdiction.

In the event of removal or resignation of the Trustee, if the Account Holder fails to appoint a successor trustee and complete the transfer of assets within 30 days of the date the Trustee mails such termination notice to the last address on file for the Account Holder or the Account Holder mails such notice to the Trustee, the Trustee may in its discretion, transfer the assets to a successor trustee of its choosing, or liquidate and distribute the assets, less any amounts withheld for Trustee compensation, taxes, and expenses, to the Account Holder. The Trustee will not be responsible for any penalties, fines, taxes, or tax consequences that may result from such distribution or transfer.

E. Upon the delivery by the resigning or removed trustee to its successor trustee of all property of the Trust, less such reasonable amount as it shall deem necessary to provide for its compensation and any taxes and expenses or advances chargeable or payable out of the Trust, the successor trustee shall thereupon have the same powers and duties as are conferred upon the Trustee.

F. No successor trustee shall have any obligation or liability with respect to the acts or omissions of its predecessors.

The actual appointment and qualification of a successor trustee to whom the Trust assets may be transferred are conditions which must be fulfilled before the resignation or removal of the Trustee shall become effective. The transfer of the Trust assets shall be made coincidentally with an accounting by the resigned or removed Trustee and such resigned or removed Trustee shall endorse, transfer, convey and deliver to the successor trustee all of the funds, securities or other property then held by it under the Trust, together with such records as may be reasonably required in order that the successor trustee may properly administer the Trust.

G. This Trust Agreement and the Trust created hereby will be terminated in the case of complete distribution of the Trust.

H. The Trustee shall not have the right to modify or to amend this Trust retroactively in such a manner as to deprive any Account Holder or his or her Beneficiary of any benefit to which he or she may be entitled under this Trust Agreement by reason of contributions made prior to the modification or amendment, unless such modification or amendment is necessary to conform this Trust to, or satisfy the conditions of, any law, governmental regulation or ruling, or to permit this Trust to meet the requirements of Code Section 408.

I. If the Trustee receives any claim to assets held in the Trust which is adverse to the Account Holder's interest or the interest of his or her Beneficiary, and the Trustee, in its absolute discretion, decides the claim is, or may be, meritorious, the Trustee may withhold distribution until the claim is resolved to its satisfaction or until instructed by a court of competent jurisdiction. In any such matter, the Trustee shall be entitled to reimbursement of all costs, fees and expenses, including reasonable attorney's fees, directly from the Trust assets, without the approval or direction of the Account Holder. If necessary, the Trustee may liquidate Trust assets in order to be reimbursed. As an alternative, the Trustee may deposit all or any portion of the assets in the Trust into the court. Deposit with the court shall relieve the Trustee of any further obligation with respect to the assets deposited. The Trustee has the right to be reimbursed from the funds deposited with the court for legal fees and costs incurred. Such reimbursement may be made directly from the Trust assets without approval or direction of the Account Holder. If necessary, the Trustee may liquidate Trust assets in order to be reimbursed as stated above.

5.8 Miscellaneous

A. Notwithstanding anything to the contrary contained in this Trust Agreement or in any amendment thereto, no part of the Trust other than such part as is required to pay the Trustee's compensation, taxes, and administration expenses (including the reimbursement referenced in Section 5.7 (I), shall be used for, or diverted to, purposes other than for the exclusive benefit of the Account Holder, their Beneficiaries, or their estates. The Trust account is established for the exclusive benefit of the Account Holder or his or her Beneficiary.

B. The Trustee shall not be liable for any act or omission made in connection with the Trust except for its intentional misconduct or negligence. Any required notice regarding the Trust will be considered effective when the Trustee mails it to the last address of the intended recipient which is contained in the Trustee's records. Any notice to be given to the Trustee will be considered effective when the Trustee actually receives it. The Account Holder and/or Beneficiaries must notify the Trustee of any change of address in a manner acceptable to the Trustee.

C. To the extent the Trustee is engaged in any form of litigation, arbitration, or dispute resolution concerning the Trust assets or the interest of the Trust, the Trustee shall be entitled to recover all costs, fees and expenses, including reasonable attorney's fees, directly from the Trust assets, pursuant to Section 5.7(I).

D. The terms and conditions of this Trust Agreement shall be applicable without regard to the community property laws of any state.

E. If the Account Holder is married, the Compensation of the Account Holder and any contributions made to this Trust under Section 4.2 shall be determined without regard to the Compensation of the spouse.

F. The captions of Articles and Sections in this Trust Agreement are included for convenience only and shall not be considered a part of, or an aid to, the construction of this Trust.

G. The Account Holder agrees that all controversies between the Account Holder and/or Beneficiaries and the Trustee and any of its officers, directors, agents or employees (present or former) concerning or arising from (i) any account maintained with the Trustee by the Account Holder; (ii) any transaction involving the Account Holder's account, whether or not such transaction occurred in such account or accounts; or (iii) the construction, performance or breach of this Trust Agreement, whether such controversy arose prior, on or subsequent to the date hereof, shall be determined by arbitration under the commercial arbitration rules of the American Arbitration Association disclosed below. Any disputes as to the arbitrability of a matter or the manner of such arbitration shall be determined in such arbitration. Such arbitration shall be held in Wilmington, Delaware.

Arbitration Disclosures: Arbitration is final and binding on the parties except to the extent superceded by the Code or the Act; the parties are waiving their right to seek remedies in court, including the right to jury trial; pre-arbitration discovery is generally more limited than and different from court proceedings; the arbitrators' award is not required to include factual findings or legal reasoning, and any party's right to appeal or to seek modification of rulings by the arbitrators is strictly limited; the panel of arbitrators will consist of arbitrators for American Arbitration Association; the arbitration will be under the commercial arbitration rules of the American Arbitration Association; the arbitration shall be held in Wilmington, Delaware; and any disputes as to such arbitration or the manner thereof shall be determined in such arbitration.

H. The determination that any provision of this Trust Agreement is not enforceable in accordance with its terms in a particular jurisdiction shall not affect the validity or enforceability of the remaining provisions of this Trust Agreement generally or in any other jurisdiction or as to any other parties, but rather such unenforceable provisions shall be stricken or modified in accordance with such determination only as to such parties and this Trust Agreement, as so modified, shall continue to bind the specific parties involved therein and otherwise all other parties in unmodified form.

I. All contributions to this Trust shall be deemed to take place in the State of Delaware.

J. This Trust Agreement may be executed in any number of counterparts, each one of which shall be deemed to be the original although the others shall not be produced.

K. This Trust Agreement is made pursuant to and shall be construed in accordance with the laws of the State of Delaware. Jurisdiction and venue of any matter not subject to the arbitration provisions of this Trust Agreement shall lie solely in the courts of the State of Delaware.

L. The Trustee shall furnish annual calendar-year reports concerning the status of the Account and such information concerning required minimum distribution as is prescribed by the Commissioner of Internal Revenue.

Principal Trust Company

A member of

Principal Financial Group

Mailing Address:
P.O. Box 8963
Wilmington, DE 19899-8963
800-209-9010 Fax: 302-999-9554

Amendment to Self-Directed Individual Retirement Trust Agreement

Delaware Charter Guarantee & Trust Company, conducting business as Principal Trust Company hereby amends the Principal Trust Company Self-Directed Individual Retirement Trust Agreement as follows to comply with Internal Revenue Service Announcement 2007-55:

Rollovers from Designated Roth Contribution Accounts

Effective for tax years beginning after 2005, a qualified rollover contribution to this Roth IRA includes a rollover from a designated Roth contribution account described in Code section 402A, as provided in Code section 408A(c)(6).

Executed by Principal Trust Company℠ on December 28, 2007.

By Jill W. Simonds

Jill W. Simonds - Vice President, Operations

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Principal Trust Company

A member of

Principal Financial Group

Mailing Address:
P.O. Box 8963
Wilmington, DE 19899-8963
800-209-9010 Fax: 302-999-9554

Privacy Notice

This Notice is provided on behalf of Delaware Charter Guarantee & Trust Company d/b/a Principal Trust Company.

Protecting Your Privacy

This Notice is required by law. It tells how we handle personal information. This Notice applies to:

- People, including IRA account holders, personal trust clients, grantors, beneficiaries, remaindermen, who own or apply for our products or services for personal use
- Employee benefit plan participants and beneficiaries

In this Notice, "you" refers to only these people. The Notice does not apply to an employer plan sponsor.

We Protect Information We Collect About You

We follow strict standards to safeguard personal information. These standards include limiting access to data and regularly testing our security technology.

How We Collect Information

We collect data about you as we do business with you. Some of the sources of this data are as follows:

- **Information we obtain when you apply or enroll for products or services.** You may provide facts such as your name, address, Social Security number, and employment data.
- **Information we obtain from others.** This may include market value data about your account and similar data.
- **Information we obtain through our transactions and experience with you.** This includes investment records and account values.
- **Information we obtain through the Internet.** This includes data from online forms you complete. It also includes data we receive when you visit our website.

How We Share Information With Others

In the course of doing business we may share data with others. This could include personal information about you or about former customers, plan participants or beneficiaries. Personal information may be shared with others for the following purposes:

- in response to a subpoena,
- to prevent fraud,
- to comply with inquiries from government agencies or other regulators, or
- for other legal purposes.

We also may share personal information about you or former customers:

- with others that service your accounts, or that perform services on our behalf,
- with others with your consent, at your request or as allowed by law.

Accuracy of Information

We strive for accurate records. Please tell us if you receive any incorrect materials from us. We will make the appropriate changes.

More Information

You can write to us if you have questions about our Privacy Notice:

Privacy Officer, P.O. Box 8963, Wilmington, DE 19899-8963.

Receipt of this notice does not mean your application has been accepted.

We may change our privacy practices at times. We will give you a revised notice when required by law.

Our privacy practices comply with all applicable laws.

If a state's privacy laws are more restrictive than those stated in this Notice, we comply with those laws.

Your agent, broker, registered representative, consultant or advisor may have a different privacy policy.

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

TAX EXEMPT AND GOVERNMENT ENTITIES DIVISION

Plan Name: Traditional or Roth IRA Trust 001

FFN: 50116680000-001 Case: 200300122 EIN: 51-0099493

Letter Serial No: K170168f

DELAWARE CHARTER GUARANTEE & TRUST CO
d/b/a TRUSTAR RETIREMENT SERVICES
1013 CENTRE ROAD
WILMINGTON, DE 19805

Contact Person:
Ms. Arrington 50-00197
Telephone Number:
(202) 283-8811
In Reference To:
T:EP:RA:T1
Date: 07/29/2003

Dear Applicant:

In our opinion, the form of the prototype trust, custodial account or annuity contract identified above is acceptable either for use as a traditional IRA under section 408 of the Internal Revenue Code or for use as a Roth IRA under Code section 408A, as amended through the Job Creation and Workers Assistance Act of 2002.

Each individual who adopts this approved prototype will be considered to have either a traditional IRA that satisfies the requirements of Code section 408 or a Roth IRA that satisfies the requirements of Code section 408A, provided the individual explicitly and unambiguously indicates at the time of adoption which type of IRA it is to be, follows the terms of the approved prototype document applicable to the type of IRA adopted, does not engage in certain transactions specified in Code section 408(e), and, if the IRA is a trust or custodial account, the trustee or custodian is a bank within the meaning of Code section 408(n) or has been approved by the Internal Revenue Service pursuant to Code section 408(a)(2).

Code section 408(i) and related regulations require that the trustee, custodian or issuer of a contract provide a disclosure statement to each participant in this program as specified in the regulations. Publication 590, Individual Retirement Arrangements (IRAs), gives information about the items to be disclosed. The trustee, custodian or issuer of a contract is also required to provide each adopting individual with annual reports of all transactions related to the IRA.

The Internal Revenue Service has not evaluated the merits of this IRA and does not guarantee contributions or investments made under the IRA. Furthermore, this letter does not express any opinion as to the applicability of Code section 4975, regarding prohibited transactions.

This prototype IRA may have to be amended to include or revise provisions in order to comply with future changes in the law or regulations.

If you have any questions concerning IRS processing of this case, call us at the above telephone number. Please refer to the File Folder Number (FFN) shown in the heading of this letter. Please provide those adopting this prototype with your telephone number, and advise them to contact your office if they have any questions about the operation of their IRA. Please provide a copy of this letter to each adopting individual.

You should keep this letter as a permanent record. Please notify us if you terminate sponsorship of this prototype IRA.

Sincerely yours,

Paul T. Shultz

Director,
Employee Plans Rulings & Agreements

TRUSTEE CERTIFICATION

Title of Trust: ____

In consideration of Interactive Brokers LLC ("IB") opening a brokerage account ("Account") for the trust named above ("Trust"), each undersigned trustee ("Trustee") hereby represents, warrants and certifies that:

1. The Trust exists under applicable laws.

2. The Trust was established on ____________________

3. The information provided in the Trust's IB account application is complete and accurate. Each Trustee has reviewed and agrees to the terms and conditions of the IB Customer Agreement.

4. The Trustee(s) has(have) the power under the instrument or agreement that governs the Trust (the "Trust Agreement ") and under applicable law to enter into all transactions authorized under the IB Customer Agreement.

5. Is the Trust authorized to engage in margin transactions in the Account?

   ☐Yes

   ☐No

6. All transactions effected and instructions given on this Account will be in full compliance with the Trust Agreement. The Trustees will continuously monitor the transactions in the Account to ensure that such transactions are authorized under the Trust Agreement.

7. The following is a complete list of all trustees associated with the Trust, their addresses and their respective authorized powers under the Trust Agreement:

   Individual Trustee
   Full Legal Name of Trustee:

   Residential Address (no PO Box):

   Mailing Address (if different):

   Is this Trustee an authorized signatory for the Trust? ☐Yes ☐No

   Is this Trustee an authorized trader for the Trust? ☐Yes ☐No

   Individual Co-Trustee
   Full Legal Name of Trustee:

   Residential Address (no PO Box):

   Mailing Address (if different):

Is this Trustee an authorized signatory for the Trust? ☐Yes ☐No

Is this Trustee an authorized trader for the Trust? ☐Yes ☐No

Entity Trustee
Full Legal Name of Trustee:

Business Address (no PO Box):

Mailing Address (if different):

Is this Trustee an authorized signatory for the Trust? ☐Yes ☐No

Is this Trustee an authorized trader for the Trust? ☐Yes ☐No

8. The settlor(s)/grantor(s) of the Trust is(are):

   Full Legal Name of Settlor/Grantor:

   Full Legal Name of Settlor/Grantor:

9. Is the Trust is revocable? ☐Yes ☐No

   If yes, please list all individuals or entities with the power to revoke the Trust.

   Full Legal Name:

   Full Legal Name:

10. The Trustee(s) agrees(agree) that any notice sent to one Trustee will constitute notice to all Trustees. IB, in its sole discretion may require the written consent of any or all Trustees prior to acting upon the instructions of any Trustee. Neither the Trustee(s) nor the Trust impose any obligation upon IB for determining the purpose or validity of any instructions received from any Trustee.

11. The Trustee(s) acknowledge(acknowledges) that (a) IB will be relying solely on the certifications herein for all matters relating to such certifications and operation of the Account, (b) IB will not review or interpret the Trust Agreement, and (c) IB will not monitor transactions to determine if they are in compliance with the Trust Agreement.

12. The Trust has not been revoked, modified or amended in any manner, which would cause the representations contained in this Certification to be incorrect. Each Trustee agrees to notify IB immediately in writing of any change that would cause this Certification to become incorrect or incomplete. Each Trustee acknowledges and agrees that IB is permitted to verify any information that is provided to IB in the account application.

13. All assets (whether cash, securities or commodities) in the Account are to be held by or on behalf of the Trust.

14. The Trustees may grant a Power of Attorney to a third party concerning the Account, and the undersigned certify that they have the authority under the terms of the Trust Agreement and applicable law to make such grant.

15. The undersigned Trustees jointly and severally agree to indemnify IB, its affiliates, officers, directors, employees and agents from, and to hold such persons harmless from any losses, expenses, penalties, claims or liabilities (including reasonable attorneys' fees) that may arise out of IB acting in reliance on the representations contained in this Certification. This indemnification shall survive the termination of the trust and/or the Account.

CERTIFIED TO INTERACTIVE BROKERS LLC BY TRUSTEES. The undersigned certify under penalty of perjury that the foregoing is true and correct. The representations and obligations stated in this Certification will survive the termination of the Account and shall be governed by the laws of the State of Connecticut, U.S.A.

TRUSTEE

By: ______________________________

Name: ______________________________

Date: ______________________________

TRUSTEE

By: ______________________________

Name: ______________________________

Date: ______________________________

RISK DISCLOSURE STATEMENT FOR FOREX TRADING AND IB MULTI-CURRENCY ACCOUNTS

Rules of the U.S. National Futures Association ("NFA") require Interactive Brokers ("IB") to provide you with the following Risk Disclosure Statement:

RISK DISCLOSURE STATEMENT

OFF-EXCHANGE FOREIGN CURRENCY ("FOREX") TRANSACTIONS INVOLVE THE LEVERAGED TRADING OF CONTRACTS DENOMINATED IN FOREIGN CURRENCY CONDUCTED WITH A FUTURES COMMISSION MERCHANT OR A RETAIL FOREIGN EXCHANGE DEALER AS YOUR COUNTERPARTY. BECAUSE OF THE LEVERAGE AND THE OTHER RISKS DISCLOSED HERE, YOU CAN RAPIDLY LOSE ALL OF THE FUNDS YOU DEPOSIT FOR SUCH TRADING AND YOU MAY LOSE MORE THAN YOU DEPOSIT.

YOU SHOULD BE AWARE OF AND CAREFULLY CONSIDER THE FOLLOWING POINTS BEFORE DETERMINING WHETHER SUCH TRADING IS APPROPRIATE FOR YOU.

(1) TRADING IS NOT ON A REGULATED MARKET OR EXCHANGE—YOUR DEALER IS YOUR TRADING PARTNER WHICH IS A DIRECT CONFLICT OF INTEREST. BEFORE YOU ENGAGE IN ANY RETAIL FOREIGN EXCHANGE TRADING, YOU SHOULD CONFIRM THE REGISTRATION STATUS OF YOUR COUNTERPARTY.

The off-exchange foreign currency trading you are entering into is not conducted on an interbank market, nor is it conducted on a futures exchange subject to regulation as a designated contract market by the Commodity Futures Trading Commission ("CFTC"). The foreign currency trades you transact are trades with the futures commission merchant or retail foreign exchange dealer as your Counterparty. WHEN YOU SELL, THE DEALER IS THE BUYER. WHEN YOU BUY, THE DEALER IS THE SELLER. As a result, when you lose money trading, your dealer is making money on such trades, in addition to any fees, commissions, or spreads the dealer may charge.

(2) AN ELECTRONIC TRADING PLATFORM FOR RETAIL FOREIGN CURRENCY TRANSACTIONS IS NOT AN EXCHANGE. IT IS AN ELECTRONIC CONNECTION FOR ACCESSING YOUR DEALER. THE TERMS OF AVAILABILITY OF SUCH A PLATFORM ARE GOVERNED ONLY BY YOUR CONTRACT WITH YOUR DEALER.

Any trading platform that you may use to enter off-exchange foreign currency transactions is only connected to your futures commission merchant or retail foreign exchange dealer. You are accessing that trading platform only to transact with your dealer. You are not trading with any other entities or customers of the dealer by accessing such platform. The availability and operation of any such platform, including the consequences of the unavailability of the trading platform for any reason, is governed only by the terms of your account agreement with the dealer.

(3) YOUR DEPOSITS WITH THE DEALER HAVE NO REGULATORY PROTECTIONS.

All of your rights associated with your retail forex trading, including the manner and denomination of any payments made to you, are governed by the contract terms established in your account agreement with the futures commission merchant or retail foreign exchange dealer. Funds deposited by you with a futures commission merchant or retail foreign exchange dealer for trading off-exchange foreign currency transactions are not subject to the customer funds protections provided to customers trading on a contract market that is designated by the CFTC. Your dealer may commingle your funds with its own operating funds or use them for other purposes. In the event your dealer becomes bankrupt, any funds the dealer is holding for you in addition to any amounts owed to you resulting from trading, whether or not any assets are maintained in separate deposit accounts by the dealer, may be treated as an unsecured creditor's claim.

(4) YOU ARE LIMITED TO YOUR DEALER TO OFFSET OR LIQUIDATE ANY TRADING POSITIONS SINCE THE TRANSACTIONS ARE NOT MADE ON AN EXCHANGE OR MARKET, AND YOUR DEALER MAY SET ITS OWN PRICES.

Your ability to close your transactions or offset positions is limited to what your dealer will offer to you, as there is no other market for these transactions. Your dealer may offer any prices it wishes, and it may offer prices derived from outside sources or not in its discretion. Your dealer may establish its prices by offering spreads from third party prices, but it is under no obligation to do so or to continue to do so. Your dealer may offer different prices to different customers at any point in time on its own terms. The terms of your account agreement alone govern the obligations your dealer has to you to offer prices and offer offset or liquidating transactions in your account and make any payments to you. The prices offered by your dealer may or may not reflect prices available elsewhere at any exchange, interbank, or other market for foreign currency.

(5) PAID SOLICITORS MAY HAVE UNDISCLOSED CONFLICTS

The futures commission merchant or retail foreign exchange dealer may compensate introducing brokers for introducing your account in ways which are not disclosed to you. Such paid solicitors are not required to have, and may not have, any special expertise in trading, and may have conflicts of interest based on the method by which they are compensated. Solicitors working on behalf of futures commission merchants and retail foreign exchange dealers are required to register. You should confirm that they are, in fact registered. You should thoroughly investigate the manner in which all such solicitors are compensated and be very cautious in granting any person or entity authority to trade on your behalf. You should always consider obtaining dated written confirmation of any information you are relying on from your dealer or a solicitor in making any trading or account decisions.

FINALLY, YOU SHOULD THOROUGHLY INVESTIGATE ANY STATEMENTS BY ANY DEALERS OR SALES REPRESENTATIVES WHICH MINIMIZE THE IMPORTANCE OF, OR CONTRADICT, ANY OF THE TERMS OF THIS RISK DISCLOSURE. SUCH STATEMENTS MAY INDICATE POTENTIAL SALES FRAUD.

THIS BRIEF STATEMENT CANNOT, OF COURSE, DISCLOSE ALL THE RISKS AND OTHER ASPECTS OF TRADING OFF-EXCHANGE FOREIGN CURRENCY TRANSACTIONS WITH A FUTURES COMMISSION MERCHANT OR RETAIL FOREIGN EXCHANGE DEALER.

PERFORMANCE OF INTERACTIVE BROKERS RETAIL CUSTOMER FOREX ACCOUNTS FOR THE PAST FOUR CALENDAR QUARTERS:

The table below sets forth the percentage of non-discretionary retail forex customer accounts maintained by Interactive Brokers LLC that were profitable and unprofitable for the past four calendar quarters. The accounts were identified and these statistics were calculated according to the definitions and interpretations set forth by the CFTC and NFA[1].

TIME PERIOD	NUMBER OF ACCOUNTS	PERCENTAGE OF PROFITABLE ACCOUNTS	PERCENTAGE OF UNPROFITABLE ACCOUNTS
Q4 2018	27,067	43.07%	56.93%
Q3 2018	26,459	44.80%	55.20%
Q2 2018	26,068	44.59%	55.41%
Q1 2018	25,948	47.86%	52.14%

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.

FURTHER INFORMATION PROVIDED BY INTERACTIVE BROKERS:

A. Overview: Interactive Brokers Multi-Currency enabled accounts allow IB Customers to trade investment products denominated in different currencies using a single IB account denominated in a "base" currency of the customer's choosing. IB Customers can also use their Multi-Currency enabled accounts to conduct foreign exchange transactions in order to manage credits or debits generated by foreign securities, options or futures trading, to convert such credits or debits back into the Customer's base currency, or to hedge or speculate. IB foreign exchange transactions offered to retail customers are forex spot transactions.

B. Nature of Your Account and Whether SIPC Covers Foreign Currency: Foreign currency trading at Interactive Brokers takes place in a securities account. Your IB securities account is governed by rules of the U.S. Securities and Exchange Commission ("SEC") and the Financial Industry Regulatory Authority. In addition, IB observes the rules of the National Futures Association in connection with foreign currency trading.

Interactive Brokers LLC is a member of the Securities Investor Protection Corporation ("SIPC"). SIPC protects cash and securities held with Interactive Brokers as specified in the Securities Investor Protection Act. SIPC protects cash, including US dollars and foreign currency, to the extent that the cash was deposited with Interactive Brokers for the purpose of purchasing securities. Whether foreign currency in your IB account would be protected by SIPC would depend in part on whether the cash was considered to be deposited with Interactive Brokers for the purpose of purchasing securities. Interactive Brokers expects that at least one factor in deciding this would be whether and the extent to which the customer engages in securities trading in addition to or in conjunction with forex trading, but, as discussed in section 3 above, funds deposited specifically for forex trading have no regulatory protections under NFA rules or CFTC regulations. For further information, you must contact your own legal counsel or SIPC.

Customer money held in the securities account is subject to Securities Exchange Act Rule 15c3-3 governing customer reserve requirements. Although relevant regulations only require computation of the 15c3-3 reserve requirement and associated segregation of customer funds to be performed weekly, IB performs such calculations and segregation on a daily basis.

C. General Risk: Customer understands and acknowledges that buying and selling securities, options, futures and other financial products that are denominated in foreign currencies or traded on foreign markets is inherently risky and requires substantial knowledge and expertise. Customers applying for Interactive Brokers Multi-Currency enabled accounts represent that they are aware of and understand the risks involved in trading foreign securities, options, futures and currencies and that they have sufficient financial resources to bear such risks.

D. Customer Responsibility for Investment Decisions: Customer acknowledges that IB representatives are not authorized to provide investment, trading or tax advice and therefore will not provide advice or guidance on trading or hedging strategies in the Multi-Currency enabled account. Customers must evaluate carefully whether any particular transaction is appropriate for them in light of their investment experience, financial objectives and needs, financial resources, and other relevant circumstances and whether they have the operational resources in place to monitor the associated risks and contractual obligations over the term of the transaction. In making these assessments, IB strongly recommends that Customers obtain independent business, legal, and accounting advice before entering into any transactions.

E. Exchange Rate Risk: Exchange rates between foreign currencies can change rapidly due to a wide range of economic, political and other conditions, exposing the Customer to risk of exchange rate losses in addition to the inherent risk of loss from trading the underlying financial product. If a Customer deposits funds in a currency to trade products denominated in a different currency, Customer's gains or losses on the underlying investment therefore may be affected by changes in the exchange rate between the currencies. If Customer is trading on margin, the impact of currency fluctuation on Customer's gains or losses may be even greater.

F. Currency Fluctuation: When Customer uses the foreign exchange facility provided by IB to purchase or sell foreign currency, fluctuation in currency exchange rates between the foreign currency and the base currency could cause substantial losses to the Customer, including losses when the Customer converts the foreign currency back into the base currency.

G. Nature of Foreign Currency Exchange Transactions Between Customer and IB: When Customer enters into a foreign exchange transaction with IB, IB, as the counterparty to Customer's trade, may effectuate that transaction by entering into an offsetting transaction with one of IB's affiliates, with another customer that enters quotes into IB's system, or with a third party bank (IB's "Forex Providers"). In such transactions, the Forex Provider is not acting in the capacity of a financial adviser or fiduciary to Customer or to IB, but rather, is taking the other side of IB's offsetting trade in an arm's length contractual transaction. Customer should be aware that the Forex Provider may from time to time have substantial positions in, and may make a market in or otherwise buy or sell instruments similar or economically related to, foreign currency transactions entered into by Customer. IB's Forex Providers may also undertake proprietary trading activities, including hedging transactions related to the initiation or termination of foreign exchange transactions with IB, which may adversely affect the market price or other factors underlying the foreign currency transaction entered into by Customer and consequently, the value of such transaction.

H. Prices on the IB Forex Platforms: The prices quoted by IB to Customers for foreign exchange transactions on IB's IdealPro platform will be determined based on Forex Provider quotes and are not determined by a competitive auction as on an exchange market. Prices quoted by IB for foreign currency exchange transactions therefore may not be the most competitive prices available. For purposes of maintaining adequate scale and competitive spreads, a minimum size is imposed on all IdealPro orders (USD $25,000 as of December 2018 but this is subject to change at any time). Orders below the minimum size are considered odd lots and limit prices for these odd lot-sized orders are not displayed through IdealPro. Retail leveraged forex orders for odd lot-sized orders are generally executed within 1 pip of the best bid and best offer of the Interbank spread (NBBO). However, if the best quote for such orders is more than 1 pip outside of the NBBO, IB will generally route the order to execute against a bank or dealer bid or offer regardless of the order size in order to get an improved price. Customers may also enter a Request for Quote ("RFQ") on the system. IB will charge transaction fees as specified by IB for foreign currency exchange transactions. IB's Forex Providers will try to earn a spread profit on transactions with IB (differential between the bid and ask prices quoted for various currencies).

I. Price Slippage; Order Cancellation and Adjustment: Prices quoted on IB's system generally reflect the prices at which IB's Forex Providers are willing to trade. Prices quoted on IB's system reflect changing market conditions and therefore quotes can and do change rapidly. As such, when a Customer order is received and processed by IB's system, the quote on IB's platform may be different from the quote displayed when the order was sent by Customer. This change in price is commonly referred to as "slippage." IB generally will not execute a Customer order at a certain price unless IB is able to trade at that price against one of IB's Forex Providers.

If Customer sends an order for a forex transaction to IB's system but Customer's requested price is no longer available and therefore the order is non-marketable, IB will not execute the order then but will place it in IB's limit order book in accordance with Customer's time-in-force instructions. Other customers can then trade against this order when it becomes the National Best Bid and Offer ("NBBO") or IB may execute the order if it becomes marketable based on prices received from IB's Forex Providers.

If Customer sends an order for a forex transaction to IB's system and the current price is more favorable for Customer than what Customer requested in the order, the order will generally be executed at the available better price.

Although IB attempts to obtain the best price for Customer orders on forex transactions, because of the inherent possibility of transmission delays between and among Customers, IB and Forex Providers, or other technical issues, execution prices may be worse than the quotes displayed on the IB platform.

To execute your order, Interactive Brokers engages in back-to-back transactions with one or more counterparties. These counterparties on occasion may cancel or adjust forex trades with us in the event of market or technical problems. In these cases we may have to cancel or adjust forex trades that you have executed.

J. Other Risks: There are other risks that relate to trading foreign investment products and trading foreign currencies that cannot be described in detail in this document. Generally, however, foreign securities, options, futures and currency transactions involve exposure to a combination of the following risk factors: market risk, credit risk, settlement risk, liquidity risk, operational risk and legal risk. For example, there can be serious market disruptions if economic or political or other unforeseen events locally or overseas affect the market. Also, the settlement date of foreign exchange trades can vary due to time zone differences and bank holidays. When trading across foreign exchange markets, this may necessitate borrowing funds to settle foreign exchange trades. The interest rate on borrowed funds must be considered when computing the cost of trades across multiple markets. In addition to these types of risk there may be other factors such as accounting and tax treatment issues that Customers should consider.

(1)Information regarding the performance of Interactive Brokers retail forex customers for the past 5 years is available upon request.