



By-Laws

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ARTICLE I – DEFINITIONS

Definitions

SECTION 1. Unless the context requires otherwise (or except as otherwise specified in the By-Laws or Rules), the terms defined herein shall, for all purposes of these By-Laws and the Rules of the Corporation, have the meanings herein specified.

A.

Account

(1) The term "account" means a separate account established by a Clearing Member with the Corporation pursuant to the provisions of Article VI of the By-Laws.

Adjustment Increment

(2) The term "adjustment increment" in respect of options means one cent. The term "adjustment increment" in respect of a series of futures other than stock futures means the minimum increment in settlement prices for such series and in respect of a series of stock futures means \$0.0001. *Adopted September 11, 2000. Amended August 20, 2001; May 16, 2002; February 26, 2010; November 12, 2018.*

Affiliate

(3) The term "Affiliate," when used in respect of a Clearing Member, means a clearing member of a Participating CCO whose account with such Clearing Member would not be the account of a "customer" within the meaning of Rules 8c-1 and 15c2-1 of the Securities and Exchange Commission and, when used in respect of a clearing member of a Participating CCO, means a Clearing Member whose account with such clearing member would be a "proprietary account" within the meaning of Section 1.3(y) of the General Regulations of the Commodity Futures Trading Commission. *Adopted September 26, 1989.*

Affiliated Futures Market

(4) The term "affiliated futures market" means a futures market or security futures market at least 50% of the equity of which (a) is owned, directly or indirectly, by a Securities Exchange or (b) is owned by any entity that owns, directly or indirectly, at least 50% of the equity in a Securities Exchange. *Adopted March 25, 2004. Amended March 20, 2009.*

Aggregate Exercise Price

(5) The term "aggregate exercise price" means the exercise price of an option contract multiplied by the number of units of the underlying security covered by the option contract; provided, however, that in the case of option contracts for which the exercise price is expressed as a multiple of the per-unit price, then for purposes of calculating the aggregate exercise price, the unit of trading shall also be modified so as to obtain the same aggregate exercise price as if the exercise price were expressed as a per-unit price. *Amended January 14, 2010.*

Aggregate Purchase Price

(6) The term "aggregate purchase price" means the total price to be paid by the Receiving Clearing Member against delivery of underlying securities on the delivery date. As used in respect of a stock option, the aggregate purchase price is the exercise settlement amount. As used in respect of a physically-settled stock future, the aggregate purchase price is equal to the final settlement price multiplied by the unit of trading. *Adopted August 20, 2001.*

Alternate Settlement Notification

(7) The term “Alternate Settlement Notification” as used in respect of a physically-settled Treasury future means a notice submitted by the Delivering Clearing Member and the Receiving Clearing Member in respect of one or more physically-settled Treasury futures that such Clearing Members have agreed to make and take delivery in respect of such physically-settled Treasury future(s) under terms or conditions which differ from the terms and conditions prescribed by paragraphs (a) through (j) of Rule 1302B.

Adopted November 20, 2009.

American; American-Style

(8) The term “American” or “American-style,” used in respect of an option contract other than a delayed-start option contract, means that the option contract may be exercised, subject to the provisions of the By-Laws and Rules, at any time from its acceptance by the Corporation until its expiration. When used in respect of a delayed start option contract, the term means that the delayed start option contract may be exercised, subject to the provisions of the By-Laws and Rules, at any time after its exercise price has been set until its expiration.

Amended October 28, 1991; November 28, 2007; May 24, 2018.

Annual Meeting

(9) The term "annual meeting" means the annual meeting of the stockholders of the Corporation.

Appointed Clearing Member

(10) The term "Appointed Clearing Member" means a Clearing Member that, in accordance with the provisions of Rule 901, has been appointed by an Appointing Clearing Member to make settlement of obligations of the Appointing Clearing Member to deliver or receive underlying securities arising from the exercise or maturity of cleared securities.

Adopted January 28, 1994. Amended August 20, 2001; March 16, 2004.

Appointing Clearing Member

(11) The term "Appointing Clearing Member" means a Clearing Member that, in accordance with the provisions of Rule 901, has appointed an Appointed Clearing Member to make settlement of obligations of the Appointing Clearing Member to deliver or receive underlying securities arising from the exercise or maturity of cleared securities.

Adopted January 28, 1994. Amended August 20, 2001; March 16, 2004.

Appropriate Regulatory Agency

(12) The term "appropriate regulatory agency" shall have the meaning given to it in Section 3(a) of the Securities Exchange Act of 1934, as amended.

Adopted February 11, 1976.

Approved Custodian

(13) The term “approved custodian” means a bank or trust company approved by the Chief Executive Officer, or Chief Operating Officer.

Amended September 17, 2004; March 21, 2014; September 16, 2016; April 26, 2017; February 15, 2019.

Assigned Clearing Member

(14) The term "Assigned Clearing Member" means the Clearing Member to which the Corporation's obligations under a cleared contract are assigned in accordance with the Rules upon the exercise of such cleared contract.

Amended April 11, 1989; May 16, 2002.

Associate Clearinghouse

(15) The term "associate clearinghouse" means a derivatives clearing organization regulated as such under the Commodity Exchange Act or a clearinghouse not located in the United States

Article I – Definitions

which, in either case, has agreed with the Corporation to act in clearing transactions in certain cleared securities on behalf of its members. An associate clearinghouse shall be a Clearing Member for purposes of the By-Laws and Rules except to the extent otherwise provided in an agreement between the Corporation and the associate clearinghouse.

Amended August 20, 2001.

Associated Market-Maker

(16) The term "associated Market-Maker" means a person maintaining an account with a Clearing Member as a Market-Maker, specialist, stock market-maker, stock specialist or Registered Trader that is a Related Person of the Clearing Member and shall include any participant, as such, in an account of which 10% or more is owned by an associated Market-Maker, or an aggregate of 10% or more of which is owned by one or more associated Market-Makers.

Adopted January 19, 1994.

B.

Backloaded OTC Option

(1) The term "Backloaded OTC option" means an OTC option for which the premium payment date communicated to the Corporation by the OTC Trade Source is prior to the business day on which such OTC option is submitted to the Corporation for clearing.

Adopted December 14, 2012.

Binary Option

(2) The term "binary option" shall have the meaning given to it in Article XIV of the By-Laws.

Adopted November 30, 2007.

Board of Directors

(3) The term "Board of Directors" means the Board of Directors of the Corporation.

Amended December 14, 2012.

Borrowing Clearing Member

(4) The term "Borrowing Clearing Member" means any Hedge Clearing Member or Market Loan Clearing Member that borrows Eligible Stock in a Stock Loan.

Adopted June 11, 1998. Amended January 23, 2009; December 14, 2012.

BOUND

(5) The term "BOUND" means a security issued by the Corporation pursuant to Article XXIV of the By-Laws and Chapter XXV of the Rules.

Adopted August 26, 1996. Amended December 14, 2012.

Business Day

(6) The term "business day" means any day on which the Corporation is open for business for the purpose of conducting money settlement. The term "business day" shall not include the expiration date of any option contract expiring on a Saturday.

Amended April 17, 1975; December 14, 2012.

Buyer

(7) The term "buyer" used in relation to a future means, as the context requires, a person with a long position in the future or a person purchasing a future in a confirmed trade.

Adopted August 20, 2001. Amended May 16, 2002; December 14, 2012.

By-Laws

(8) The term "By-Laws" means the By-Laws of the Corporation as the same may be amended from time to time.

Amended December 14, 2012.

C.

Call

(1) The term “call” means an option that provides the holder the right, in accordance with the terms and provisions of the By-Laws and Rules, to purchase from the Corporation the number of units of the underlying interest covered by the option at the aggregate exercise price, or, in the case of a futures option, to enter into a long position in the underlying futures contract, upon the timely exercise of such option.

Amended September 24, 1997; June 25, 1998; March 20, 2009; January 14, 2010.

Canadian Clearing Member

(2) The term "Canadian Clearing Member" means a Non-U.S. Clearing Member formed and operating under the laws of Canada or a province thereof with its principal place of business in Canada.

Adopted January 28, 1994.

Canadian Hedge Clearing Member

(3) The term “Canadian Hedge Clearing Member” means a Canadian Clearing Member approved to participate in the Stock Loan/Hedge Program.

Adopted May 8, 2013.

Capped; Capped-Style

(4) The term "capped" or "capped-style," used in respect of an option contract, means that the option contract (i) is in a series which has a cap price (as defined, in the case of capped cash-settled options, in Article XVII of the By-Laws) at which all options in such series will be automatically exercised, subject to the provisions of the By-Laws and Rules, and (ii) may otherwise be exercised, subject to the provisions of the By-Laws and Rules, only on its expiration date.

Amended March 20, 2009.

Carrying Clearing Member

(5) The term “Carrying Clearing Member” means a Clearing Member that has authorized an Executing Clearing Member to direct the transfer of a confirmed trade to a designated account of such Carrying Clearing Member pursuant to a CMTA arrangement.

Adopted June 9, 2004. Amended December 14, 2012.

Cash-Settled Foreign Currency Future

(6) The term “cash-settled foreign currency future” means a future for which the underlying interest is a foreign currency and which is settled at maturity by a final variation payment and does not require delivery of the underlying currency. Cash-settled foreign currency futures are governed by the applicable provisions of Article XII of the By-Laws and Chapter XIII of the Rules.

Adopted August 1, 2003.

Cash-Settled Stock Future

(7) The term "cash-settled stock future" means a stock future that is settled at maturity by a final variation payment and does not require delivery of the underlying security.

Adopted August 20, 2001.

CCC-Eligible

(8) The term “CCC-eligible,” as used at any point in time with reference to an underlying security shall mean that securities contracts in the underlying security arising from the exercise or maturity of a cleared security are eligible as of that point in time for settlement through the Continuous Net Settlement Accounting Operation or the Balance Order Accounting Operation of the National Securities Clearing Corporation.

Adopted July 31, 2017.

Article I – Definitions

CDS

(9) The term "CDS" means the CDS Clearing and Depository Services Inc. or any successor thereto.

Adopted January 28, 1994. Amended May 1, 2007.

Certificate of Incorporation

(10) The term "Certificate of Incorporation" means the certificate of incorporation of the Corporation as the same may be amended from time to time.

Class

(11) The term "class" means, when applied to options, all option contracts of the same type and style covering the same underlying interest; provided, however, that OTC options and listed options that would otherwise constitute a single class of options shall constitute separate classes. When applied to futures, the term "class" means all futures covering the same underlying interest.

Amended August 20, 2001; May 16, 2002; December 14, 2012.

Cleared Contract

(12) The term "cleared contract" means a cleared security or a commodity future, futures options or commodity option that is cleared by the Corporation.

Adopted May 16, 2002. Amended March 20, 2009.

Cleared Security

(13) The term "cleared security" means an option contract (other than a futures option or commodity option), a security future or a BOUND.

Adopted April 11, 1989. Amended December 20, 1991; August 26, 1996; September 24, 1997; March 3, 1999; June 15, 2001; August 20, 2001; May 16, 2002; March 20, 2009.

Clearing Fund

(14) The term "Clearing Fund" means the fund established pursuant to Chapter X of the Rules.

Amended November 24, 1982; April 11, 1989; October 26, 1989; August 26, 1996; March 3, 1999; June 5, 2000; September 1, 2018.

Clearing Member

(15) The term "Clearing Member" means a person or organization that has been admitted to membership in the Corporation pursuant to the provisions of the By-Laws and Rules. References in the By-Laws or Rules to the term "Clearing Member" preceded by a capitalized reference to an underlying interest or a cleared contract, e.g., a "Stock Clearing Member," or a "Security Futures Clearing Member," shall be deemed to be to a Clearing Member approved in accordance with Article V of the By-Laws to clear transactions in options on the specified underlying interest, or in the cleared contract, as applicable, provided that the term "Stock Clearing Member" shall be deemed to include a Clearing Member approved to clear transactions in BOUNDS as well as stock options, the term "Treasury Securities Clearing Member" shall mean a Clearing Member approved to clear transactions in Treasury Securities options excluding yield-based Treasury options and the term "Index Clearing Member" shall mean a Clearing Member approved to clear transactions in cash-settled options other than OTC options. The term "OTC Index Option Clearing Member" means a person that has been approved to clear OTC index options.

Amended August 6, 1981; November 24, 1982; December 14, 1982; February 4, 1983; May 12, 1983; April 11, 1989; June 16, 1989; October 26, 1989; November 7, 1991; February 23, 1993; July 15, 1993; January 19, 1994; November 1, 1994; December 23, 1994; August 26, 1996; September 24, 1997; June 11, 1998; March 3, 1999; August 20, 2001; May 16, 2002; June 9, 2004; December 13, 2005; March 25, 2009; December 14, 2012.

Clearing Member Group

(16) The term "Clearing Member Group" means a Clearing Member and any Member Affiliates of

such Clearing Member.

Adopted September 23, 2011.

Clearing Member Organization

(17) The term "Clearing Member Organization" means a Clearing Member that is a legal entity rather than a natural person.

Amended August 20, 2001.

Closing Purchase Transaction

(18) The term "closing purchase transaction" means a confirmed trade in which the purchaser's intention is to reduce or eliminate his short position in a series of cleared security.

Amended April 11, 1989; October 26, 1989; August 26, 1996; March 3, 1999; August 20, 2001; December 14, 2012.

Closing (Sale) Transaction

(19) The term "closing sale transaction" or "closing writing transaction" means a confirmed trade in which the seller's intention is to reduce or eliminate a long position in a series of cleared security.

Amended April 11, 1989; October 26, 1989; August 26, 1996; March 3, 1999; August 20, 2001; December 14, 2012.

CMTA

(20) The term "CMTA" (Clearing Member Trade Assignment) means the process by which an Executing Clearing Member, acting on its own behalf or as the Clearing Member of an Introducing Broker, directs the transfer of a confirmed trade to a designated account of a Carrying Clearing Member for clearance and settlement.

Adopted June 9, 2004. Amended March 9, 2005; December 14, 2012.

CMTA Agreement

(21) The term "CMTA Agreement" means an agreement between a Carrying Clearing Member and an Executing Clearing Member regarding their respective responsibilities in connection with their CMTA arrangement.

Adopted June 9, 2004. Amended October 15, 2010.

CMTA Customer; CMTA Customer Identifier; Customer CMTA Indicator

(22) The term "CMTA Customer" means a customer of a Carrying Clearing Member who has been assigned a CMTA Customer Identifier by such Carrying Clearing Member to designate that confirmed trades executed and cleared on such customer's behalf are pursuant to a CMTA arrangement. The term "CMTA Customer Identifier" means a string of characters (as may be modified from time to time) assigned by a Carrying Clearing Member to identify a CMTA Customer. The term "Customer CMTA Indicator" means an indicator included with the confirmed trade information to designate that a confirmed trade was effected on behalf of a CMTA Customer.

Adopted March 9, 2005. Amended December 14, 2012.

CMTA Retransfer

(23) The term "CMTA Retransfer" means the process by which an Executing Clearing Member, upon receiving the Return of a position because of the misidentification of the Carrying Clearing Member, transfers the position to the correct Carrying Clearing Member.

Adopted June 9, 2004.

Commodity Future

(24) The term "commodity future" means a futures contract within the exclusive jurisdiction of the Commodity Futures Trading Commission that is traded on, through the facilities of, or subject to the rules of a futures market.

Adopted May 16, 2002.

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Commodity Option

(25) The term “commodity option” means an option contract within the exclusive jurisdiction of the Commodity Futures Trading Commission that gives the holder of the option the right to buy or sell a specified quantity of a commodity, or in the case where the underlying interest is an index of commodities, to buy or sell the aggregate current index value (as that term is defined in Article XVII) of the underlying index, and that is traded on, through the facilities of, or subject to the rules of a futures market.

Amended March 20, 2009.

Common Member

(26) The term "Common Member" means a Clearing Member that is concurrently a member or participant of a Cross-Guaranty Party.

Adopted March 17, 1997.

Confirmed Trade

(27) The term “confirmed trade” means a transaction for the purchase, writing, or sale of a cleared contract, or for the closing out of a long or short position in a cleared contract, that is (i) effected on or through the facilities of an Exchange and submitted to the Corporation for clearance or (ii) affirmed through the facilities of an OTC Trade Source and submitted to the Corporation for clearance.

. . . Interpretations and Policies:

.01 The term “Exchange transaction” was removed from the By-Laws and Rules and replaced with the term “confirmed trade” to reflect the expansion of the Corporation’s clearing activities into OTC options. “Confirmed trade” is a successor term to the term “Exchange transaction.” Any reference to the term “Exchange transaction” or “exchange transaction” in any agreement to which the Corporation is a party should be interpreted to refer instead to the term “confirmed trade.”

Adopted December 14, 2012.

Contract

(28) The term "contract" means a single contract in any series of cleared contracts held in a long or short position and a single commodity futures, futures option or commodity option contract cleared by a Participating CCO and held in a long or short position.

Adopted September 26, 1989. Amended August 20, 2001; May 16, 2002; March 20, 2009; December 14, 2012.

Contract Month

(29) The term "contract month" in respect of a series of futures means the month and year in which the maturity date of such series occurs.

Adopted August 20, 2001. Amended May 16, 2002; December 14, 2012.

Correspondent Bank

(30) The term "correspondent bank" means the Federal Reserve member bank which has been designated by a Clearing Member pursuant to Chapter XIII of the Rules to perform on behalf of such Clearing Member certain functions in the settlement of physically-settled Treasury futures, or pursuant to Chapter XIV of the Rules to perform on behalf of such Clearing Member certain functions in the settlement of exercises and assignments of Treasury securities options, in each case as described in the Rules.

Adopted October 14, 1982. Amended March 12, 1986; July 1, 2009; December 14, 2012.

The Corporation

(31) The term "the Corporation" means The Options Clearing Corporation.

Amended December 14, 2012.

Correspondent Clearing Corporation

(32) The term "correspondent clearing corporation" means the National Securities Clearing Corporation or any successor thereto which, by agreement with the Corporation, provides facilities for settlements in respect of exercised option contracts or BOUNDS or in respect of delivery obligations arising from physically-settled stock futures.

Amended October 4, 1976; April 11, 1989; October 26, 1989; August 26, 1996; March 3, 1999; August 20, 2001; October 19, 2001.

Country of Origin

(33) The term "country of origin" in respect of a particular foreign currency (except the euro and the ECU) means the sovereign government whose official medium of exchange is that foreign currency. In respect of the euro and the ECU, the term "country of origin" has the meaning ascribed to it in the Rules.

Adopted November 7, 1991. Amended December 10, 1998; December 14, 2012.

Cross-Guaranty Party

(34) The term "Cross-Guaranty Party" means a party to a Limited Cross-Guaranty Agreement other than the Corporation.

Adopted March 17, 1997. Amended December 14, 2012.

Currency

(35) The term "currency" means the official medium of exchange of a sovereign government, including the euro, and, until the EMU Transition Date, the ECU.

Adopted November 1, 1994. Amended December 10, 1998.

Customer

(36) The term "customer" means a "securities customer" or a "futures customer," as the context requires.

Amended August 20, 2001.

Customers' Account

(37) The term "customers' account" in respect of a Clearing Member means an account of the Clearing Member on the records of the Corporation which is confined to confirmed trades cleared and positions carried by the Clearing Member on behalf of its securities customers, other than those transactions of Market-Makers which are cleared through a Market-Maker's account. The term "customers' account" does not include a segregated futures account or customers' lien account.

Amended August 20, 2001; July 14, 2005; December 14, 2012.

Customers' Lien Account

(38) The term "customers' lien account" in respect of a Clearing Member means an account of the Clearing Member on the records of the Corporation as provided under Article VI, Section 3(i) of the By-Laws.

Adopted July 14, 2005. Amended December 14, 2012.

D.

Delayed Start Option

(1) The term "delayed start option" means an option that at the commencement of trading does not have an exercise price but instead has an exercise price setting formula pursuant to which the exercise price will be fixed on the exercise price setting date for the series of delayed start option.

Adopted November 28, 2007.

Delivering Clearing Member

(2) The term "Delivering Clearing Member," when used (i) with respect to a call option contract,

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shall mean the Assigned Clearing Member; (ii) with respect to a put option contract, shall mean the Exercising Clearing Member; (iii) with respect to a BOUND, shall mean a Clearing Member obligated to deliver the underlying securities; and (iv) with respect to a physically-settled future, shall mean a Clearing Member that has become obligated to make delivery of the interest underlying such future.

Adopted October 4, 1976. Amended April 4, 1977; April 11, 1989; October 26, 1989; August 26, 1996; March 3, 1999; August 20, 2001; March 25, 2009.

Delivery Date

(3) The term “delivery date” as used in respect of a physically-settled stock future means the date on which, subject to the specific terms of the futures contract and the By-Laws and Rules, delivery is to be made, and as used in respect of a stock option means the exercise settlement date.

Adopted August 20, 2001. Amended March 25, 2009.

Delivery Intent

(4) The term “delivery intent” as used in respect of a physically-settled commodity future means a notice submitted (or deemed to be submitted pursuant to the By-Laws or Rules or Exchange Rules) by a Clearing Member that is, or represents, the seller in respect of such physically-settled commodity future, pursuant to the Rules or the Exchange Rules, as applicable, that such Clearing Member intends to make delivery of the underlying interest.

Adopted March 25, 2009.

Delivery Month

(5) The term “delivery month” as used in respect of a physically-settled commodity future means the calendar month in which delivery is permitted (including any permitted delivery days in the following calendar month) or required to be made under the terms of the particular futures contract.

Adopted March 25, 2009. Amended July 1, 2009.

Delivery Payment Amount

(6) The term “delivery payment amount” as used in respect of a physically-settled commodity future means the amount due from the buyer and payable to the seller pursuant to the Exchange Rules in respect of the delivery covered by a delivery intent.

Adopted March 25, 2009.

Designated Clearing Organization

(7) The term "Designated Clearing Organization" means the Corporation or a Carrying CCO as designated by a Joint Clearing Member or a Pair of Affiliated Clearing Members as described in Rule 702.

Adopted September 26, 1989. Amended June 28, 1993.

Designated Officer

(8) The term “Designated Officer” shall mean the Chief Executive Officer, Chief Operating Officer and any officer of the Corporation of the rank of Senior Vice President or higher to whom the Chief Executive Officer or Chief Operating Officer has delegated authority to perform a duty or exercise a power under these By-Laws and Rules.

Adopted April 26, 2017. Amended February 15, 2019.

Dividend Equivalent

(9) The term “Dividend Equivalent” has the meaning provided in Section 871(m) of the Internal Revenue Code of 1986, as amended, and related Treasury Regulations and other official interpretations thereof.

Adopted November 30, 2016.

Domestic Clearing Member

(10) The term “Domestic Clearing Member” means any Clearing Member other than a “Non-U.S. Clearing Member” as defined in this Article I.

Adopted March 25, 2009.

E.

ECU

(1) The term "ECU" means the European Currency Unit.

Adopted December 10, 1998.

EDP Pledge System

(2) The term “EDP Pledge System” shall mean an electronic data processing system through which Clearing Members and approved custodians may pledge securities and/or cash to the Corporation in accordance with the By-Laws and Rules and that is: (i) operated by the Corporation, or (ii) operated by an approved custodian and approved by the Corporation.

Adopted January 3, 1986. Amended April 4, 2005; October 13, 2016.

Eligible Stock

(3) The term “Eligible Stock” means any security that is eligible for lending in the Stock Loan/Hedge Program and the Market Loan Program. A security shall be eligible for lending in the Stock Loan/Hedge Program and the Market Loan Program if and only if (i) the security is an equity security that the Depository has determined is eligible for deposit at the Depository, (ii) the Corporation has not determined to terminate all outstanding Stock Loans and/or Market Loans in respect of such security pursuant to the By-Laws, (iii) the security is a “covered security” within the meaning of Section 18(b)(1) of the Securities Act of 1933, (iv) in the case of securities which are neither underlying securities nor fund shares that have as their reference index an index that underlies any cleared contract, the security is trading at a market price of at least \$3 per share, as determined by the Corporation. The Corporation may waive requirement (iv) at its discretion upon a determination that other factors, including trading volume, the number of shareholders, the number of outstanding shares, and current bid/ask spreads warrant such result. However, should the market price for a security for which the Corporation has not waived requirement (iv) fall below \$3, no new Stock Loan or Market Loan transactions may be submitted for clearance, but existing positions may be maintained.

Adopted July 15, 1993. Amended June 11, 1998; December 10, 1998; May 21, 2003; May 28, 2004; January 23, 2009; November 17, 2009.

EMU Effective Date

(4) The term "EMU Effective Date" means the date on which the legacy currencies cease to be units of the euro and the euro becomes the sole medium of exchange of the participating member states.

Adopted December 10, 1998.

EMU Transition Date

(5) The term "EMU Transition Date" means January 1, 1999, or, if later, the date upon which national currencies of participating member states are first replaced by the euro and become units of the euro.

Adopted December 10, 1998.

Equity Exchange

(6) The term “Equity Exchange” means each national securities exchange that has been qualified for participation in the Corporation pursuant to the provisions of Article VIIA of the By-Laws and any national securities exchange or national securities association to which any of such exchanges transfer their Class A Common Stock and Class B Common Stock of the Corporation

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in accordance with the Stockholders Agreement referred to in Section VIIA of the By-Laws.
Adopted September 6, 2002. Amended March 6, 2015; February 13, 2019.

Euro

(7) The term "euro" means the single currency that replaces the national currencies of the participating member states from and after the EMU Transition Date.
Adopted December 10, 1998.

European; European-Style

(8) The term "European" or "European-style," used in respect of an option contract, means that the option contract may be exercised, subject to the provisions of the By-Laws and Rules, only on its expiration date.
Amended October 28, 1991; December 10, 1998.

Exchange

(9) The term "Exchange" means a Securities Exchange, a futures market, a security futures market or an international market.
Amended September 6, 2002; March 20, 2009.

Exchange Member

(10) The term "Exchange member" means a "member" or "member organization" of an Exchange, as those terms are defined in the Exchange Rules of such Exchange, excluding individuals who are classified as members solely by virtue of their being associated with a member organization of such Exchange.
Amended June 15, 2001; August 20, 2001; May 16, 2002; March 20, 2009.

Exchange Rules

(11) The term "Exchange Rules," when used in respect of any Exchange, means the constitution, certificate of incorporation, by-laws, rules and stated policies, and all written interpretations thereof, or instruments corresponding to the foregoing, as the same may be in effect from time to time, of that Exchange. The term "Exchange Rules" in respect of a confirmed trade effected on or through the facilities of an Exchange means the constitution, certificate of incorporation, by-laws, rules and stated policies, and all written interpretations thereof, or instruments corresponding to the foregoing, as the same may be in effect from time to time, of that Exchange. The term "Exchange Rules" in respect of a cleared contract means the constitution, certificate of incorporation, by-laws, rules and stated policies, and all written interpretations thereof, as the same may be in effect from time to time, of each Exchange on which such cleared contract is traded.
Amended April 11, 1989; October 26, 1989; August 26, 1996; March 3, 1999; June 15, 2001; August 20, 2001; May 16, 2002; March 20, 2009; December 14, 2012.

Executing Clearing Member

(12) The term "Executing Clearing Member" means a Clearing Member, on its own behalf or as the Clearing Member of an Introducing Broker that has been authorized by a Carrying Clearing Member to direct confirmed trades to be transferred to a designated account of the Carrying Clearing Member pursuant to such Clearing Members' CMTA arrangement.
Adopted June 9, 2004. Amended March 9, 2005; December 14, 2012.

Execution-Only Clearing Member

(13) The term "Execution-Only Clearing Member" shall mean a Clearing Member approved to act only as a Clearing Member that transfers confirmed trades or allocates positions to other Clearing Members, and not to carry positions in its accounts with the Corporation on a routine basis.
Adopted March 25, 2009. Amended December 14, 2012.

Executive Chairman

(14) The term "Executive Chairman" shall mean the individual elected by the Board of Directors

as the Executive Chairman of the Board pursuant to Article IV, Section 1 of these By-Laws.
Adopted February 15, 2019.

Exercise

(15) The term "exercise" means, with respect to an option contract, an exercise effected in accordance with Chapter VIII of the Rules.

Adopted April 11, 1989. Amended March 3, 1999; December 14, 2012.

Exercise Price

(16) The term "exercise price" in respect of an option contract means the specified price per unit at which the underlying interest may be purchased (in the case of a call) or sold (in the case of a put) upon exercise of the option contract, provided that the exercise price for certain options may be expressed as a multiple of the per-unit price.

Amended March 20, 2009; January 14, 2010; December 14, 2012.

Exercise Price Setting Date

(17) The term "exercise price setting date" means the date, specified at or before the commencement of trading of a series of delayed start options by the Exchange on which such series is trading, on which the exercise price of that series will be fixed by the Exchange using the option's exercise price setting formula.

Adopted November 28, 2007. Amended December 14, 2012.

Exercise Price Setting Formula

(18) The term "exercise price setting formula" means the formula, specified at or before the commencement of trading of a series of delayed start options by the Exchange on which such series is trading, that will be used by the Exchange to set the exercise price of that series on the exercise price setting date.

Adopted November 28, 2007. Amended December 14, 2012.

Exercising Clearing Member

(19) The term "Exercising Clearing Member" means a Clearing Member that is exercising a cleared contract. As used in respect of an option that is subject to an automatic exercise, the term refers to the Clearing Member in whose accounts an option that is so exercised is carried.

Adopted April 11, 1989. Amended October 28, 1991; January 19, 1994; May 16, 2002; December 14, 2012.

Expiration Date

(20) Unless separately defined elsewhere in these By-Laws with regard to a particular option contract, the term "expiration date" as used in respect of an option contract, other than a flexibly structured option, futures option, commodity option, a short term option, a quarterly option, a monthly option, a weekly option, or a BOUND, means: (i) in the case of such an option expiring prior to February 1, 2015, the Saturday immediately following the third Friday of the expiration month of such option contract; and (ii) in the case of such an option expiring on or after February 1, 2015, the third Friday of the expiration month of such option contract, or if such Friday is a day on which the Exchange on which such option is listed is not open for business, the preceding day on which such Exchange is open for business; unless, in either case, expiration is accelerated pursuant to Rule 807. Notwithstanding the foregoing, in the case of certain options expiring on or after February 1, 2015 that the Corporation has designated as grandfathered, the term "expiration date" shall mean the Saturday immediately following the third Friday of the expiration month.

Amended April 18, 1975; August 1, 1977; August 26, 1996; September 3, 1996; June 25, 1998; July 12, 2005; June 23, 2006; November 9, 2010; June 17, 2013.

Expiration Exercise Report

(21) The term "Expiration Exercise Report" shall mean information made available online by the Corporation to a Clearing Member with respect to an expiration date identifying, by account, each

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expiring option contract in each of the Clearing Member's accounts with the Corporation. Such term shall also include updated versions of any such information made available to a Clearing Member prior to such time with respect to the expiration date as the Corporation shall from time to time specify.

Adopted October 18, 1995. Amended March 20, 2009; December 14, 2012; June 17, 2013.

Expiration Month

(22) The term "expiration month" in respect of an option contract or a BOUND means the month and year in which such option contract expires.

Amended October 18, 1995; August 26, 1996; December 14, 2012.

Expiration Time

(23) Except as otherwise specified in the By-Laws and Rules for particular classes of options, the term "expiration time" in respect of an option contract, means 10:59 P.M. Central Time (11:59 P.M. Eastern Time).

Adopted November 2, 1995. Amended January 14, 1997; June 6, 2007.

F.

FATCA

(1) The term "FATCA" means (i) the provisions of Sections 1471 through 1474 of the Internal Revenue Code of 1986, as amended, which were enacted as part of The Foreign Account Tax Compliance Act (or any amendment thereto or successor sections thereof), and related Treasury Regulations and other official interpretations thereof, as in effect from time to time, and (ii) the provisions of any intergovernmental agreement to implement The Foreign Account Tax Compliance Act as in effect from time to time between the United States and the jurisdiction of the FFI Clearing Member's residency.

Adopted November 30, 2016.

FATCA Compliant

(2) The term "FATCA Compliant" or "FATCA Compliance" means, with respect to an FFI Clearing Member, that such FFI Clearing Member has qualified under such procedures promulgated by the Internal Revenue Service as are in effect from time to time to establish an exemption from withholding under FATCA such that the Corporation will not be required to withhold any amount with respect to any payment or deemed payment to such FFI Clearing Member under FATCA.

Adopted November 30, 2016.

FFI Clearing Member

(3) The term "FFI Clearing Member" means any Clearing Member that is treated as a non-U.S. entity for U.S. federal income tax purposes.

Adopted November 30, 2016.

Final Settlement Price

(4) The term "final settlement price" in respect of a series of futures means the marking price, rate, level, value, or measure of the underlying interest or a contract of such series on the maturity date of such series, as determined in accordance with the By-Laws and Rules, that is used to calculate (a) the final variation payment in respect of cash-settled futures or (b) the purchase price of the underlying interest in respect of physically settled futures, in the manner set forth in the By-Laws and Rules.

Adopted August 20, 2001. Amended May 16, 2002; January 24, 2008.

Final Variation Payment

(5) The term "final variation payment" means the final "mark-to-market" or "variation margin" payment a Clearing Member is obligated to pay to, or entitled to collect from, the Corporation at

maturity of a series of futures as determined in accordance with the By-Laws and Rules.

Adopted August 20, 2001. Amended May 16, 2002.

Firm Account

(6) The term “firm account” in respect of a Clearing Member means an account established by the Clearing Member which is confined to confirmed trades cleared and positions carried on behalf of non-customers of the Clearing Member. The term “firm lien account” means a firm account as to which the Corporation shall have a lien on all long positions in the account pursuant to Sections 3(a), (b)(iv), (c)(v), and (k) of Article VI of the By-Laws, and the term “firm non-lien account” means a firm account as to which the Corporation shall have a lien only on unsegregated long positions therein.

Amended April 11, 1989; March 9, 2004; December 14, 2012.

Flexibly Structured Future

(7) The term “flexibly structured future” means a future having a maturity date and (in the case of an index future) and an index value determinant and an index multiplier that are selected by the buyer and seller of such future within a permissible range of values or alternatives for such terms that is set by the Exchange and that do not correspond to the terms of any regularly listed series of futures; provided that the maturity date is not a date specified by the Corporation as ineligible to be a maturity date.

Adopted August 20, 2001. Amended May 16, 2002; March 20, 2009; June 17, 2013.

Flexibly Structured Option

(8) The term “flexibly structured option” means an option having variable terms that are negotiated between the parties to a confirmed trade pursuant to Exchange Rules and that do not correspond to the variable terms of any series of non-flexibly structured options previously opened for trading on the Exchange. Once a series of non-flexibly structured options is opened for trading on an Exchange, any existing flexibly structured option contracts that have identical variable terms shall be fully fungible with options in such series, and shall cease to be flexibly structured options.

Adopted September 3, 1996. Amended March 31, 2009; April 1, 2009; June 17, 2013; September 1, 2018.

Foreign Currency

(9) The term “foreign currency” means the official medium of exchange of a sovereign government other than the United States Government, including the euro and, until the EMU Transition Date, the ECU.

Adopted November 7, 1991. Amended December 10, 1998.

Fund Option

(10) The term “fund option” means a put or a call, as defined in this Article I, as to which the underlying security is fund shares.

Adopted November 26, 2002.

Fund Share

(11) The term “fund share” means a publicly traded security (as defined in Section 3(a)(10) of the Securities Exchange Act of 1934, as amended) that represents an interest in a trust, investment company, commodity pool, or similar entity holding and/or trading in one or more investments.

Adopted November 26, 2002. Amended January 23, 2007; October 22, 2007.

. . . Interpretations and Policies:

For the elimination of doubt, OCC will treat as within this definition of “fund share,” and will clear and treat as options on securities, any option on SPDR Gold Shares, iShares® COMEX Gold Shares, iShares® Silver Shares, ETFS Physical Swiss Gold Shares or ETFS Physical Silver

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Shares. Similarly, OCC will clear and treat as security futures any futures contracts on SPDR Gold Shares, iShares® COMEX Gold Shares, iShares® Silver Shares, ETFs Physical Swiss Gold Shares or ETFs Physical Silver Shares.

Adopted May 30, 2008. Amended December 4, 2008; February 25, 2010.

Future

(12) The term “future” means a security future or a commodity future. The term “non-equity future” means a future other than a stock future. For purposes of Chapter VI of the Rules, the term “non-equity future” shall also include such classes of futures on underlying fund shares as the Corporation may from time to time designate as non-equity futures for such purposes.

Adopted May 16, 2002. Amended November 26, 2002.

Futures Customer

(13) The term “futures customer” means a person whose positions are carried by a futures commission merchant (whether or not such futures commission merchant is registered as a broker or dealer under Section 15(a) or (g) of the Securities Exchange Act of 1934) in a futures account required to be segregated under Section 4d of the Commodity Exchange Act and the regulations of the Commodity Futures Trading Commission thereunder.

Adopted August 20, 2001.

Futures Market

(14) The term “futures market” means an entity designated under the Commodity Exchange Act and the rules of the Commodity Futures Trading Commission as a contract market that has satisfied all legal and regulatory requirements necessary to serve as a market for commodity futures, futures options or commodity options and acts as such a market.

Adopted May 16, 2002. Amended March 20, 2009.

Futures-Only Affiliated Clearing Member

(15) The term “Futures-Only Affiliated Clearing Member” means a Clearing Member admitted to membership solely for the purpose of clearing transactions in security futures, commodity futures, and/or futures options that is a member affiliate of an earlier admitted Clearing Member.

Adopted April 18, 2013.

Futures Professional

(16) The term “futures professional” means a member of a futures market or security futures market that acts as a floor trader or in the capacity of a market-maker, specialist, or similar liquidity provider under the rules of the futures market or security futures market on which such futures professional’s trading activity is conducted.

Adopted March 9, 2004.

G.

General Lien

(1) The term “general lien” means a security interest of the Corporation in all or specified assets in a Clearing Member account as security for all of the Clearing Member’s obligations to the Corporation regardless of the source or nature of such obligations.

Adopted September 1, 2006.

General Lien Account

(2) The term “general lien account” means any account of a Clearing Member with the Corporation over which the Corporation has a general lien over all assets in the account. General lien accounts include, but are not limited to, a firm lien account, a proprietary Market-Maker’s account, proprietary combined Market-Makers’ account or proprietary futures professional account.

Adopted September 1, 2006.

Given-Up Clearing Member

(3) The term "Given-Up Clearing Member" means a Clearing Member that has authorized a Giving-Up Clearing Member to allocate positions to its account in accordance with Rule 408.
Adopted December 13, 2005. Amended March 20, 2009; May 24, 2018.

Giving-Up Clearing Member

(4) The term "Giving-Up Clearing Member" means a Clearing Member that has been authorized by a Given-Up Clearing Member to allocate positions to the latter's account in accordance with Rule 408.
Adopted December 13, 2005. Amended March 20, 2009; May 24, 2018.

Government Securities

(5) The term "Government securities" means securities issued or guaranteed by the United States or Canadian Government, or by any other foreign government acceptable to the Corporation, except Separate Trading of Registered Interest and Principal Securities issued on Treasury Inflation Protected Securities (commonly called TIP-STRIPS). The term "short-term Government securities" means Government securities maturing within one year. The term "long-term Government securities" means all other Government securities.
Amended August 2, 1976; August 31, 1978; April 22, 1988; November 7, 1991; October 28, 1996; July 29, 2010.

GSE Debt Securities

(6) The term "GSE debt securities" means such debt securities issued by Congressionally chartered corporations as the Risk Committee may from time to time approve for deposit as margin.
Adopted April 12, 2002. Amended July 19, 2006; March 6, 2014.

H.

Hedge Clearing Member

(1) The term "Hedge Clearing Member" means a Clearing Member approved to participate in the Stock Loan/Hedge Program.
Adopted June 11, 1998.

Hedge Loan

(2) The term "Hedge Loan" means a matched pair of securities contracts for the loan of Eligible Stock made through the Stock Loan/Hedge Program, with one such securities contract being between the Lending Clearing Member and the Corporation as the borrower and the second such securities contract being between the Corporation as the lender and the Borrowing Clearing Member.
Adopted January 23, 2009.

Holder

(3) The term "holder" in respect of an option contract or a BOUND means the person owning the beneficial interest in such option contract or BOUND.
Amended August 26, 1996.

I.

Index Future

(1) The term "index future" means a future on an index of securities or commodities.
Adopted August 20, 2001. Amended October 26, 2005.

Index-Linked Security

(2) The term "index-linked security" means a debt security listed on a national securities exchange, the payment upon maturity of which is based in whole or in part upon the performance

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of an index or indexes of equity securities or futures contracts, one or more physical commodities, currencies or debt securities, or a combination of any of the foregoing.

Adopted October 23, 2009.

Index Multiplier

(3) The term “index multiplier” (i) as used in reference to an index option contract other than an OTC index option contract, means the dollar amount (as specified by the Exchange on which such contract is traded) by which the current index value is to be multiplied to obtain the aggregate current index value, (ii) as used in reference to an OTC index option contract, means the dollar amount (as agreed upon by the parties to such transaction) by which the current index value is to be multiplied to obtain the aggregate current index value, and (iii) as used in reference to index futures of any series, means the dollar amount (as specified by the Exchange on which such series is traded) by which the final settlement price in respect of such futures is to be multiplied to obtain the final variation payment. Such term replaces the term “unit of trading,” used in reference to other kinds of options.

Adopted August 20, 2001. Amended May 16, 2002; March 20, 2009; December 14, 2012.

Index Value Determinant

(4) The term “index value determinant,” used in respect of settlement of flexibly structured index option contracts and futures and OTC options, means the method for determining the current index value on the expiration date or maturity date as that method is reported to the Corporation by the applicable Exchange or OTC Trade Source.

Adopted August 20, 2001. Amended May 16, 2002; March 20, 2009; December 14, 2012.

Interest Rate Future

(5) The term "interest rate future" means a commodity future for which the underlying interest is a specified interest rate expressed either as an annualized percentage or as 100 minus the annualized percentage (100 minus the interest rate).

Adopted October 3, 2006.

Interim Settlement Price

(6) The term “interim settlement price” in respect of a series of futures means the marking price of the futures of such series that is used to calculate variation payments in respect of such futures (including intra-day variation payments, if applicable) in the manner set forth in the Exchange Rules of the Exchange(s) on which such series is traded.

Adopted January 24, 2008. Amended March 20, 2009.

International Market

(7) The term "international market" means any exchange or other person which is not within or subject to the jurisdiction of the United States and which provides facilities for bringing together purchasers and sellers of instruments that would be deemed under the Securities Exchange Act of 1934, as amended, to be securities if transactions in such instruments were effected on a national securities exchange.

International Market Agreement

(8) The term "international market agreement" means an agreement, as the same may be in effect from time to time, between the Corporation and an international market pursuant to which the Corporation (i) acts as a clearing agent in respect of specified transactions effected on the international market and (ii) may issue option contracts. One or more Securities Exchanges may, but need not be, parties to an international market agreement.

Amended March 20, 2009.

Internal Non-Proprietary Cross-Margining Account

(9) The term “internal non-proprietary cross-margining account” means an account with the Corporation carried by a Clearing Member or Pair of Affiliated Clearing Members in which

positions of non-proprietary Market Professionals in cleared contracts that are eligible for cross-margining treatment in accordance with Article VI, Section 25 of the By-Laws are maintained.
Adopted October 8, 2004. Amended June 21, 2011.

International Option

(10) The term “international option” means an option contract issued by the Corporation as the result of an international transaction pursuant to an international market agreement. In addition, the Corporation may designate other options belonging to the same class as such options as international options, and may designate confirmed trades in such options as international transactions, for the purposes of some or all of the provisions of the By-Laws and Rules applicable to international options and international transactions, respectively.

Amended December 14, 2012.

International Transaction

(11) The term “international transaction” means a confirmed trade effected under the provisions of an international market agreement and shall include such other confirmed trades as the Corporation may designate as international transactions in accordance with the definition of “international option.”

Amended March 20, 2009; December 14, 2012.

Introducing Broker; IB Identifier

(12) The term “Introducing Broker” means a broker-dealer or futures commission merchant that takes an order for a transaction in a cleared contract from a CMTA Customer, executes or arranges for another broker-dealer or futures commission merchant to execute such transaction and, in the case of an Introducing Broker that is not a Clearing Member, arranges for its Clearing Member or the executing broker-dealer’s or futures commission merchant’s Clearing Member to direct the resulting confirmed trade to be transferred to a designated account of a Carrying Clearing Member. The term “IB Identifier” means a string of characters (as may be modified from time to time) assigned by the Executing Clearing Member to (i) itself or (ii) an Introducing Broker that is not a Clearing Member to identify an Introducing Broker that has executed or arranged for the execution of any transaction in a cleared contract on behalf of a CMTA Customer.

Adopted March 9, 2005. Amended December 14, 2012.

J.

JBO Participant

(1) The term “JBO Participant” means a broker-dealer registered with the Securities and Exchange Commission that: (i) maintains a joint back office arrangement with a Clearing Member pursuant to the requirements of Regulation T promulgated by the Board of Governors of the Federal Reserve System; (ii) meets the requirements applicable to JBO Participants as specified in Exchange Rules; and (iii) consents to having his confirmed trades cleared and positions carried in a JBO Participants’ account. A JBO Participant shall be considered a “Market-Maker” for purposes of these By-Laws and Rules, except for purposes of Chapter IV of the Rules, or where the context otherwise requires.

Adopted May 26, 1999. Amended October 16, 2002; December 14, 2012.

JBO Participants’ Account

(2) The terms “JBO Participants’ account” in respect of a Clearing Member means an account established by the Clearing Member which is confined to confirmed trades cleared and positions carried by the Clearing Member on behalf of JBO Participants.

Adopted May 26, 1999. Amended September 22, 2003; December 14, 2012.

Joint Clearing Member; Pair of Affiliated Clearing Members; OCC Clearing Member; CCO Clearing Member

(3) The term “Joint Clearing Member,” in respect of a cross-margining program with one or more

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Participating CCOs, means a Clearing Member that is also a clearing member of each Carrying CCO. The term "Pair of Affiliated Clearing Members," (a) in respect of a cross-margining program with one or more Participating CCOs, means two clearing members that are Affiliates of one another, one of which is an OCC Clearing Member and one or the other of which is a clearing member of each Carrying CCO; and (b) in respect of an internal cross-margining program, means two Clearing Members that are Member Affiliates of one another. The term "OCC Clearing Member," in respect of a cross-margining program with one or more Participating CCOs, means a Clearing Member of the Corporation. The term "CCO Clearing Member," in respect of a cross-margining program with one or more Participating CCOs, means a clearing member of a particular Carrying CCO.

Amended September 26, 1989; June 28, 1993; December 15, 1993; May 7, 2004; June 21, 2011.

K.

Reserved.

L.

Legacy Currency

(1) The term "legacy currency" means a national currency of a participating member state that has been replaced by the euro as the official currency of such participating member state.

Adopted December 10, 1998.

Lending Clearing Member

(2) The term "Lending Clearing Member" means any Hedge Clearing Member or Market Loan Clearing Member that lends Eligible Stock in a Stock Loan.

Adopted June 11, 1998. Amended January 23, 2009.

Lien

(3) The term "lien" shall mean a "security interest" as defined in applicable provisions of the Uniform Commercial Code as in effect in the relevant jurisdiction and, where used in respect of the Corporation's security interest in cleared contracts carried in the accounts of Clearing Members, shall include an "issuer's lien" within the meaning of the 1977 amendments to the Uniform Commercial Code.

Adopted July 2, 1996. Amended May 16, 2002.

Limited Cross-Guaranty Agreement

(4) The term "Limited Cross-Guaranty Agreement" means an agreement, between the Corporation and one or more other clearing corporations (as defined in Section 3(a) of the Securities Exchange Act of 1934, as amended) and/or one or more clearing organizations (as defined in Regulation §1.3(d) under the Commodity Exchange Act, as amended), relating to the cross-guaranty by the Corporation and the other party or parties of certain obligations of a suspended Common Member to the parties to the agreement.

Adopted March 17, 1997.

Loan Market

(5) The term "Loan Market" means an electronic platform included in the Corporation's Market Loan Program that supports securities lending and borrowing transactions by matching lenders and borrowers based on loan terms that each party is willing to accept.

Adopted January 23, 2009.

Long Position

(6) The term "long position" in respect of a cleared contract other than a future means a person's interest as the holder (or as an agent for the holder) of one or more contracts in a series of such cleared contracts. In respect of a future, the term "long position" means a person's position as the

buyer of the underlying interest of one or more contracts in a series of futures.
Adopted March 3, 1999. Amended August 26, 1996; August 20, 2001; May 16, 2002.

M.

Market-Maker

(1) The term “Market-Maker” means any member of a national securities exchange or association who is not required to be treated as a “customer” under Rule 15c3-3 of the Securities Exchange Act of 1934 and who is acting in a capacity commonly known as a market-maker, specialist, stock specialist (including specialist units), Registered Trader, floor trader, or any other member of such market deemed to be acting in a similar capacity under applicable rules of the market on which such member’s trading activity is conducted. In respect of an international market, “Market-Maker” shall mean such classes of persons as may be deemed to be Market-Makers or specialists pursuant to an international market agreement.

Amended April 18, 1975; August 20, 2001; October 16, 2002.

Market-Maker Account

(2) The term “Market-Maker account” or “Market-Maker’s account” in respect of a Clearing Member means an account established by the Clearing Member which is confined to confirmed trades cleared and positions carried by the Clearing Member in an account that is not required to be segregated under Section 4d of the Commodity Exchange Act on behalf of a Market-Maker; and, unless the context otherwise requires, such term includes (i) a combined Market-Makers’ account, and (ii) a JBO Participants’ account.

Amended April 18, 1975; August 20, 2001; September 22, 2003; December 14, 2012.

Market Loan

(3) The term “Market Loan” means a loan of Eligible Stock that was effected through a Loan Market and accepted by the Corporation in accordance with the By-Laws and Rules.

Adopted January 23, 2009.

Market Loan Clearing Member

(4) The term “Market Loan Clearing Member” means a Stock Clearing Member approved to participate in the Market Loan Program.

Adopted January 23, 2009.

Market Loan Program

(5) The term “Market Loan Program” means the Corporation’s program for processing and maintaining stock loan positions originated through a Loan Market and effecting required payments in respect of such positions, all as further described in the By-Laws and Rules.

Adopted January 23, 2009.

Margin Assets

(6) The term “margin assets” means assets that are held by the Corporation as collateral, but shall not include Clearing Fund deposits, positions in cleared contracts, deposits in lieu of margin or stock loan or borrow positions notwithstanding the Corporation’s security interest therein and/or lien thereon. The term “margin” as it appears in the By-Laws and the Rules shall be interpreted as referring to the margin requirement or margin assets as the context requires.

Adopted February 15, 2006.

Margin Requirement

(7) The term “margin requirement” means the amount, if any by which the minimum expected liquidating value of the positions in cleared contracts and stock loan and borrow positions in an account is less than zero or any greater amount specified by the Corporation as the “margin requirement” in respect of an account pursuant to Rule 601.

Adopted February 15, 2006.

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Matched-Book Borrowing Clearing Member

(8) The term “Matched-Book Borrowing Clearing Member” shall mean, with respect to any Matched-Book Positions, the Hedge Clearing Member that borrows Eligible Stock from a Hedge Clearing Member maintaining Matched-Book Positions in that Eligible Stock.

Adopted March 15, 2016.

Matched-Book Lending Clearing Member

(9) The term “Matched-Book Lending Clearing Member” shall mean, with respect to any Matched-Book Positions, the Hedge Clearing Member that lends Eligible Stock to a Hedge Clearing Member maintaining Matched-Book Positions in that Eligible Stock.

Adopted March 15, 2016.

Matched-Book Positions

(10) The term “Matched-Book Positions” shall mean Hedge Loan positions in which a single Hedge Clearing Member borrows Eligible Stock from a Matched-Book Lending Clearing Member and lends an equal or lesser amount of the same Eligible Stock to a Matched-Book Borrowing Clearing Member.

Adopted March 15, 2016.

Market Professional

(11) The term "Market Professional" means (i) any Market-Maker as defined in the Rules and (ii) any member of, or firm owning a membership in, a commodity exchange for which the Corporation or a Participating CCO is the clearing organization, to the extent he is trading for his own account and not for the account of others.

Adopted November 26, 1991. Amended December 5, 1991; August 20, 2001; May 7, 2004; October 8, 2004.

Marking Price

(12) The term “marking price,” as used on any business day in respect of a cleared contract, stock loan or borrow position, underlying interest, or other asset or liability in a Clearing Member account means the most recent market value reasonably ascertainable (or the most recent reasonably ascertainable contract price, in the case of a future), as determined by the Corporation in its discretion, subject to such additional provisions of the By-Laws and Rules as may be applicable to the determination of marking prices for particular cleared contracts, stock loan or borrow positions, underlying interests or other assets or liabilities. The Corporation may, in certain circumstances, use different marking prices for the same asset or liability depending upon the purpose for which the marking price is used.

Adopted February 15, 2006.

Maturity Date

(13) The term “maturity date” means (i) in respect of a series of futures other than flexibly structured security futures, the date designated by the Exchange(s) on which such series is traded as the date on or as of which the final settlement price for such series is determined, and (ii) in respect of a flexibly structured future, the date agreed upon by the Purchasing Clearing Member and Selling Clearing Member in a confirmed trade as the date on or as of which the final settlement price for such future is determined, as such date is reported to the Corporation by the Exchange.

Adopted August 20, 2001. Amended May 16, 2002; January 24, 2008; March 20, 2009; July 19, 2011; December 14, 2012.

Member Affiliate

(14) The term "Member Affiliate" means an affiliated entity of a Clearing Member that controls, is controlled by, or under common control with, the Clearing Member.

Adopted December 4, 2000.

Monthly Option

(15) The term “monthly option” means an option of a series of stock options or index options that expires on the last trading day of a calendar month. The term “monthly index option” means a monthly option on an index.

Adopted November 9, 2010.

Multiplier

(16) The term “multiplier” as used in reference to a cash-settled option contract, cash-settled future or other cash-settled cleared contract for which there is no unit of trading means the amount by which a premium price, exercise price, underlying interest value, contract price, settlement price, final settlement price or other value is to be multiplied, as provided in the By-Laws and Rules relating to particular cleared contracts, for the purpose of determining an extended value such as in determining an aggregate exercise price, aggregate underlying interest value, premium payment, variation payment or final variation payment.

Adopted May 10, 2004. Amended October 3, 2006; March 20, 2009; March 25, 2009.

N.

Non-Customer

(1) The term “non-customer” in respect of any person carrying an account with a broker or dealer (other than an account that is required to be segregated under Section 4d of the Commodity Exchange Act) means a person that is not a customer of such broker or dealer as defined in Rules 8c-1 and 15c2-1 under the Securities Exchange Act of 1934. In addition, the term “non-customer” shall include a Member Affiliate that (a) has consented to having its securities account at a Clearing Member treated as a non-customer account; (b) has executed a non-conforming subordination agreement which has been filed with the Clearing Member’s designated examining authority (in a form approved by such designated examining authority), pursuant to which the Member Affiliate (i) has agreed to subordinate its claims against the Clearing Member in respect of such account to the claims of “customers” as defined in Rule 15c3-3 of the Securities Exchange Act of 1934; (ii) provides written acknowledgment that its securities account is not covered by the Securities Investor Protection Act of 1970 and that any credit balances in the account are not subject to foreign investor protection (including appropriate disclosure of these two points if the Member Affiliate’s assets are not proprietary); (iii) contains a written representation that the subordinated assets (funds and securities) are not those of U.S. customers; and (c) has attached to such non-conforming subordination agreement an opinion of counsel to the effect that the Member Affiliate is legally authorized to subordinate its claims against such Clearing Member to the claims of other Rule 15c3-3 customers; provided, however, that the requirements set forth in clauses (a), (b) and (c) shall not apply to a Member Affiliate that is registered as a broker-dealer under the Securities Exchange Act of 1934.

Amended December 4, 2000; August 20, 2001; March 14, 2006.

Non-Equity Exchange

(2) The term “Non-Equity Exchange” means each national securities exchange or national securities association that has qualified for participation in the Corporation pursuant to the provisions of Article VIIB of the By-Laws and any national securities exchange or national securities association to which any such exchange transfers its Promissory Note in accordance with the Noteholders Agreement referred to in Section VIIB of the By-Laws.

Adopted September 6, 2002.

Non-Proprietary Market Professional

(3) The term “non-proprietary Market Professional” means a Market Professional other than a proprietary Market Professional.

Adopted October 8, 2004.

Non-U.S. Regulatory Agency

(4) The term "Non-U.S. Regulatory Agency" shall mean that government agency or self-regulatory authority primarily responsible for regulating the activities of a Non-U.S. Clearing Member. With respect to a Canadian Clearing Member such term shall mean the Investment Industry Regulatory Organization of Canada.

Amended August 9, 1986; October 26, 2012.

Non-U.S. Securities Firm

(5) The term "Non-U.S. Securities Firm" shall mean a securities firm: (1) formed and operating under the laws of a country other than the United States; (2) with its principal place of business in that country; and (3) that is subject to the regulatory authority of that country's government or an agency or instrumentality thereof, or subject to the regulatory authority of an independent organization or exchange in that country. The term "Non-U.S. Securities Firm" shall not include any broker-dealer registered, or required to be registered, with the Securities and Exchange Commission pursuant to Section 15 of the Securities Exchange Act of 1934, as amended or any futures commission merchant registered, or required to be registered, as such pursuant to Section 4d of the Commodity Exchange Act, as amended. The term "Non-U.S. Clearing Member" shall mean a Non-U.S. Securities Firm that has been admitted to membership in the Corporation pursuant to the provisions of the By-Laws and Rules. The term "exempt Non-U.S. Clearing Member" shall mean a Non-U.S. Clearing Member that has made an election pursuant to Rule 310.

Amended August 9, 1986; January 28, 1994; October 7, 2002.

O.

OCC Proprietary X-M Account; OCC Non-Proprietary X-M Account; CCO Proprietary X-M Account; CCO Non-Proprietary X-M Account; Set of X-M Accounts

(1) The term "OCC cross-margin account" or "OCC X-M account" means an account carried by a Joint Clearing Member or the OCC Clearing Member of a Pair of Affiliated Clearing Members at the Corporation in which options positions subject to cross-margining treatment are maintained. The term "CCO cross-margin account" or "CCO X-M account" means an account carried by a Joint Clearing Member or the CCO Clearing Member of a Pair of Affiliated Clearing Members at a Carrying CCO in which futures options, commodity options and futures contracts subject to such cross-margining treatment are maintained. A "proprietary X-M account" means an X-M account that is confined to the confirmed trades and positions of non-customers of the carrying Clearing Member and other proprietary Market Professionals. A "non-proprietary X-M account" means an X-M account that is confined to the confirmed trades and positions of Market Professionals that are neither non-customers of the carrying Clearing Member nor other proprietary Market Professionals. The term "set of X-M accounts," which may consist of two X-M accounts ("paired accounts") or three or more X-M accounts, means the OCC X-M account (proprietary or non-proprietary) and each corresponding CCO X-M account of a Joint Clearing Member or a Pair of Affiliated Clearing Members carried at the Carrying CCO(s).

Adopted September 26, 1989. Amended November 26, 1991; June 28, 1993; December 15, 1993; March 20, 2009; December 14, 2012.

Opening Purchase Transaction

(2) The term "opening purchase transaction" means a confirmed trade in which the purchaser's intention is to create or increase a long position in a series of cleared contracts.

Amended April 11, 1989; October 26, 1989; March 3, 1999; August 20, 2001; March 20, 2009; December 14, 2012.

Opening Sale (Writing) Transaction

(3) The term "opening sale transaction" or "opening writing transaction" means a confirmed trade in which the seller's intention is to create or increase a short position in a series of cleared contracts.

Amended April 11, 1989; October 26, 1989; August 26, 1996; March 3, 1999; August 20, 2001; March 20, 2009; December 14, 2012.

Option Contract

(4) The term “option contract” or “option” means a put option, a call option, a binary option, a range option or a packaged spread option (as defined in Article XXVI of the By-Laws) issued by the Corporation pursuant to the By-Laws and Rules. The term “stock option contract” means a put or a call, as defined in this Article I for which the underlying security is an equity security, including fund shares, or an index-linked security. The term “Treasury securities option contract” means a put or a call, as defined in Article XIII of the By-Laws. The term “yield-based Treasury option contract” means a put or a call, as defined in Article XVI of the By-Laws. The term “debt securities option contract” means a Treasury securities option contract. The term “foreign currency option contract” means a put or a call, as defined in Article XV of the By-Laws. The term “cash-settled foreign currency option contract” means a put or a call, as defined in Article XXII of the By-Laws. The term “index option contract” means any option contract the underlying interest of which is a securities index or commodities index. The term “cash-settled option contract” means any option contract that is settled upon exercise by payment of cash rather than delivery of, and payment for, the underlying interest. The term “non-equity securities option contract” means a debt securities option contract (other than an option on an index-linked security), a foreign currency option contract, a cash-settled option contract, or a futures option. The term “futures option” means any option to buy or sell any commodity futures contract traded on, through the facilities of, or subject to the rules of a futures market.

Amended August 6, 1981; November 24, 1982; December 14, 1982; February 4, 1983; April 11, 1989; June 16, 1989; November 7, 1991; January 19, 1994; September 24, 1997; March 3, 1999; June 25, 1999; May 16, 2002; November 26, 2002; June 6, 2007; August 20, 2007; November 30, 2007; June 23, 2008; March 20, 2009; October 23, 2009; December 14, 2012; May 24, 2018.

Origination Date

(5) The term “origination date” means the date when the bilateral option was entered into by the parties to such bilateral option, as communicated to the Corporation by the OTC Trade Source.
Adopted December 14, 2012.

OTC Index Option

(6) The term “OTC index option” means an “OTC option,” as defined in this Article I, that is an index option.
Adopted December 14, 2012.

OTC Option

(7) The term “OTC option” means an “option contract,” as defined in this Article I, with variable terms that are negotiated bilaterally between the parties to such transaction (subject to any specific requirements applicable to such products as set forth in the By-Laws and Rules), and that is affirmed through the facilities of an OTC Trade Source and submitted to the Corporation for clearing as a confirmed trade.
Adopted December 14, 2012.

OTC Trade Source

(8) The term “OTC Trade Source” means any electronic messaging system approved by the Corporation through which transactions in OTC options may be affirmed by the parties to such transactions and submitted to the Corporation for clearance.
Adopted December 14, 2012.

OTC Trade Source Rules

(9) The term “OTC Trade Source Rule,” when used in respect of any OTC Trade Source, means the rules, agreements, policies and procedures of the OTC Trade Source applicable to users or

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participants of the OTC Trade Source.
Adopted December 14, 2012.

P.

Participating CCO; Carrying CCO

(1) The term "Participating CCO" means a clearing organization (as defined in Regulation §1.3(d) under the Commodity Exchange Act, as amended) that has established a cross-margining program with the Corporation. The term "Carrying CCO," as used in respect of a particular set of X-M Accounts, means a Participating CCO that carries one of such set of X-M Accounts.
Adopted September 26, 1989. Amended June 28, 1993; December 15, 1993.

Participating CCO Agreement

(2) The term "Participating CCO Agreement" means an agreement between or among the Corporation and one or more Participating CCOs as further described in Section 24 of Article VI of the By-Laws.
Adopted September 26, 1989. Amended June 28, 1993; December 15, 1993.

Participating Member State

(3) The term "participating member state" means a member state of the European Union that participates in European Economic and Monetary Union.
Adopted December 10, 1998.

Physically-Settled Commodity Future

(4) The term "physically-settled commodity future" means a commodity future that is settled through physical delivery of the underlying interest.
Adopted March 25, 2009.

Physically-Settled Metals Future

(5) The term "physically-settled metals future" means a physically-settled commodity future for which the underlying interest is a metal.
Adopted March 25, 2009.

Physically-Settled Stock Future

(6) The term "physically-settled stock future" means a stock future that requires the seller to deliver, and the buyer to pay for, the underlying security on the delivery date.
Adopted August 20, 2001.

Physically-Settled Treasury Future

(7) The term "physically-settled Treasury future" means a physically-settled commodity future for which the underlying interest is either a specific Treasury security or any Treasury security constituting a deliverable grade Treasury security.
Adopted July 1, 2009.

Pledge

(8) The term "pledge," when used as a noun, shall mean a "security interest" within the meaning of the Uniform Commercial Code as in effect in the relevant jurisdiction and, when used as a verb, shall mean the creation of such a security interest.
Adopted July 2, 1996.

Premium

(9) The term "premium" in respect of any confirmed trade in option contracts means the aggregate price of such option contracts agreed upon between the purchaser and seller in such transaction. In the case of a transaction in stock options, the premium is equal to the agreed upon premium per unit multiplied by the unit of trading for the series of options multiplied by the number

of contracts subject to the confirmed trade. As used in respect of any confirmed trade in BOUNDS, the word “premium” means the trade price.

Amended April 11, 1989; August 26, 1996; March 3, 1999; December 14, 2012.

Price Differential Spread

(10) The term “Price Differential Spread” has the meaning given to it in Rule 1301A(a).

Adopted June 24, 2011.

Primary Market

(11) The term “primary market” in respect of an underlying security means the principal market in which the underlying security is traded.

Proprietary Futures Professional Account

(12) The term “proprietary futures professional account” in respect of a Clearing Member means an account of the Clearing Member on the records of the Corporation which is confined to confirmed trades cleared and positions carried by the Clearing Member on behalf of futures professionals who are not futures customers.

Adopted March 9, 2004. Amended December 14, 2012.

Proprietary Market-Maker; Proprietary Market-Maker Account

(13) The term “proprietary Market-Maker” in respect of a Clearing Member carrying an account that is not required to be segregated under Section 4d of the Commodity Exchange Act means a Market-Maker that is (A) a non-customer of such Clearing Member or (B) a Related Person of such Clearing Member that (i) is not a customer of such Clearing Member for purposes of Rule 15c3-3 of the Securities and Exchange Commission, (ii) does not carry the accounts of persons who are customers of such Market-Maker for purposes of Rule 15c3-3, and (iii) has consented to be treated as a proprietary Market-Maker for purposes of the By-Laws and Rules. The term “proprietary Market-Maker” shall include any participant, as such, in an account that is not required to be segregated under Section 4d of the Commodity Exchange Act of which 10% or more is owned by a proprietary Market-Maker. The term “proprietary Market-Maker account” means an account established by a Clearing Member which is confined to the confirmed trades cleared and positions carried by the Clearing Member on behalf of a proprietary Market-Maker.

Adopted January 19, 1994. Amended August 20, 2001; December 14, 2012.

Proprietary Market Professional

(14) The term “proprietary Market Professional” in respect of a Clearing Member means a Market Professional that is (A) a non-customer of such Clearing Member or (B) a Related Person of such Clearing Member that (i) is not a customer of such Clearing Member for purposes of Rule 15c3-3 of the Securities and Exchange Commission, (ii) does not carry the accounts of persons who are customers of such Market Professional for purposes of Rule 15c3-3, and (iii) has consented to be treated as a proprietary Market Professional for purposes of the By-Laws and Rules including any applicable Participating CCO Agreement. The term “proprietary Market Professional” shall include any participant, as such, in an account of which 10% or more is owned by a proprietary Market Professional.

Adopted January 19, 1994.

Proprietary X-M Account Agreement; Non-Proprietary X-M Account Agreement; X-M Pledge Account Agreement

(15) The term “X-M Account Agreement” means an agreement among (i) a Joint Clearing Member, one or more Carrying CCOs, and the Corporation, or (ii) a Pair of Affiliated Clearing Members, one or more Carrying CCOs and the Corporation, for the purposes described in Section 24 of Article VI of the By-Laws. The term “Proprietary X-M Account Agreement” means an X-M Account Agreement relating to a proprietary X-M account, and the term “Non-Proprietary X-M Account Agreement” means an X-M Account Agreement relating to a non-proprietary X-M

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account.

Adopted September 26, 1989. Amended November 26, 1991; June 28, 1993.

Purchasing Clearing Member

(16) The term “Purchasing Clearing Member” means the Clearing Member acting as, or on behalf of, the purchaser of a cleared contract.

Amended April 11, 1989; October 26, 1989; March 3, 1999; May 16, 2002; December 14, 2012.

Put

(17) The term “put” means an option that provides the holder the right, in accordance with the terms and provisions of the By-Laws and Rules, to sell to the Corporation the number of units of the underlying interest covered by the option, at the aggregate exercise price, or, in the case of a futures option, to enter into a short position in the underlying futures contract, upon the timely exercise of such option.

Amended September 24, 1997; June 25, 1998; March 20, 2009; January 14, 2010.

Q.

Qualified Intermediary Assuming Primary Withholding Responsibility

(1) The term “Qualified Intermediary Assuming Primary Withholding Responsibility” means an FFI Clearing Member that has entered into an agreement with the Internal Revenue Service to be a qualified intermediary and to assume primary responsibility for reporting and for collecting and remitting withholding tax pursuant to Chapters 3 and 4 of subtitle A, and Chapter 61 and Section 3406, of the Internal Revenue Code with respect to any income (including Dividend Equivalents) arising from transactions entered into by the Clearing Member with the Corporation as an intermediary, including transactions entered into on behalf of such Clearing Member’s customers.

Adopted November 30, 2016.

Qualified Derivatives Dealer

(2) The term “Qualified Derivatives Dealer” means an FFI Clearing Member that has entered into an agreement with the Internal Revenue Service that permits the Corporation to make Dividend Equivalent payments or deemed payments to such Clearing Member free from U.S. withholding tax pursuant to Chapters 3 and 4 of subtitle A, and Chapter 61 and Section 3406, of the Internal Revenue Code with respect to transactions entered into by such Clearing Member with the Corporation as a principal (i.e., for such Clearing Member’s own account).

Adopted November 30, 2016.

Quarterly Option

(3) The term “quarterly option” means an option of a series of stock options or index options that expires on the last business day of a calendar quarter. The term “quarterly index option” means a quarterly option on an index.

Adopted June 23, 2006.

Quarterly Option

(1) The term “quarterly option” means an option of a series of stock options or index options that expires on the last business day of a calendar quarter. The term “quarterly index option” means a quarterly option on an index.

Adopted June 23, 2006.

R.

Range Option

(1) The term “range option” shall have the meaning given to it in Article XIV of the By-Laws.

Adopted June 23, 2008.

Receiving Clearing Member

(2) The term “Receiving Clearing Member,” when used (i) with respect to a call option contract shall mean the Exercising Clearing Member; (ii) with respect to a put option contract, shall mean the Assigned Clearing Member; and (iii) with respect to a BOUND or a physically-settled future, shall mean a Clearing Member entitled to receive the underlying interest and obligated to make payment therefor.

Adopted October 4, 1976. Amended April 4, 1977; April 11, 1989; October 26, 1989; August 26, 1996; March 3, 1999; August 20, 2001; March 25, 2009.

Reference Variable

(3) The term “reference variable” means the price or value of a security, commodity, future, currency, asset, index, or other thing, the variance or other measure of variability of which is used as the underlying interest for a cleared contract.

Adopted May 10, 2004.

Related Person

(4) A person is a "Related Person" of a Clearing Member if such person: (1) is a business affiliate that controls, or is controlled by or under common control with any officer, director, or general or special partner of the Clearing Member; (2) is a Member Affiliate other than a non-customer of the Clearing Member; or (3) is an employee whose duties include: (A) managing the business of the Clearing Member or any portion thereof, (B) handling the transactions, positions or funds of any customer of the Clearing Member or of such Clearing Member itself, (C) maintaining the records which relate to trades or funds of any customer of the Clearing Member or of such Clearing Member, or (D) signing or cosigning any checks or drafts on behalf of the Clearing Member; (4) is a spouse or minor dependent living in the same household as any such employee or in the same household as any non-customer of the Clearing Member; provided, however, that the term Related Person shall not include any person who is a non-customer of the Clearing Member. For the purpose of this paragraph R.(3), direct or indirect ownership of 10% or more, in the aggregate, of the equity of any entity shall be deemed conclusively to confer control of that entity.

Adopted January 19, 1994. Amended December 4, 2000.

Reporting Authority

(5) When used in respect of any cash-settled contract, the term “reporting authority” shall mean the source that is relied upon by the Corporation as the official source for the current price or value of the underlying interest.

Adopted August 20, 2001. Amended May 16, 2002; December 14, 2012.

Representative

(6) The term "Representative" in respect of a Clearing Member Organization means a director, senior officer, principal, or a general partner of such Clearing Member Organization or an entity that controls, is controlled by, or under common control with the Clearing Member.

Adopted April 3, 2000. Amended July 29, 2010.

Restricted Lien

(7) The term “restricted lien” means a security interest of the Corporation in specified assets (including any proceeds thereof) in an account of a Clearing Member with the Corporation as security for the Clearing Member’s obligations to the Corporation arising from such account or, to the extent so provided in the By-Laws or Rules, a specified group of accounts that includes such account including, without limitation, obligations in respect of all confirmed trades effected through such account or group of accounts, short positions maintained in such account or group of accounts, and exercise notices assigned to such account or group of accounts.

Adopted September 1, 2006. Amended December 14, 2012.

Restricted Lien Account

(8) The term “restricted lien account” means any account of a Clearing Member with the

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Corporation over which the Corporation has a restricted lien with respect to specified assets (including any proceeds thereof) in such account. Restricted lien accounts include but are not limited to, a firm non-lien account, a non-proprietary Market-Maker's account, a non-proprietary combined Market-Makers' account, a customer lien account, a customers' account, a JBO Participants' account and a segregated futures account.

Adopted September 1, 2006.

Return

(9) The term "Return" means the process by which a Carrying Clearing Member transfers back to an Executing Clearing Member, for one or more reasons specified in the CMTA Agreement between the Clearing Members, a position resulting from a confirmed trade transferred by the Executing Clearing Member to an account of the Carrying Clearing Member.

Adopted June 9, 2004. Amended December 14, 2012.

Rules

(10) The term "Rules" means the rules of the Corporation as the same may be amended from time to time; provided, however, that for purposes of the Uniform Commercial Code, the phrase "rule adopted by a clearing corporation" shall mean any of the Rules and By-Laws of the Corporation and any stated interpretation that would be deemed to be a "rule of a clearing agency" within the meaning of the Securities Exchange Act of 1934.

Amended July 2, 1996. April 3, 2000.

S.

Section 871(m) Effective Date

(1) The term "Section 871(m) Effective Date" means January 1, 2017, or, if later, the date on which Section 871(m) of the Internal Revenue Code of 1986, as amended, and related Treasury Regulations and other official interpretations thereof, first apply to any type of listed options transactions.

Adopted November 30, 2016.

Section 871(m) Implementation Date

(2) The term "Section 871(m) Implementation Date" means such date on or after December 1, 2016 as the Corporation may designate in an Information Memo issued to its Clearing Members.

Adopted November 30, 2016.

Securities Customer

(3) The term "securities customer" means a person having a securities account at a broker or dealer other than a non-customer of such broker or dealer.

Adopted August 20, 2001.

Securities Exchange

(4) The term "Securities Exchange" means an Equity Exchange or a Non-Equity Exchange.

Adopted March 20, 2009.

Security Future

(5) The term "security future" has the same meaning as provided in Section 3(a) (55) of the Securities Exchange Act of 1934.

Adopted June 15, 2001. Amended August 20, 2001.

Security Futures Market

(6) The term "security futures market" means any market, other than a Securities Exchange, that (i) has been designated as a contract market under Section 5f or 6 of the Commodity Exchange Act; (ii) is registered as a national securities exchange under Section 6(a) or (g), or as a national securities association under Section 15A(a), of the Securities Exchange Act of 1934; and (iii) has

satisfied all other legal and regulatory requirements necessary to trade security futures.
Adopted June 15, 2001. Amended August 20, 2001; March 20, 2009.

Segregated Futures Account

(7) The term “segregated futures account” in respect of a Clearing Member means an account of the Clearing Member on the records of the Corporation which is confined to confirmed trades cleared and positions carried by the Clearing Member on behalf of futures customers.

Adopted August 20, 2001. Amended December 14, 2012.

Segregated Futures Professional Account

(8) The term “segregated futures professional account” in respect of a Clearing Member means an account of the Clearing Member on the records of the Corporation which is confined to confirmed trades cleared and positions carried by the Clearing Member on behalf of futures professionals who are futures customers. A segregated futures professional account is a type of segregated futures account.

Adopted March 9, 2004. Amended December 14, 2012.

Segregated Long Position

(9) The term "segregated long position" shall mean that portion of a long position in a cleared security, other than a security future, in a firm non-lien or customers' account which has been segregated on the books and records of the Corporation in accordance with the Rules.

Amended April 17, 1975; August 20, 2001.

Seller

(10) The term “seller” means, as the context requires, a person with a short position in a future or a person selling a future in a confirmed trade.

Adopted August 20, 2001. Amended May 16, 2002; December 14, 2012.

Selling Clearing Member

(11) The term “Selling Clearing Member,” in respect of a confirmed trade in options or BOUNDS, means the Writing Clearing Member and, in respect of a confirmed trade in futures, means the Clearing Member acting as, or on behalf of, the seller.

Adopted August 20, 2001. Amended May 16, 2002; December 14, 2012.

Series

(12) The term “series,” when used in respect of options, means all option contracts of the same class and having otherwise identical terms including exercise price (or, in the case of delayed start option contracts that do not yet have a set exercise price, the same exercise price setting formula and exercise price setting date), expiration date, unit of trading and, in the case of futures options or commodity options, series marker if any; and when used in respect of futures, means all futures of the same class having identical terms, including the same maturity date and series marker, if any.

Amended August 20, 2001; May 16, 2002; November 28, 2007; March 20, 2009.

Series Marker

(13) The term “series marker” used in respect of futures or futures option or commodity options means a unique identifier assigned to an Exchange (or by mutual agreement among them, a group of such Exchanges) on which such futures or futures options or commodity options are traded that may be used to cause such futures or futures options or commodity options to be non-fungible with otherwise identical futures traded on other Exchanges.

Adopted August 20, 2001. Amended May 16, 2002; March 20, 2009.

Settlement Day

(14) The term “settlement day”, when used in respect of amounts owed by Clearing Members to the Corporation or by the Corporation to Clearing Members to settle confirmed trades and/or stock loan transactions, means: (i) the first business day following the Corporation’s receipt of a

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report of confirmed trade information from the Exchange on which the transaction was effected or a report of a completed stock loan from the Depository, or (ii) with respect to transactions in cleared contracts effected in trading sessions beginning on one calendar day and ending on the next calendar day, the business day after the day on which trading ends, as applicable, unless a different settlement day is specified in the Corporation's By-Laws, Rules or procedures.

Adopted June 24, 2011. Amended December 14, 2012.

Settlement Price

(15) The term "settlement price" in respect of a series of futures means the interim settlement price or the final settlement price.

Adopted August 20, 2001. Amended May 16, 2002; January 24, 2008.

Settlement Time

(16) The term "settlement time", when used in respect of a Clearing Member's obligation to pay the Corporation amounts owed to settle confirmed trades and/or stock loan transactions or any other obligations to the Corporation, other than such transactions settling outside the United States, means 9:00 A.M. Central Time (10:00 A.M. Eastern Time) on the settlement day for such confirmed trades and/or stock loan transaction or other obligation.

Amended December 14, 2012.

The term "settlement time", when used in respect of the Corporation's obligation to pay a Clearing Member amounts owed to settle confirmed trades and/or stock loan transactions or any other obligations to a Clearing Member, other than such transactions settling outside the United States, means 1:00 P.M. Central Time (2:00 P.M. Eastern Time) on the settlement day for such confirmed trades and/or stock loan transaction or other obligation. For confirmed trades and/or stock loan transactions or other obligations settling outside the United States, the settlement time therefor shall be as specified in the By-Laws, Rules or procedures of the Corporation.

Amended November 7, 1991, November 1, 1994; October 28, 2002; June 24, 2011; December 14, 2012.

Short Position

(17) The term "short position" in respect of options or BOUNDS means a person's obligation as the writer (or as an agent for the writer) of one or more option contracts of a series of options or one or more BOUNDS of a series of BOUNDS. In respect of futures, the term "short position" means a person's position as the seller (or as an agent for the Seller) of the underlying interest under one or more contracts in a series of futures.

Amended August 26, 1996; March 3, 1999, August 20, 2001, May 16, 2002.

Short Term Option

(18) The term "short term option" means an option of a series of options that expires one week after it is opened for trading. Short term option series may be opened in any option class. Series of short term options may be opened on a Friday that is a business day and shall expire, at the expiration time, on the next Friday that is a business day; provided, however, that if a Friday is not a business day, the series shall be opened (or shall expire) on the first business day immediately prior to that Friday.

Adopted July 12, 2005.

Statutory Disqualification

(19) The term "statutory disqualification" shall have the meaning given to it in Section 3(a) of the Securities Exchange Act of 1934, as amended.

Adopted February 11, 1976.

Statutory Rules

(20) The term "statutory rules" in respect of the Corporation means the Certificate of Incorporation, the By-Laws, the Rules, and such of the stated policies, practices and

interpretations of the Corporation as are deemed to be rules and have become effective under the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Securities and Exchange Commission thereunder.

Adopted February 11, 1976.

Stock Borrow Position

(21) The term "stock borrow position" means the position of a Borrowing Clearing Member in respect of a Stock Loan.

Adopted July 15, 1993.

Stock Future

(22) The term "stock future" means a security future for which the underlying security is an equity security or an index-linked security.

Adopted August 20, 2001. Amended July 18, 2012.

Stock Loan

(23) The term "Stock Loan" means either a "Hedge Loan" or a "Market Loan" or both as the context requires.

Adopted July 15, 1993. Amended January 23, 2009.

Stock Loan/Hedge Program

(24) The term "Stock Loan/Hedge Program" means the Corporation's program for processing and monitoring Stock Loans and hedging stock loan positions and stock borrow positions against stock option positions, all as further described in the By-Laws and Rules.

Adopted July 15, 1993.

Stock Loan Position

(25) The term "stock loan position" means the position of a Lending Clearing Member in respect of a Stock Loan.

Adopted July 15, 1993.

Stock Market-Maker; Stock Specialist

(26) The term "stock specialist" or "stock market-maker" means a member of a national securities exchange or national securities association who is acting as a market-maker or specialist, or a group of such members acting as a specialist unit, pursuant to the rules of such exchange or association in a stock that is an underlying security in respect of any stock option contract issued by the Corporation.

Style of Option

(27) The term "style of option" means the classification of an option as an American option, a European option or a capped option.

Amended October 28, 1991.

T.

Trade Date

(1) The term "trade date" in respect of any confirmed trade effected on or through the facilities of an Exchange means the day on which such transaction occurred except that the trade date in respect of confirmed trades in cleared contracts that are effected in trading sessions beginning on one calendar day and ending on the next calendar day shall be deemed to be the calendar day on which such trading ends. The term "trade date" in respect of any confirmed trade in OTC options means the day on which such transaction is accepted by the Corporation for clearance.

Amended July 22, 1987; March 25, 2009; December 14, 2012; September 25, 2013.

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Trade Price

(2) The term “trade price” in respect of a confirmed trade in market baskets of a particular class means the price of such market baskets agreed upon in such transaction. The term “trade price” in respect of a confirmed trade in BOUNDS means the price of such BOUNDS agreed upon in such transaction.

Adopted April 11, 1989. Amended October 26, 1989, August 26, 1996, March 3, 1999; December 14, 2012.

Trading Currency

(3) The term “trading currency” means the currency in which premium and/or exercise prices are denominated for a class of foreign currency options. Premium and exercise price are ordinarily denominated in the same currency; but in the case of certain classes of options, the premium may be denominated in the underlying currency. In such cases, the term “trading currency” may refer to the currency in which the premium is denominated, the currency in which the exercise price is denominated, or both of them, as the context requires. For clarity, the currency in which the premium is denominated is sometimes referred to as the premium currency, and the currency in which the exercise price is denominated is sometimes referred to as the exercise currency.

Amended November 1, 1994, March 18, 2004; May 24, 2018.

Treasury Bill

(4) The term "Treasury bill" means a Treasury security sold at original issuance at a discount from par with a term to maturity of one year or less.

Adopted July 1, 2009.

Treasury Bond

(5) The term "Treasury bond" means a Treasury security with a term to maturity of more than ten years at the time of original issuance.

Adopted July 1, 2009.

Treasury Note

(6) The term "Treasury note" means a Treasury security with a term to maturity of at least one year but no more than ten years at the time of original issuance.

Adopted July 1, 2009.

Treasury Security

(7) The term "Treasury security" means a bond, note, bill, or other evidence of indebtedness issued by the United States Treasury. The term “deliverable grade Treasury security” means a Treasury security meeting the specifications set forth in Chapter 13 of the Rules for Treasury securities that are deliverable in respect of physically-settled Treasury futures. The term "issue of Treasury securities" in respect of Treasury bonds or Treasury notes means all such bonds or notes having the same maturity date and coupon rate. All Treasury bills having the same maturity date shall be deemed to be of the same issue.

Adopted July 1, 2009.

Type of Option

(8) The term "type of option" means the classification of an option contract as a put, a call, a binary option, a range option, a packaged butterfly spread option, a packaged vertical call spread option or a packaged vertical put spread option.

Amended September 24, 1997; November 30, 2007; June 23, 2008.

U.

Underlying Currency

(1) The term “underlying currency” means the currency which is required to be delivered upon the

exercise of a class of foreign currency options.
Adopted November 1, 1994. Amended May 24, 2018.

Underlying Interest

(2) The term "underlying interest" means the underlying security, commodity, future, currency, asset, index or other variable that is the subject of a cleared contract.
Adopted April 16, 2001. Amended August 20, 2001; May 16, 2002; March 20, 2009.

Underlying Security

(3) The term "underlying security" when used in respect of any contract other than a cash-settled contract means the security or other asset which the Corporation is obligated to sell or purchase upon exercise or maturity of the contract. When used in respect of a cash-settled contract, the term means the index or other underlying interest on which the exercise settlement amount or final settlement price is based.
Amended November 24, 1982; June 16, 1989; August 20, 2001.

Underlying Variance

(4) The term "underlying variance" or "variance" means the variability of a reference variable over a specified period as measured by the futures market on which the overlying variance future is traded or as measured by a reporting authority designated by that futures market.
Adopted May 10, 2004.

Unit of Trading

(5) The term "unit of trading" in respect of any series of options or futures means the number of units of the underlying interest which have been designated by the Corporation as the minimum number to be the subject of a single option contract or single future in such series. In the absence of any such designation for a series of options or futures in which the underlying security is a common stock the unit of trading shall be 100 shares.
Amended August 20, 2001; May 16, 2002; October 3, 2006.

Unsegregated Long Position

(6) The term "unsegregated long position" shall mean any long position or portion thereof in a firm non-lien or securities customers' account which is not a segregated long position and all long positions maintained in firm lien accounts, Market-Makers' accounts and JBO Participants' accounts. Except when used in Chapter XI of the Rules, said term shall also include any exercised option or any expired BOUND for which, in either case, settlement has not yet been made, regardless of the account in which it is maintained, provided that for the purpose of calculating margin under Chapter VI of the Rules, such exercised options or expired BOUNDS carried in customers' accounts and firm non-lien accounts shall be treated as unsegregated only to the extent specifically provided therein. All long positions in futures are unsegregated long positions.
Amended April 17, 1975; January 9, 1981; April 22, 1986; April 11, 1989; March 1, 1991; August 26, 1996; March 3, 1999; May 26, 1999; August 20, 2001; May 16, 2002.

V.

Variable Terms

(1) The term "variable terms" in respect of a series of option contracts other than OTC options means the name of the underlying interest, the exercise price (or, in respect of a series of delayed start options that does not yet have a set exercise price, the exercise price setting formula and exercise price setting date), the index value determinant and the index multiplier (in the case of a flexibly structured index option), the cap interval (in the case of a capped option) and the expiration date of such option contract. The term "variable terms" in respect of a series of OTC options means the terms of such options that are permitted to be negotiated bilaterally between the parties within the range of values specified by the Corporation therefor as set forth in the By-Laws and Rules. "Variable terms," when used in respect of a series of futures means the

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name of the underlying interest, the maturity date, the method of determining the final settlement price, and the series marker, if any, and in the case of a flexibly structured index future, the index value determinant and the index multiplier.

Amended November 2, 1995; August 20, 2001, May 16, 2002; November 28, 2007; March 19, 2009; December 14, 2012.

Variance Future

(2) The term “variance future” means a commodity future for which the underlying interest is a variance.

Adopted May 10, 2004.

Variation Payment

(3) The term "variation payment" means the "mark-to-market" payment or "variation margin" payment that a buyer or seller of futures is obligated to pay to, or entitled to collect from, the Corporation from time to time in accordance with the By-Laws and Rules applicable to futures.

Adopted August 20, 2001. Amended May 16, 2002.

W.

Weekly Option

(1) The term “weekly option” means an option of a series of stock options or index options that expires on any Friday of a calendar month other than the third Friday of such calendar month.

The term “weekly index option” means a weekly option on an index.

Adopted November 9, 2010.

Writer

(2) The term "writer" in respect of an option contract or a BOUND means the person who, directly or indirectly, has agreed to perform the Corporation's obligations on such option contract or BOUND or on an option contract or BOUND of the same series in accordance with the By-Laws and the Rules and Exchange Rules.

Amended August 26, 1996.

Writing Clearing Member

(3) The term “Writing Clearing Member” means the Clearing Member acting as, or on behalf of, the writer (as defined, in the case of, in this Article I, and in the case of BOUNDS, in Article XXIV of the By-Laws) of a cleared contract.

Amended April 11, 1989; October 26, 1989, August 26, 1996, March 3, 1999, May 16, 2002; December 14, 2012.

X. – Z.

Reserved.

* * * *

ARTICLE II – MEETINGS OF STOCKHOLDERS

Annual Meeting

SECTION 1. The annual meeting shall be held in Chicago, Illinois (or such other place as may be fixed from time to time by the Board of Directors) on a date not later than April 30 of each year as determined by the Board of Directors. The exact time and place of each annual meeting shall be determined by the Board of Directors at least 30 days prior to such meeting.

Amended May 23, 1990; January 7, 2015.

Special Meetings

SECTION 2. Special meetings of the stockholders may be called by the Executive Chairman or the Board of Directors, and shall be called by the Executive Chairman upon the written request of a holder of the outstanding Common Stock of the Corporation.

Amended January 18, 1978; March 6, 2014.

Quorum

SECTION 3. Subject to the provisions of the Certificate of Incorporation, a majority of the outstanding Common Stock of the Corporation, represented in person or by proxy, shall constitute a quorum at any meeting of stockholders.

Amended March 6, 2015; February 13, 2019.

Notice of Meetings

SECTION 4. Written or printed notice stating the place, day, and hour of the meeting and, in case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered not less than ten nor more than forty days before the date of the meeting, or in case of a merger or consolidation not less than twenty nor more than forty days before the date of the meeting, either personally or by mail, by or at the direction of the Executive Chairman or the Secretary, or the persons calling the meeting, to each stockholder of record. If mailed, such notice shall be deemed to be delivered when deposited in the United States mails addressed to the shareholder at his address as it appears on the records of the Corporation, with postage thereon prepaid.

Amended January 18, 1978, December 10, 1997; March 21, 2014; September 16, 2016.

Voting

SECTION 5. Subject to the provisions of the Certificate of Incorporation, the holders of the outstanding Common Stock shall be entitled to one vote for each share of outstanding Common Stock held of record on the record date for such meeting in respect of each matter submitted to a vote at the meeting, and, subject to such provisions, if a quorum is present, the affirmative vote of the majority of shares of Common Stock represented at the meeting shall be the act of the stockholders.

Amended March 6, 2015; February 13, 2019.

Proxies

SECTION 6. A stockholder may vote either in person or by proxy executed in writing by the stockholder or by his duly authorized attorney-in-fact. No proxy shall be valid after eleven months from the date of its execution, unless otherwise provided in the proxy.

Informal Action by Stockholders

SECTION 7. Any action required to be taken at a meeting of the stockholders or any other action which may be taken at a meeting of the stockholders, may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by all of the stockholders entitled to vote with respect to the subject matter thereof.

* * * *

ARTICLE III – BOARD OF DIRECTORS

Number of Directors

SECTION 1. The Board of Directors of the Corporation shall be composed of nine Member Directors, the number of Exchange Directors fixed by or pursuant to Section 6 of this Article III, five Public Directors, and may include one Management Director.

Amended March 6, 1992; March 9, 2012; July 30, 2013; May 13, 2014; September 16, 2016; February 15, 2019.

Qualifications of Member Directors

SECTION 2. Every Member Director shall be either a Clearing Member or a representative of a Clearing Member Organization. No person shall be eligible to serve as a Member Director (a) for more than three consecutive three-year terms; (b) if the election or appointment of such person would result in the simultaneous service as a director of more than one person associated with affiliated Clearing Member Organizations; or (c) if the election or appointment of such person would result in the simultaneous service as Member Directors of more than two persons who are sole members, or are associated with Clearing Member Organizations which are sole members, of any one Exchange.

Amended January 17, 1985, March 6, 1992, April 3, 2000; May 13, 2014; December 17, 2018

. . . Interpretations and Policies:

.01 Fitness Standards. The Governance and Nominating Committee shall use the criteria of the Fitness Standards for Directors, Clearing Members and Others, as adopted or amended by the Board of Directors from time to time, in considering Member Director nominees for election to the Board.

Adopted October 27, 2011. Amended May 13, 2014.

Classification and Term of Office of Member Directors

SECTION 3. The Member Directors shall be divided into three classes, designated as Class I, Class II and Class III, respectively, each composed of not less than three members. The Member Directors of each Class as of January 3, 1975 shall be those persons serving on such date as directors in the Class bearing such designation. The successors of the Class I Member Directors shall be elected at the 1975 annual meeting of stockholders, the successors of the Class II Member Directors at the 1976 annual meeting, and the successors of the Class III Member Directors at the 1977 annual meeting. Member Directors shall be elected for a term expiring at the third succeeding annual meeting of stockholders or when their respective successors are thereafter elected and qualified, and shall be identified as being of the same Class as the directors they succeed.

Amended March 6, 1992; March 9, 2012; July 30, 2013; May 13, 2014.

Committees

SECTION 4. Subject to applicable law, the Certificate of Incorporation and the other provisions of these By-Laws, the Board of Directors, by resolution passed by a majority of the whole Board of Directors, may designate persons to serve on such committees as it may deem necessary and appropriate, may delegate one or more of its powers to such committees, and may fill any vacancy occurring in any such committee and may remove any member thereof for any reason.

Article III – Board of Directors

(a) *Audit Committee.* On an annual basis, the Board of Directors shall appoint an Audit Committee, having the powers and duties set forth in the By-Laws and Rules and as delegated by the Board. All of the Audit Committee members will be selected by the Board from among the directors recommended by the then-constituted Governance and Nominating Committee after consultation with the Executive Chairman and shall serve at the pleasure of the Board provided that no Management Director may serve on the Audit Committee. The chairman of the Audit Committee shall be designated by the Board from among the Public Director member(s) of the Committee.

(b) *Compensation and Performance Committee.* On an annual basis, the Board of Directors shall appoint a Compensation and Performance Committee, having the powers and duties set forth in the By-Laws and Rules and as delegated by the Board. The Compensation and Performance Committee shall consist of the Executive Chairman, the Member Vice Chairman, and at least one Public Director. Consistent with the preceding sentence, all of the Compensation and Performance Committee members will be selected by the Board from among the directors recommended by the then-constituted Governance and Nominating Committee after consultation with the Executive Chairman and shall serve at the pleasure of the Board. The chairman of the Compensation and Performance Committee shall be designated by the Board from among the Public Director member(s) of the Committee.

(c) *Governance and Nominating Committee.* On an annual basis, the Board of Directors shall appoint a Governance and Nominating Committee, having the powers and duties set forth in the By-Laws and Rules and as delegated by the Board. The Governance and Nominating Committee shall consist of at least one Public Director, at least one Exchange Director and at least one Member Director. All of the Governance and Nominating Committee members will be selected by the Board from among the directors recommended by the then-constituted Governance and Nominating Committee after consultation with the Executive Chairman and shall serve at the pleasure of the Board. The chairman of the Governance and Nominating Committee shall be designated by the Board from among the Public Director members of the Committee.

(d) *Regulatory Committee.* The Board of Directors shall appoint a Regulatory Committee, having the powers and duties set forth in the By-Laws and Rules and as delegated by the Board. The Regulatory Committee members shall consist of all Public Directors of the Corporation. The chairman of the Regulatory Committee shall be designated by the Board or by a majority vote of the Regulatory Committee membership from among the members of the Committee.

(e) *Risk Committee.* On an annual basis, the Board of Directors shall appoint a Risk Committee, having the powers and duties set forth in the By-Laws and Rules and as delegated by the Board. The Risk Committee shall consist of the Executive Chairman, at least one Member Director selected on a basis that shall not discriminate against any Exchange, and at least one Public Director and one Exchange Director. Consistent with preceding sentence, all of the Risk Committee members will be selected by the Board from among the directors recommended by the then-constituted Governance and Nominating Committee after consultation with the Executive Chairman and shall serve at the pleasure of the Board. The chairman of the Risk Committee shall be a Director designated by the Board from among the Public Director member(s) of the Committee.

(f) *Technology Committee.* On an annual basis, the Board of Directors shall appoint a Technology Committee, having the powers and duties set forth in the By-Laws and Rules and as delegated by the Board. All of the Technology Committee members will be selected by the Board from among the directors recommended by the then-constituted Governance and Nominating Committee after consultation with the Executive Chairman and shall serve at the pleasure of the Board. The chairman of the Technology Committee shall be designated by the Board from among the members of the Committee.

Amended July 26, 1991, April 3, 2000; March 9, 2012; March 6, 2014; May 13, 2014; September 16, 2016; November 20, 2019.

Nomination and Election of Member Directors

SECTION 5. Prior to each annual meeting of stockholders, the Governance and Nominating Committee shall nominate one person for each directorship among the Member Directors to be filled at such annual meeting, designating the Class for which each such person is nominated. In selecting such nominees, the Governance and Nominating Committee shall endeavor to achieve balanced representation among Clearing Members on the Board of Directors to assure that (i) not all Member Directors are representatives of the largest Clearing Member Organizations based on the prior year's volume, and (ii) the mix of Member Directors includes representatives of Clearing Member Organizations that are primarily engaged in agency trading on behalf of retail customers or individual investors. The Governance and Nominating Committee shall submit a list of its nominations in writing to the Board of Directors. The Board of Directors shall either approve such nominations or instruct the Governance and Nominating Committee regarding the submission of revised nominations; provided, however, that the Board of Directors shall approve one person for each directorship to be filled not later than thirty days prior to each annual meeting. Upon approval of any nominations by the Board of Directors, the Secretary of the Corporation shall transmit them to all Clearing Members within five days thereafter. Clearing Members shall have the right to nominate additional persons by filing with the Secretary, not less than fifteen days prior to the date of the annual meeting, a petition signed by not less than the lesser of (a) representatives of 20% of the Clearing Members or (b) representatives of 25 Clearing Members; provided that in no case shall such a petition be signed by representatives of less than 10% of the Clearing Members. Each such petition may include nominations for all or less than all of the Member Director positions to be filled on the Board of Directors at the annual meeting; provided, however, that no Clearing Member shall nominate by one or more petitions more than one candidate for each such position to be filled at such annual meeting. No petition shall be valid unless it specifies the respective position (e.g., Class I Member Director) for which each candidate named therein is nominated and unless each candidate named therein is eligible for the position for which he is nominated. In the event any question is raised as to the validity of any petition or as to the eligibility of any candidate so named for the position specified therein, such matter shall be determined by the Board of Directors. In the event no such petition is filed, the stockholders shall elect the Member Directors from the persons nominated by the Governance and Nominating Committee and approved by the Board of Directors. In the event one or more such petitions are filed, the Secretary shall, not less than ten days prior to the date of the annual meeting, transmit to each Clearing Member not under suspension, a ballot setting forth the names of the persons nominated by the Governance and Nominating Committee and approved by the Board of Directors and by such petitions in respect of every position for which such a petition has been filed, and the stockholders shall elect the Member Directors from the persons receiving the highest number of votes on the ballots which are returned by Clearing Members to the Secretary prior to the time the stockholders vote thereon at the annual meeting; provided, however, that no person shall be elected to a position if such election would render the composition of the Member Directors inconsistent with the provisions of Section 2 of this Article III. In the event any nominee receiving the highest number of votes is ineligible for election because of the preceding sentence, the person receiving the next highest number of votes who is eligible for election shall be elected by the stockholders. In the case of a tie, the names of the nominees involved shall be referred to the Board of Directors, and the stockholders shall elect the person selected from among such nominees by the Board of Directors upon the vote of a majority of the directors then in office. In the event that the number of persons who are nominated in accordance with this Section 5 and who are willing and able to serve should be less than the number of Member Directors to be elected at the annual meeting, the stockholders may nominate and elect any qualified person to fill those positions for which there are no other nominations. If the stockholders shall fail to elect a Member Director in accordance

Article III – Board of Directors

with the preceding sentence, the office shall be deemed to be vacant and the vacancy shall be filled in accordance with Section 12 of this Article III.

Amended April 3, 2000; March 9, 2012; May 13, 2014; September 16, 2016.

Exchange Directors

SECTION 6. The number of Exchange Directors shall be equal to the number of Equity Exchanges which are holders of Class B Common Stock of the Corporation; provided, however, that the number of Exchange Directors shall not be increased above six by reason of any new Equity Exchange until the first annual meeting of stockholders following the date on which such Exchange shall have been a stockholder for sixty days. The nominee of each Equity Exchange shall be elected as an Exchange Director by the stockholder entitled to vote thereon at each annual meeting of stockholders. An individual may be nominated by, elected by, and serve as an Exchange Director for more than one Equity Exchange. Each such individual shall be counted, for all purposes under the By-Laws (including, without limitation, for the purpose of determining whether a quorum is present or whether a resolution has been passed by the requisite number of directors), as a separate Exchange Director for each Equity Exchange that elected him or her. Each Exchange Director shall serve until the annual meeting of stockholders following the election or appointment of such Exchange Director and until a successor is elected or appointed and qualified, or until the earlier death, disqualification, resignation or removal of such Exchange Director. If any Equity Exchange shall cease to be qualified as an Equity Exchange pursuant to the provisions of Article VII hereof after having elected an Exchange Director, the term of such Exchange Director shall cease simultaneously with such disqualification, and the number of Exchange Directors shall decrease accordingly; provided, however, that if such Exchange Director is serving as an Exchange Director of any other Equity Exchange that continues to be qualified as an Equity Exchange pursuant to the provisions of Article VII hereof, then this sentence shall not affect such Exchange Director's term as an Exchange Director for any such other Equity Exchange. Exchange Directors need not be Clearing Members or be associated with a Clearing Member Organization.

. . . Interpretations and Policies:

.01 Fitness Standards. The Equity Exchanges shall use the criteria of the Fitness Standards for Directors, Clearing Members and Others, as adopted or amended by the Board of Directors from time to time, in considering Exchange Director nominees for election to the Board.

Amended March 6, 1992; January 12, 2009; March 20, 2009; October 27, 2011; May 13, 2014.

Public Directors

SECTION 6A. Prior to each annual meeting of stockholders at which one or more Public Directors are to be elected, the Governance and Nominating Committee shall, for each directorship among the Public Directors to be filled at such annual meeting, nominate one person who is not affiliated with any national securities exchange or national securities association or with any broker or dealer in securities and submit a list of its nominations in writing to the Board of Directors. The Board of Directors shall either approve such nominations or instruct the Governance and Nominating Committee regarding the submission of revised nominations, and at the annual meeting the stockholders entitled to vote thereon shall elect as Public Director(s) such person(s) as shall have been nominated by the Governance and Nominating Committee and approved by the Board of Directors. The Public Directors shall be divided into three classes, designated as Class I, Class II and Class III, respectively. The Public Director elected at the 2011 annual meeting will be designated as a Class II Public Director. One of the two Public Directors appointed prior to the 2013 annual meeting will be designated as a Class I Public Director and the other will be designated as a Class III Public Director. The successor of the initial Class I Public

Director shall be elected at the 2013 annual meeting of stockholders, the successor of the initial Class II Public Director at the 2014 annual meeting and the successor of the initial Class III Public Director at the 2015 annual meeting. One of the two Public Directors first appointed or elected after the 2014 annual meeting as a result of the increase of the number of Public Directors from three to five will be designated as a Class I Public Director and the other will be designated as a Class III Public Director so that, following such appointment or election, there shall be two Class I Public Directors, one Class II Public Director and two Class III Public Directors. The successor of the Class III Public Director appointed or elected as described in the preceding sentence shall be elected at the 2015 annual meeting of stockholders and the successor of the Class I Public Director appointed or elected as described in the preceding sentence shall be elected at the 2016 annual meeting. Except as provided above in the case of the initial Class I Public Director and the initial Class III Public Director, and in the preceding sentence of this Section 6A for the Class I Public Director and the Class III Public Director referred to therein, each Public Director shall serve until a successor is elected and qualified, or until the earlier death, disqualification, resignation, or removal of such Director.

. . . Interpretations and Policies:

.01 Fitness Standards. The Governance and Nominating Committee shall use the criteria of the Fitness Standards for Directors, Clearing Members and Others, as adopted or amended by the Board of Directors from time to time, in considering Public Director nominees for election to the Board.

Adopted March 6, 1992, Amended October 16, 1992, March 19, 1997; October 27, 2011; March 9, 2012; March 6, 2014; March 21, 2014; May 13, 2014; September 16, 2016.

Management Directors

SECTION 7. One Management Director, who also serves as an employee of the Corporation, may be elected by the stockholders at each annual meeting of the stockholders. A Management Director shall serve until the annual meeting of stockholders following his election or appointment as Management Director, and until his successor is elected and appointed and qualified, or until his earlier death, disqualification, resignation or removal. If a Management Director shall cease to hold the office by virtue of which he was elected as a Management Director, he shall simultaneously be disqualified to serve as a Management Director.

. . . Interpretations and Policies:

.01 Fitness Standards. The Board of Directors shall use the criteria of the Fitness Standards for Directors, Clearing Members and Others, as adopted or amended by the Board of Directors from time to time, in considering nominees for election as Management Director.

Amended January 18, 1978; October 27, 2011; July 30, 2013; March 21, 2014; December 8, 2014; April 26, 2017; February 15, 2019.

Power of the Board of Directors

SECTION 8. Except to the extent provided in the Certificate of Incorporation or elsewhere in these By-Laws, the management of the business and affairs of the Corporation shall be vested in the Board of Directors. In the exercise of its powers, the Board of Directors may impose such fees and charges, adopt such Rules, make such interpretations of the By-Laws and Rules, issue such operating procedures, orders and directions, and make such decisions as it may deem proper; provided, however, that the Board of Directors shall not take action in respect of any matters as to which the Corporation has agreed to limit its authority under the provisions of its agreements with the Exchanges referred to in Article VII hereof, and provided further that the fee structure of the

Article III – Board of Directors

Corporation shall be fixed in accordance with the principles set forth in Section 9 of Article IX hereof. Subject to the provisions of these By-Laws and the Rules, the Board of Directors may suspend Clearing Members and may prescribe and impose penalties for the violation of the By-Laws or the Rules of the Corporation, and it may, by Rule or otherwise, establish all disciplinary procedures applicable to Clearing Members and their partners, officers, directors and employees.

Amended May 12, 1983.

SECTION 9. Reserved.

Resignations

SECTION 10. A director may resign at any time by giving written notice of resignation to the Executive Chairman or to the Secretary; provided, however, that in the event a Management Director resigns, he must simultaneously resign his position with the Corporation. A resignation, unless specifically contingent upon its acceptance, will be effective as of its date or as of the effective date specified therein.

Amended January 18, 1978; July 30, 2013; March 21, 2014; May 13, 2014; September 16, 2016; February 15, 2019.

Disqualification

SECTION 11. A vacancy shall occur in the office of any director if the Board of Directors shall determine, by the affirmative vote of a majority of the whole Board of Directors and upon the recommendation of the Governance and Nominating Committee, that the holder of such office is no longer qualified therefor under the provisions of these By-Laws or that there has been such a change in his affiliations or Exchange memberships (or those of the Clearing Member Organization of which he is a Designee) as would make him ineligible for election or appointment to such office on the date the Board makes such determination.

Amended May 13, 2014.

Filling of Vacancies and Newly Created Directorships

SECTION 12. A vacancy occurring for any reason among the Member Directors of any Class shall be filled by a majority of the directors then in office, even though they may be less than a quorum, and the person appointed to fill such vacancy shall serve until the next election of such Class and until a successor shall be elected and qualified; provided that the vacancy shall be filled only by the appointment of a person recommended by the Governance and Nominating Committee. A vacancy or newly created directorship occurring for any reason among the Exchange Directors shall be filled by the Exchange entitled to elect such Exchange Director. A vacancy occurring for any reason among the Public Directors shall be filled by a majority of the directors then in office, even though they may be less than a quorum, with a person, not affiliated with any national securities exchange or national securities association or with any broker or dealer in securities, selected as provided in Section 6A of this Article III (including the recommendation of the Governance and Nominating Committee), and the person appointed to fill such vacancy shall serve for the remainder of the predecessor's term of office and until a successor shall be elected and qualified. A vacancy occurring for any reason in the position of Management Director may be filled by a majority of the directors then in office, even though they may be less than a quorum, only with the person elected or appointed to fill the office of Executive Chairman of the Corporation.

Amended January 18, 1978, March 6, 1992, April 3, 2000; March 9, 2012. July 30, 2013; March 21, 2014; May 13, 2014; September 16, 2016; February 15, 2019.

Quorum and Manner of Acting

SECTION 13. At all meetings of the Board of Directors a majority of the directors then in office, but not less than six directors, shall constitute a quorum for the conduct of business. If a quorum shall not be present at any meeting, the directors in attendance thereat may adjourn from time to time, without further notice other than an announcement at the meeting, until a quorum shall be present. The act of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board of Directors, except as may otherwise be provided by law, the Certificate of Incorporation, or the By-Laws.

Meetings

SECTION 14. Regular meetings of the Board of Directors shall be held at such times and at such places as shall from time to time be provided by resolution of the Board of Directors, without notice other than such resolution. Special meetings of the Board of Directors to be held on a business day may be called by the Executive Chairman at any time and shall be called by the Secretary upon the written request of not less than three directors. At least one hour's notice of any special meeting shall be given to each director either in writing, in person, by telephone or by facsimile; provided that the Secretary shall use reasonable efforts to give notices in person or by telephone if less than two days' notice is given. Any action taken at such special meeting called on less than two days' notice shall not remain in effect after the next regular meeting of the Board of Directors unless ratified by the Board of Directors at such regular meeting; provided, however, that nothing herein shall invalidate any acts of the Corporation taken in reliance upon the action of the Board of Directors at such special meeting, nor shall the rights of any person which arise out of action taken by the Board of Directors at such special meeting be affected as a result of the failure of the Board of Directors subsequently to ratify such action at a regular meeting. Neither the business to be transacted nor the purpose of any meeting of the Board of Directors need be specified in any notice of such meeting.

Amended January 18, 1978, June 4, 1993; March 6, 2014; March 21, 2014; May 13, 2014.

Emergency Powers

SECTION 15. (a) During any emergency which results, directly or indirectly, from an attack (including a terrorist attack) on the United States or on a locality in which the Corporation maintains an office or customarily holds meetings of the Board of Directors, or from a war, armed hostilities, insurrection or other calamity involving the United States or any such locality, or from any nuclear or atomic disaster, or from any other catastrophe, disaster, (including any environmental or natural disaster), communications systems failure, or other similar condition, in which a quorum (as specified in Article III of the By-Laws) of the Board of Directors or a standing committee thereof cannot readily be convened for action (an "Emergency"), the following provisions of this Section 15 shall be operative notwithstanding any other provision in any of the sections (other than Section 110) of the Delaware Corporation Law or in the Certificate of Incorporation, By-Laws or Rules of the Corporation. The Executive Chairman, Chief Executive Officer, Chief Operating Officer or, if it is not feasible for the Executive Chairman, Chief Executive Officer, or Chief Operating Officer to take such action, then a Designated Officer is authorized to declare the existence of such Emergency and to declare this By-Law to be in effect. The Executive Chairman, Chief Executive Officer, Chief Operating Officer, or such Designated Officer, shall use his best efforts to attempt to consult with officials of the Securities and Exchange Commission ("SEC") prior to declaring the existence of such Emergency; provided, however, that the authority contained herein shall not be conditioned by such consultation. The Corporation shall advise the SEC as soon as practicable by telephone, and confirmed in writing, of the declaration of an Emergency and the reasons therefor, and a record of such declaration shall be prepared and maintained in the records of the Corporation.

(b) During an Emergency, special meetings of the Board of Directors or a committee thereof may be called by the Executive Chairman, Chief Executive Officer, Chief Operating Officer, or by a

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Designated Officer of the Corporation at any time. At least thirty minutes notice of any such special meeting shall be given to such of the directors as it may be feasible to reach at the time by such means as may be deemed feasible at the time by the Executive Chairman, Chief Executive Officer, Chief Operating Officer, or the Designated Officer calling such meeting. Neither the business to be transacted nor the purpose of any such meeting need be specified in the notice thereof.

(c) The Designated Officers of the Corporation shall be on a list approved by the Board of Directors before an Emergency, in such order of priority as may be provided in the resolution approving the list, and shall, to the extent required to provide a quorum at any special meeting of the Board of Directors or a committee thereof held during such Emergency, be deemed directors for such meeting. If a quorum (as specified in Article III of these By-Laws) shall not be present at any such special meeting held during the Emergency, then the director or directors in attendance at any such meeting shall constitute a quorum.

(d) Notwithstanding the provisions of Article XI of these By-Laws, the By-Laws or the Rules of the Corporation may be amended by the Board of Directors at any meeting of the Board of Directors held during an Emergency upon the affirmative vote of a majority of the directors in attendance at any such meeting; provided, however, that any such amendment adopted by less than the vote required by Article XI shall not remain in force or effect for a period of longer than thirty days following the termination of such Emergency. The Corporation shall, if practicable, file with the Commodity Futures Trading Commission (“CFTC”) any rule change relating to commodity futures, futures options or commodity options adopted in response to an Emergency prior to implementation of the rule. If it is not practicable to file such rule change with the CFTC prior to its implementation, the Corporation shall file the rule change with the CFTC at the earliest possible time, and in no event more than 24 hours after implementation.

(e) In the event the Executive Chairman, Chief Executive Officer, or Chief Operating Officer is authorized or directed by the By-Laws, the Rules, any resolution of the Board of Directors or a committee thereof, or any agreement to which the Corporation is a party to take any action, and it is not feasible for such officer to take such action, then such action may be taken by one of the others, and if it is not feasible for any of them to take such action, then such action may be taken by a Designated Officer in the order of priority provided in the resolution of the Board of Directors approving such list.

(f) The Corporation shall advise the SEC by telephone, and confirmed in writing, of the termination of an Emergency as soon as practicable thereafter.

. . . Interpretations and Policies:

.01 For purposes of this Section 15, in the absence of a different list approved by the Board of Directors as referred to above, only the following officers (in the following order of priority) shall be considered Designated Officers: any Senior Executive Vice President, any Executive Vice President, any Senior Vice President, and any First Vice President.

Adopted May 18, 1992. Amended May 18, 1992; December 10, 1997; December 10, 1998; May 16, 2002; March 20, 2009; July 30, 2013; March 21, 2014; September 16, 2016; April 26, 2017; February 15, 2019.

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ARTICLE IV – OFFICERS

Selection by Board of Directors

SECTION 1. Upon the nomination of the Governance and Nominating Committee, an Executive Chairman shall be elected by the Board of Directors from among the employees of the Corporation. Also upon the nomination of the Governance and Nominating Committee, a Vice Chairman of the Board shall be elected by the Board of Directors from among the Member Directors. Such Vice Chairman shall be referred to as the Member Vice Chairman. The Board of Directors shall also elect a Chief Executive Officer, a Chief Operating Officer, who it may, in its discretion, designate as President of the Corporation, a Secretary and a Treasurer, none of whom need be a member of the Board of Directors at the time of such election. The Board of Directors may, but need not, elect one or more Vice Presidents or such other officers as it may from time to time determine are required for the efficient management and operation of the Corporation. An officer shall hold his office for one year and until his successor is elected and qualified or until his earlier death, resignation or removal. Two or more offices may be held by the same person except the offices of Executive Chairman, Chief Operating Officer and Member Vice Chairman.

Amended January 18, 1978, December 10, 1997, December 18, 2001; July 30, 2013; March 21, 2014; December 8, 2014; September 16, 2016; April 26, 2017; May 5, 2017; February 15, 2019.

Appointments by the Executive Chairman, Chief Executive Officer, or Chief Operating Officer

SECTION 2. The Executive Chairman, Chief Executive Officer, and Chief Operating Officer each may appoint such officers, in addition to those elected by the Board of Directors, and such agents as they each shall deem necessary or appropriate to carry out the functions assigned to them, who shall hold their respective positions for such terms and shall exercise such powers and perform such duties as determined from time to time by the Executive Chairman, Chief Executive Officer, or Chief Operating Officer, respectively; provided that the Executive Chairman and Chief Executive Officer also shall have the authority to set such terms, powers, and duties of any officer or agent appointed by the Chief Operating Officer. Notwithstanding the foregoing, only the Board of Directors may elect a Chief Executive Officer, Chief Operating Officer, Secretary, or Treasurer of the Corporation.

Amended January 18, 1978, December 18, 2001; July 30, 2013; March 21, 2014; September 16, 2016; April 26, 2017; February 15, 2019.

Removal

SECTION 3. Any officer may be removed by the Board of Directors at any time with or without cause. Any officer or agent appointed by the Executive Chairman, Chief Executive Officer, or Chief Operating Officer may be removed by the Executive Chairman, Chief Executive Officer, or Chief Operating Officer, respectively, at any time with or without cause; provided that the Executive Chairman and Chief Executive Officer also shall have the authority to remove any officer or agent appointed by the Chief Operating Officer. Such removal shall be without prejudice to the contract rights, if any, of the person removed.

Amended January 18, 1978; July 30, 2013; March 21, 2014; April 26, 2017; February 15, 2019.

Vacancies

SECTION 4. A vacancy in any office required to be filled by the Board of Directors shall be filled by it as soon as practicable after the occurrence of the vacancy. A person elected by the Board of

Article IV – Officers

Directors to fill a vacancy shall serve only until the expiration of the term of office of the person whom he replaces.

Powers and Duties of Officers

SECTION 5. The powers and duties of the officers of the Corporation shall be those usually appertaining to their respective offices, the further powers and duties prescribed by these By-Laws and such other powers and duties as may be prescribed by the Board of Directors, a committee of the Board of Directors, or a senior officer.

Executive Chairman

SECTION 6. (a) The Executive Chairman shall be responsible for certain control functions of the Corporation, including internal audit and public affairs and government relations, and shall have supervision of the officers and agents appointed by him. Subject to the provisions of these By-Laws and the Rules, the Executive Chairman shall have the authority to suspend Clearing Members. The Executive Chairman shall preside at all meetings of the Board of Directors and the stockholders.

(b) Subject to the subsequent ratification by, and any specific instructions of, the Board of Directors, the Executive Chairman, or a proxy appointed by him, shall have full power and authority, in the name of and on behalf of the Corporation, to vote at his discretion stock of wholly owned subsidiaries of the Corporation, except to the extent that such authority shall be withheld or vested in a different officer or agent of the Corporation by the Board of Directors.

Amended January 18, 1978, October 21, 1999, December 18, 2001; July 30, 2013; March 6, 2014; March 21, 2014; April 26, 2017; February 15, 2019.

Vice Chairmen of the Board

SECTION 7. In the absence or disability of the Executive Chairman, the Member Vice Chairman shall preside at meetings of the Board of Directors and the stockholders.

Adopted December 10, 1997. Amended December 18, 2001; July 30, 2013; March 6, 2014; September 16, 2016.

Chief Executive Officer and Chief Operating Officer

SECTION 8. The Board of Directors shall elect a Chief Executive Officer and a Chief Operating Officer. The Chief Executive Officer shall be responsible for all aspects of the Corporation's business and of its day to day affairs, including enterprise risk management and compliance, and shall be responsible for all aspects of the business of the Corporation that do not report directly to the Executive Chairman, as determined by the Board of Directors, to promote the efficient and effective management and operation of the Corporation. Subject to the provisions of these By-Laws and the Rules, the Chief Executive Officer and, in his absence, Chief Operating Officer, shall have the authority to suspend Clearing Members. The Chief Operating Officer shall support the operations of the Corporation in accordance with the directions and under the oversight of the Chief Executive Officer and shall have supervision of the officers and agents appointed by them. In the absence or disability of the Chief Executive Officer, the Chief Operating Officer shall fulfill the duties and have the powers of the Chief Executive Officer provided, however, that neither the Chief Executive Officer nor the Chief Operating Officer shall preside at meetings of the Board of Directors or the stockholders.

Amended January 18, 1978; December 10, 1997; December 18, 2001; July 30, 2013; March 21, 2014; December 8, 2014; September 16, 2016; April 26, 2017; February 15, 2019.

Vice Presidents

SECTION 9. To the extent such offices are filled by the Board of Directors, the Executive Chairman, the Chief Executive Officer, or the Chief Operating Officer, the Vice Presidents shall perform the respective duties and exercise the respective powers assigned to them by the Board of Directors or the Executive Chairman, Chief Executive Officer, or Chief Operating Officer, as applicable. In the absence or disability of the Executive Chairman, Chief Executive Officer, or Chief Operating Officer, the Vice Presidents shall, in the order of their seniority or such order as may have been specified by the Board of Directors, the Executive Chairman, the Chief Executive Officer, or the Chief Operating Officer at the time of their election, perform the duties and exercise the powers of the Executive Chairman, Chief Executive Officer, and Chief Operating Officer, except that no Vice President shall preside at meetings of the Board of Directors or the stockholders.

Amended January 18, 1978; December 10, 1998; December 18, 2001; July 30, 2013; March 21, 2014; September 16, 2016; April 26, 2017; February 15, 2019.

Secretary

SECTION 10. The Secretary shall attend all meetings of the Board of Directors and all meetings of the stockholders and record all the proceedings of such meetings in a book to be kept for that purpose. He shall be the custodian of the Corporation's ledger of stockholders, the corporate seal, and all other books and records of the Corporation except those entrusted to the Treasurer.

Treasurer

SECTION 11. Subject to the provisions of Article IX of the By-Laws, the Treasurer shall have the custody of the Corporation's funds and property and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation, and shall deposit all moneys and other property of the Corporation in such depositories as may be designated from time to time by the Board of Directors.

Amended April 26, 2017.

Controller

SECTION 12. The Controller shall serve as the chief accounting officer of the Corporation. In the event the office of Controller shall be vacant at any time, the Board of Directors or the Chief Executive Officer, or in their absence the Chief Operating Officer, shall designate the person who will serve as chief accounting officer until the office of Controller is filled.

Amended January 18, 1978; July 30, 2013; April 26, 2017; February 15, 2019.

Salaries

SECTION 13. The salary, if any, of those officers elected by the Board of Directors shall be fixed by the Board of Directors, and (subject to any contrary action taken by the Board of Directors) the salary, if any, of all other officers, agents and employees appointed by the Executive Chairman, Chief Executive Officer, or Chief Operating Officer shall be fixed by the Executive Chairman, Chief Executive Officer, or Chief Operating, respectively; provided that the Executive Chairman and the Chief Executive Officer also shall have the authority to fix the salary, if any, of any officer or agent appointed by the Chief Operating Officer. Members of the Board of Directors other than full-time employees of the Corporation shall be entitled to compensation for their services as directors at such rates as the Board of Directors may from time to time determine. Members of the Board of Directors may be reimbursed for their reasonable expenses in attending meetings of the Board of Directors or any Committee thereof.

Article IV – Officers

*Amended January 18, 1978; June 8, 1979; December 18, 2001; July 30, 2013; March 21, 2014;
April 26, 2017; February 15, 2019.*

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ARTICLE V – CLEARING MEMBERS

Qualifications

SECTION 1. (a) Any person registered as a broker-dealer under the Securities Exchange Act of 1934, as amended, or any Non-U.S. Securities Firm, shall be eligible to become a Clearing Member; and in addition, a futures commission merchant registered under Section 4f(a)(1) of the Commodity Exchange Act shall be eligible to become a Clearing Member for the purpose of clearing transactions in commodity futures, futures options and commodity options. Each applicant to become a Clearing Member must meet the initial Clearing Member financial requirements then in effect and maintain facilities and personnel adequate for the expeditious and orderly transaction of business with the Corporation and other Clearing Members. Every applicant must meet such additional non-discriminatory standards of financial responsibility, operational capability, experience and competence as may from time to time be prescribed in the statutory rules of the Corporation. The Corporation may, and in cases in which the Securities and Exchange Commission, by order, directs as appropriate in the public interest, shall disapprove the application for clearing membership of any person subject to a statutory disqualification.

(b) Notwithstanding any other provision of the By-Laws or Rules, no broker or dealer registered under Section 15(b)(11) of the Securities Exchange Act of 1934 shall clear transactions or carry positions in cleared securities other than security futures.

(c) The procedures of the Corporation may provide that a Clearing Member shall not clear transactions in a particular type of product unless, in addition to satisfying any specific requirements applicable to such type of product set forth in the By-Laws and Rules, the Corporation has specifically approved the Clearing Member to clear such type of product.

(d) Any Clearing Member who holds positions in physically-settled metals futures or options on such futures is required to be a member of the Exchange on which the products are traded.

(e) Beginning on the Section 871(m) Implementation Date, no applicant that, if admitted, would be an FFI Clearing Member, will be admitted to membership unless such applicant is a Qualified Intermediary Assuming Primary Withholding Responsibility and FATCA Compliant. In order to be able to conduct any transaction or activity through the Corporation for its own account, such applicant also must be a Qualified Derivatives Dealer. If such applicant currently is admitted, such applicant must cease conducting any transaction or activity through the Corporation for its own account until it is a Qualified Derivatives Dealer, but may continue to conduct any other authorized transaction or activity through the Corporation provided it is a Qualified Intermediary Assuming Primary Withholding Responsibility and FATCA Compliant.

. . . Interpretations and Policies:

.01 Financial Responsibility. The Risk Committee will not approve any application for clearing membership if:

- a. the applicant fails to meet the initial financial requirements set forth in the Rules;
- b. the applicant has sustained net pre-tax losses, after giving effect to realized and unrealized gains and losses in trading, investment or other proprietary accounts, (i) during the three calendar months preceding the month in which the application is considered, in a net amount equal to 30% or more of the excess of its net capital at the end of such three-month period over the initial net capital required by the Rules; (ii) during the two calendar months preceding the month in which the application is considered, in a net amount equal to 25% or more of such excess net capital, or (iii) during the calendar month preceding the month in which the application is considered, in a net amount equal to 15% or more of such excess net capital;

Article V – Clearing Members

c. the applicant was listed in the special surveillance list (SIPC Form 5A) most recently filed with the Securities Investor Protection Corporation by the applicant's designated Examining Authority or is subject to similar special financial surveillance procedures imposed by a regulatory or self-regulatory authority under the Commodity Exchange Act; or

d. the applicant lacks access to sufficient financial resources to meet obligations arising from clearing membership in extreme but plausible market conditions, as determined by the Corporation for purposes of this Rule.

.02 Operational Capability. The Risk Committee will not approve any application for clearing membership unless:

a. the applicant:

1. is in compliance with all applicable requirements with respect to the maintenance of books and records under the Securities Exchange Act of 1934, the Commodity Exchange Act, or both, as the case may be; or

2. in the case of a Non-U.S. Securities Firm other than a Non-U.S. Securities Firm that is applying for clearing membership as an exempt Non-U.S. Clearing Member, maintains those books and records necessary to reflect accurately its net capital, aggregate indebtedness and debt-equity total as defined by Securities and Exchange Commission Rule 15c3-1, or, in the case of a Non-U.S. Securities Firm that is applying for clearing membership as an exempt Non-U.S. Clearing Member, maintains those books and records necessary to comply with the reporting requirements of its Non-U.S. Regulatory Agency and with such additional requirements as the Corporation may impose;

b. the applicant employs personnel and utilizes procedures which, in the opinion of the Risk Committee, are operationally sufficient to enable the applicant to discharge its functions as a Clearing Member in a timely and efficient manner, including the ability to process expected volumes and values of transactions cleared by the Clearing Member within required time frames, including at peak times and on peak days; the ability to fulfill collateral, payment, and delivery obligations as required by the Corporation, and the ability to participate in applicable default management activities, including auctions, as may be required by the Corporation and in accordance with applicable laws and regulations

c. the applicant's Designated Examining Authority (or designated self-regulatory organization, in the case of an applicant primarily regulated as a futures commission merchant) has stated that it has no objections to the application for clearing membership; provided that, upon the written request of an applicant, the Risk Committee may, in exceptional cases and where good cause is shown, waive the foregoing requirement.

.03 Experience and Competence. The Risk Committee has discretion not to approve, and will not approve if so ordered by the SEC, any application for clearing membership if:

a. the applicant is subject to a "statutory disqualification," as defined in Section 3 of the Securities Exchange Act of 1934, as amended, or, in the case of an applicant regulated as a futures commission merchant, the applicant or a principal of the applicant, as defined in Section 8a(2) of the Commodity Exchange Act, is subject to statutory disqualification under Section 8a(2)-(4) of the Commodity Exchange Act, or, in the case of a Non-U.S. Securities Firm, any similar provision of the laws or regulations applicable to such Non-U.S. Securities Firm;

b. the applicant or any natural person associated with the applicant has engaged and there is a reasonable likelihood he will again engage in acts or practices inconsistent with just and equitable principles of trade; or

c. the applicant lacks substantial experience in clearing the kind(s) of cleared contracts that the applicant proposes to clear or related kinds of transactions (e.g., stock transactions where the applicant proposes to clear physically-settled options or futures on individual stocks or futures transactions where the applicant proposes to clear futures options), and has failed, in the opinion of the Risk Committee, to employ back-office personnel with sufficient experience to compensate for the applicant's lack of such experience.

The terms "associated person" and "person associated with an applicant" as used in these Interpretations and Policies means any partner, officer, director, or branch manager of such applicant (or any person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such applicant, or any employee of such applicant.

In respect of clause (a) above, the applicant must notify the Corporation in writing if the applicant is or becomes subject to a statutory disqualification as soon as practicable upon learning of such statutory disqualification and in any event within 5 business days. The applicant must provide the Corporation with any information and forms, including amendments thereto, related to the statutory disqualification provided to the SEC, the CFTC or any self-regulatory organization, including, as applicable, any amended Form BD, Financial Industry Regulatory Authority ("FINRA") Form MC-400A, and any written response to a National Futures Association ("NFA") Rule 504 Notice of Intent or other written request for relief addressed to a self-regulatory organization. Applicants that are not members of NFA or FINRA must provide to the Risk Committee, at a minimum, the information required by FINRA Form MC-400A in addition to any forms or written responses filed with any self-regulatory organization or regulatory agency with respect to a statutory disqualification or similar provision of the laws or regulations applicable to such applicant. If an applicant fails to provide the notice required by this paragraph, the Risk Committee has discretion not to approve such applicant's application for clearing membership.

* * *

In addition, the Risk Committee will not approve any application for clearing membership unless:

In respect of clause (c) above, an applicant for clearing membership or at least one associated person of applicant:

a. in the case of a broker-dealer registered under Section 15(b)(1) or (2) of the Securities Exchange Act of 1934), must be registered as a "Limited Principal - Financial and Operations" with the Financial Industry Regulatory Authority or must have passed the appropriate qualification examination for registration as such;

b. in the case of a Non-U.S. Securities Firm that is applying for clearing membership as an exempt Canadian Clearing Member, must be registered as such Canadian Clearing Member's Chief Financial Officer with the Investment Industry Regulatory Organization of Canada; or

c. in the case of a Non-U.S. Securities Firm other than one which is applying for clearing membership as an exempt Non-U.S. Member, has taken and successfully completed any applicable OCC financial and operational examination for employees who are responsible for supervising the preparation of applicant's financial reports.

d. in the case of a futures commission merchant or other registrant registered under Section 4f of the Commodity Exchange Act that is not a broker-dealer registered under Section 15(b)(1) or (2) of the Securities Exchange Act of 1934, must meet such other non-discriminatory standards of experience and competence as the Corporation may prescribe.

Article V – Clearing Members

If an applicant elects to use an associated person to satisfy the requirements of the foregoing clauses applicable to such applicant that associated person shall be a full-time employee of the applicant. The Risk Committee may exempt from the applicable requirements of the foregoing clauses any applicant for clearing membership which entered into a facilities management agreement in accordance with Interpretation and Policy .05 below. Upon the written request of an applicant, the Risk Committee may, in exceptional cases and where good cause is shown, waive the foregoing requirements and accept other standards as evidence of an applicant's experience in clearing securities, futures options, commodity options or futures transactions.

In addition, the Risk Committee will not recommend the approval of any application for clearing membership unless:

d. at least two key operations employees of the applicant who shall be full-time employees of such applicant have attended all applicable OCC operations readiness review sessions and successfully completed any applicable OCC operational and financial examinations for operations employees, provided that the Risk Committee may, upon the applicant's written request, waive the requirement that the operations employees be full-time employees of the applicant if the applicant's daily operations are conducted by staff employed on a full-time basis by an entity affiliated with the applicant; and

e. if the applicant has not applied for authorization to clear all types of transactions (i.e., customer transactions, firm transactions, market-maker and JBO Participant transactions), or all kinds of transactions (e.g., transactions in stock options, Treasury securities options, foreign currency options, cross-rate foreign currency options, cash-settled options, futures options, commodity options and futures), or has not applied to carry positions in its accounts on a routine basis, or has not applied to be a Hedge Clearing Member, the applicant shall have undertaken to apply to the Risk Committee for further approval before commencing to clear any type or kind of transaction for which approval is not currently being sought, before carrying positions in its accounts on a routine basis, or before participating in the Stock Loan/Hedge Program, as applicable.

In the event that expedited treatment is requested for an application submitted pursuant to clause (e) above, the Chief Executive Officer, Chief Operating Officer, or any delegate of such officer, shall have the authority to approve or disapprove such application on a temporary basis. Any delegate shall be an officer of the rank of Senior Vice President or higher. Thereafter, at the next scheduled meeting of the Risk Committee, the Risk Committee shall independently review the submitted application and shall determine de novo whether to approve or disapprove such application. Should the Risk Committee's determination result in the modification or reversal of the action taken by the Chief Executive Officer, Chief Operating Officer or any delegate of such officer, any acts taken by the Corporation prior to such modification or reversal shall not be invalidated nor shall any rights of any person arising out of such acts be affected. Notwithstanding the foregoing, in the event a Hedge Clearing Member submits an application to become a Market Loan Clearing Member pursuant to clause (e) above, the Chief Executive Officer, Chief Operating Officer, or any delegate of such officer shall have the authority to approve or disapprove such application without further review by the Risk Committee. Any delegate shall be an officer of the rank of Senior Vice President or higher.

.04 Fitness Standards. In addition to the standards of financial responsibility, operational capability and experience and competence, the Risk Committee shall consider the criteria of the Fitness Standards for Directors, Clearing Members and Others, as adopted or amended by the Board of Directors from time to time, before approving any application for clearing membership.

.05 Facilities Management. In determining whether the requirements of Sections .02, .03c, .03d, and .03e of this Interpretation have been satisfied by an applicant, the Risk Committee will consider the provisions of a written agreement ("facilities management agreement") between the

applicant and another Clearing Member (“Managing Clearing Member”), approved by the Corporation, pursuant to which the Managing Clearing Member agrees to perform certain of the applicant's obligations as a Clearing Member for (i) the transaction of business with the Corporation and other Clearing Members and (ii) the maintenance of required books and records. The Corporation shall not approve a facilities management agreement in which a Clearing Member acts as Managing Clearing Member, and such facilities management agreement shall be of no force or effect, unless:

- a. The agreement clearly sets forth the specific facilities management services (the "managed services") which are to be performed by the Managing Clearing Member on behalf of a Clearing Member (the "Managed Clearing Member") and the respective duties and obligations of the Managing Clearing Member and Managed Clearing Member. The Risk Committee will not approve any application for membership unless the applicant demonstrates in accordance with this Interpretation that it has the operational capability, experience and competence to perform those duties and obligations which are not required under the terms of the agreement to be performed by the Managing Clearing Member.
- b. The agreement provides that it will not be terminated until 30 days after written notice of such termination is provided (i) by the terminating party to the Corporation, and (ii) if the terminating party is the Managing Clearing Member, by the terminating party to the Managed Clearing Member.
- c. The agreement provides for its termination in the event the Managing Clearing Member shall no longer be approved by the Corporation to act as a Managing Clearing Member. A Clearing Member shall be approved by the Corporation to act as a Managing Clearing Member only so long as the Corporation continues to be satisfied after conducting periodic reviews that the Managing Clearing Member has the requisite operational capability, experience and competence, and has allocated sufficient resources and experienced staff, to enable it properly to serve as a Managing Clearing Member under all facilities management agreements to which it is a party and that it shall have and shall maintain net capital of not less than the amount prescribed in the Rules for Managing Clearing Members. Each Clearing Member will be required to undergo a further operational readiness review each time it expands its facilities management activities by an additional four Managed Clearing Members.

.06 Additional Membership Criteria. If the Risk Committee determines that the applicant's financial or operational condition, in relation to the business that the applicant is expected to transact with the Corporation, makes it necessary or advisable, for the protection of the Corporation, Clearing Members, or the general public, the Risk Committee may impose: (i) additional financial requirements on an applicant for clearing membership, including, but not limited to, requiring such applicant to increase its net capital or to make and maintain an initial margin deposit, or (ii) restrictions on the applicant's clearance of confirmed trades. Additional requirements or restrictions imposed pursuant to this Section shall remain in force for the period determined by the Risk Committee, but in any event not later than the end of the first three calendar months commencing after the applicant's admission to clearing membership. The imposition of additional requirements or restrictions pursuant to this Section shall not preclude the Corporation from imposing contemporaneous requirements or restrictions pursuant to other provisions of the By-Laws and Rules, including without limitation, Rule 305.

.07 Designation as a Hedge Clearing Member. In order to be designated as a Hedge Clearing Member, a Clearing Member must (i) be a member of the Depository (as defined in Article XXI of the By-Laws) or be a Canadian Clearing Member on behalf of which CDS maintains an identifiable sub-account in a CDS account at the Depository, provided that CDS is a participant of the Depository eligible to perform the necessary functions on behalf of the Canadian Clearing Member during the period when such Canadian Clearing Member has in effect an appointment of

Article V – Clearing Members

CDS pursuant to the provisions set forth in this Interpretation, and (ii) execute such agreements and other documents as the Corporation may prescribe.

A Canadian Hedge Clearing Member on behalf of which CDS maintains an identifiable sub-account in a CDS account at the Depository may appoint, in such manner as the Corporation shall from time to time prescribe, CDS to act on its behalf with respect to effecting delivery orders for stock loan and stock borrow transactions in the accounts of the Canadian Hedge Clearing Member through the Depository. An appointment pursuant to this paragraph shall become effective as of the second business day following the day on which the Corporation shall receive written notice of the appointment from the Canadian Hedge Clearing Member, or such later date as may be specified by the Canadian Hedge Clearing Member, and (unless the Corporation shall terminate the appointment at an earlier time) shall remain effective until the close of business on the thirtieth calendar day after the Corporation shall have received, from either the Canadian Hedge Clearing Member or CDS, written notice of revocation of the appointment, and shall remain effective thereafter, with respect to each obligation of the Canadian Hedge Clearing Member to close out open stock loan and borrow positions directed to CDS prior to the effective date of the revocation, until the close out of all such positions is completed. If, for any reason, CDS ceases to act on behalf of the Canadian Hedge Clearing Member with respect to effecting delivery orders for stock loan and stock borrow transactions, the Corporation may require the Canadian Hedge Clearing Member to close out open stock loan and borrow positions through buy-in and sell-out procedures, or any other procedures provided in the By-Laws or Rules, as necessary. The Canadian Hedge Clearing Member shall promptly notify the Corporation, in writing, if it knows or reasonably expects that CDS will cease, or if CDS has ceased, to act on behalf of the Canadian Hedge Clearing Member with respect to effecting delivery orders for stock loan and stock borrow transactions. During the effectiveness of an appointment pursuant to this paragraph, the Canadian Hedge Clearing Member shall remain responsible to the Corporation with respect to its stock loan and borrow positions, regardless of any non-performance or failure by CDS, and the Corporation may treat any failure by CDS to complete delivery or payment required to close out an open stock loan or borrow position as a default by such Clearing Member and the Corporation may thereby exercise all remedies that the Corporation has under its By-Laws and Rules against a defaulting Clearing Member and the collateral deposited by the Clearing Member.

.07A Designation as a Market Loan Clearing Member. In order to be designated as a Market Loan Clearing Member with respect to a particular Loan Market, a Clearing Member must be a Hedge Clearing Member and (i) be a U.S. Clearing Member, (ii) be a subscriber to such Loan Market with full access to services provided by the Loan Market, (iii) be a member of the Depository that has provided the Depository with written authorization to honor instructions issued by the Corporation against such Clearing Member's account at the Depository, and (iv) execute such agreements and other documents as the Corporation may prescribe. A separate designation is required for each Loan Market in which a Clearing Member participates. A Market Loan Clearing Member shall continue to comply with all conditions referred to in (i) – (iv) above until the Clearing Member has terminated all open stock borrow and loan positions resulting from Market Loans.

.08 Admission of Clearing Member Affiliates to Clear Security Futures. If an affiliate of an entity that is currently a Clearing Member applies to become a Clearing Member solely in order to clear transactions in futures or future options, the Corporation will endeavor to perform an expedited review of the affiliate's qualifications as appropriate under the circumstances of each case and, in particular, the degree to which the experience and operational resources of the existing Clearing Member can be called upon by the affiliate. The Corporation shall have the ability to waive normal membership requirements (other than financial requirements) and review procedures, temporarily or permanently, where appropriate.

.09 Any Clearing Member that is a Stock Clearing Member on the day on which the Corporation commences clearing security futures shall be authorized to clear physically-settled stock futures, and any Clearing Member that is an Index Clearing Member on the day on which the Corporation commences clearing security futures shall be authorized to clear cash-settled stock futures and index futures.

.10 Regulatory Authorization. A Clearing Member must be: (i) registered as a broker-dealer under Section 15(b)(1) or (2) of the Securities Exchange Act of 1934 (the “Exchange Act”) (a “fully registered broker-dealer”); (ii) registered as a futures commission merchant (“FCM”) under Section 4f(a)(1) of the Commodity Exchange Act (the “CEA”) (a “fully registered FCM”); or (iii) a Non-U.S. Securities Firm. In addition, in order to clear transactions in particular types of products, a Clearing Member must be in compliance with all registration and other regulatory requirements applicable to that activity. In that regard, the following specific requirements will ordinarily apply:

(a) In order to clear transactions in options other than futures options or commodity options, a Clearing Member must be a fully-registered broker-dealer or a Non-U.S. Securities Firm.

(b) In order to clear transactions in commodity futures, options and commodity futures options, a Clearing Member must be (i) a fully registered FCM or (ii) not required by the CEA or the regulations of the Commodity Futures Trading Commission (the “CFTC”) to be registered as an FCM. (An exclusion from the FCM registration requirement under the CEA would ordinarily be available to a firm that clears only transactions that are for a “proprietary account” as defined in the regulations of the CFTC.)

(c) In order to clear transactions in security futures products, a Clearing Member must be: (i) a fully registered broker-dealer that is also (A) a fully registered FCM, (B) notice-registered as an FCM under Section 4f(a)(2) of the CEA, or (C) not required to register as an FCM under the CEA and the regulations of the CFTC; (ii) a fully registered FCM that is notice-registered as a broker-dealer under Section 15(b)(11)(A) of the Exchange Act; or (iii) a Non-U.S. Securities Firm.

.11 Designation as an OTC Index Option Clearing Member. In order to be designated as an OTC Index Option Clearing Member, a Clearing Member must (i) be a broker-dealer registered under Section 15(b)(1) or (2) of the Securities Exchange Act of 1934 or a Non-U.S. Securities Firm; (ii) execute and maintain in effect such agreements and other documents as the Corporation may prescribe (including, for purposes of clearing OTC index options on indices published by the Standard & Poor’s Financial Services LLC (“S&P”), a short-form index license agreement in the form specified from time to time by S&P); (iii) be a user of or participant in an OTC Trade Source for the purpose of affirming and submitting confirmed trades to the Corporation for clearance; and (iv) meet such other requirements as the Corporation may specify. An OTC Index Option Clearing Member shall continue to comply with all conditions described above until the Clearing Member has closed out all open positions in OTC index options.

Amended February 11, 1976; May 24, 1976; May 25, 1976; September 11, 1979; May 19, 1981; August 6, 1981; October 14, 1982; November 24, 1982; December 14, 1982; February 4, 1983; May 12, 1983; June 6, 1985; August 2, 1985; April 23, 1986; August 9, 1986; July 22, 1987; April 11, 1989; June 16, 1989; August 21, 1989; October 26, 1989; November 7, 1991; January 8, 1992; March 17, 1993; July 15, 1993; December 31, 1996; December 10, 1998; May 26, 1999; August 20, 2001; June 29, 2001; August 20, 2001; May 16, 2002; October 7, 2002; May 21, 2003; June 9, 2004; July 19, 2006; July 20, 2006; January 23, 2009; July 19, 2006; May 1, 2007; March 20, 2009; March 25, 2009; October 27, 2011; April 25, 2012; May 18, 2012; December 14, 2012; December 26, 2012; May 8, 2013; November 26, 2013; March 6, 2014; March 21, 2014; April 28, 2014; December 3, 2014; July 11, 2016; September 16, 2016; November 30, 2016; April 26, 2017; February 15, 2019.

Admission Procedure

SECTION 2. (a) Applications for clearing membership shall be in such form and contain such information as the Corporation shall from time to time prescribe. The Risk Committee shall review and approve or disapprove such applications for clearing membership. The Risk Committee, or its designated delegates or agents, may examine the books and papers of any applicant, take such evidence as they may deem necessary or employ such other means as they may deem desirable or appropriate to ascertain relevant facts bearing upon the applicant's qualifications. If the Risk Committee proposes to disapprove an application for clearing membership, it shall first furnish the applicant with a written statement of its proposed recommendation and the specific grounds therefor, and afford the applicant an opportunity to be heard and to present evidence on its own behalf. If the Risk Committee disapproves the application, written notice of its decision, accompanied by a statement of the specific grounds therefor, shall be mailed or delivered to the applicant. An applicant shall have right to present such evidence as it may deem relevant to its application. A verbatim record shall be kept of any hearing held pursuant hereto.

(b) Authority to approve applications for clearing membership shall be delegated to the Chief Executive Officer, or Chief Operating Officer, provided that: (i) the Risk Committee's designated delegates or agents do not recommend that the Risk Committee impose additional membership criteria upon the applicant pursuant to Section 1, Interpretation and Policy .06 of this Article V, and (ii) the Risk Committee is given not less than five business days from the date it is notified by its designated delegates or agents that the Chief Executive Officer or Chief Operating Officer intends to approve a given application to determine that such application should be reviewed at a meeting of the Risk Committee and the Risk Committee has not requested that the application be reviewed at a meeting of the Risk Committee within such five day period.

(c) The Board of Directors shall be informed of all applications for membership at its next regularly scheduled meeting.

Amended February 11, 1976; May 18, 2012; September 5, 2012; March 6, 2014; July 11, 2016; April 26, 2017; February 15, 2019.

Conditions to Admission

SECTION 3. No applicant shall be admitted as a Clearing Member until the applicant has deposited with the Corporation its initial contribution to the Clearing Fund in the amount required by Chapter X of the Rules and has signed and delivered to the Corporation an agreement in such form as the Corporation shall require, including applicant's agreements (a) to clear through the Corporation, either directly or through another Clearing Member, all of its confirmed trades and all other transactions which the By-Laws or the Rules may require to be cleared through the Corporation, (b) to abide by all provisions of the By-Laws and the Rules and by all procedures adopted pursuant thereto, (c) that the By-Laws and the Rules shall be a part of the terms and conditions of every confirmed trade or other contract or transaction which the applicant, while a Clearing Member, may make or have with the Corporation, or with other Clearing Members in respect of cleared contracts, or which may be cleared or required to be cleared through the Corporation, (d) to grant the Corporation all liens, rights and remedies set forth in the By-Laws and the Rules, (e) to pay to the Corporation all fees and other compensation provided by or pursuant to the By-Laws and the Rules for clearance and for all other services rendered by the Corporation to the applicant while a Clearing Member, (f) to pay such fines as may be imposed on it in accordance with the By-Laws and the Rules, (g) to permit inspection of its books and records at all times by the representatives of the Corporation and to furnish the Corporation with all information in respect of the applicant's business and transactions as the Corporation or its officers may require, (h) to make such payments to or in respect of the Clearing Fund as may be required from time to time, (i) to comply, in the case of Non-U.S. Securities Firms, with the guidelines and restrictions imposed on domestic broker-dealers regarding the extension of credit,

as provided by Section 7 of the Securities Exchange Act of 1934 and Regulation T promulgated thereunder by the Board of Governors of the Federal Reserve System, with respect to any customer account that includes cleared contracts issued by the Corporation, (j) to comply, in the case of Non-U.S. Securities Firms, with the Rules of the Financial Industry Regulatory Authority governing maintenance margin and cut-off times for the submission of exercise notices by customers, and (k) to consent, in the case of Non-U.S. Securities Firms, to the jurisdiction of Illinois courts and to the application of United States law in connection with any dispute with the Corporation arising from membership.

. . . Interpretations and Policies:

.01 Each applicant that has been approved for clearing membership subject to satisfaction of specified conditions shall meet all conditions applicable to its admission within six months from the date on which its application was approved, unless the Risk Committee prescribed an earlier date at the time the applicant was approved for clearing membership. In the event that an applicant fails to meet such conditions within the applicable time period, the approval of the application shall be deemed withdrawn and the application shall be deemed to have lapsed, unless the Corporation shall determine to extend the deadline for fulfilling such conditions. Any applicant seeking an extension under this paragraph shall submit a written request to the Secretary, specifying in detail any material changes that have occurred in applicant's financial condition, operational capability and experience and competence in clearing securities transactions from the date on which its application for clearing membership was approved by the Risk Committee. The Chief Executive Officer, Chief Operating Officer, or, if it is not feasible for the Chief Executive Officer or Chief Operating Officer to take such action, then a Designated Officer shall have the authority to approve or disapprove the applicant's request for an extension, which shall be communicated in writing to the applicant. In no event may that deadline be extended beyond one year from the date the application originally was approved.

Amended June 6, 1985; August 9, 1986; April 11, 1989; October 26, 1989, December 31, 1996; December 10, 1998; March 3, 1999, May 16, 2002; April 25, 2012; September 5, 2012; December 14, 2012; March 21, 2014; September 16, 2016; April 26, 2017; September 1, 2018; February 15, 2019.

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ARTICLE VI – CLEARANCE OF CONFIRMED TRADES

General Clearance Rule

SECTION 1. All confirmed trades shall be cleared through the Corporation, and no other transaction shall be cleared through the Corporation without its consent.

. . . Interpretations and Policies:

.01 (a) Subject to paragraph (c) below, it is the policy of the Corporation to permit a Clearing Member to submit adjustments to its positions with the Corporation to (1) effect a transfer of accounts between Clearing Members; (2) effect a Return, (3) effect a CMTA Retransfer; (4) correct a bona fide error or omission regarding a confirmed trade previously submitted to the Corporation by the Exchange, security futures market, futures market, futures market, international market or OTC Trade Source on which such confirmed trade occurred or was affirmed; (5) grant a request for offset pursuant to Rule 1306; and (6) effect a retender in connection with the settlement of a physically-settled commodity future pursuant to Rule 1307. Such data shall be submitted in such form and within such times as the Corporation shall prescribe. Such adjustments shall be treated as confirmed trades for the purposes of Sections 15 and 16 of Article VI of the By-Laws and for the purposes of other sections of Article VI except where the context otherwise requires. Notwithstanding the foregoing, adjustment of positions in OTC Options shall be a manual process and subject to such procedures as the Corporation may specify from time to time.

(b) Subject to paragraph (c) below, it is the policy of the Corporation to accept adjustments submitted by the correspondent clearing corporation on behalf of a Clearing Member to effect a transfer of accounts between Clearing Members. Such data shall be submitted in such form and within such times as the Corporation shall prescribe.

(c) Notwithstanding paragraphs (a) and (b) above, the Corporation shall have the right to reject adjustments to Clearing Members' positions and accounts contemplated by paragraphs (a) and (b), as well as any other post-trade transactions permitted by the Corporation's By-Laws and Rules, under circumstances where the Corporation, in its sole discretion, determines that the input regarding the adjustment or other transaction contains an error or omission.

.02 On an expiration date, a Clearing Member may submit adjustments to its positions only to correct bona fide errors or omissions with respect to confirmed trades in expiring options series. Such adjustments shall be submitted in such form and at such times as may be prescribed by the Corporation but no later than the deadline for submitting exercise instructions prescribed pursuant to Rule 805(b).

.03 (a) Except as otherwise provided in the By-Laws or Rules (including Chapter XI thereof), the Corporation will promptly transfer all or any portion of a carrying Clearing Member's segregated futures customer account maintained in accordance with Section 3(f) of this Article VI or segregated futures professional account maintained in accordance with Section 3(j) of this Article VI, and will, at the same time, transfer related funds (if any) upon the request of the carrying Clearing Member and the confirmation of the receiving Clearing Member that it will accept such transfer, provided that the request for transfer and confirmation of transfer are received by the Corporation in accordance with the procedures and within such timeframes as required by the Corporation.

(b) Any transfer effected pursuant to this Interpretation and Policy .03 shall be subject to such policies and procedures as the Corporation determines are reasonably necessary for the protection of the Corporation, other Clearing Members, customers and the general public and the

Corporation may refuse any transfer request that does not comply with such policies and procedures.

(c) Any carrying Clearing Member requesting a transfer pursuant to this Interpretation and Policy .03 shall be deemed to have represented to the Corporation that: (1) such transfer is being made upon the instruction of the customer of the carrying Clearing Member to make such transfer, (2) the customer instructing the carrying Clearing Member to transfer its positions is not currently in default to the carrying Clearing Member, and (3) any remaining positions of the customer will have appropriate margin at the carrying Clearing Member.

(d) Any receiving Clearing Member consenting to a transfer of positions in accordance with Interpretation and Policy .03 shall be deemed to have represented to the Corporation that the transferred positions will have appropriate margin at the receiving Clearing Member.

(e) No transfer of positions between Clearing Members pursuant to this Interpretation and Policy .03 shall require the close-out or re-booking of the positions.

(f) The Corporation may refuse to effect a transfer pursuant to this Interpretation and Policy .03 if doing so would result in any account of the carrying or receiving Clearing Member having margin assets less than the Corporation deems necessary.

(g) Any transfer effected pursuant to this Interpretation and Policy .03 shall be deemed to have been completed at such time as (1) position reports provided to the receiving Clearing Member indicate that the transferred position(s) is/are in the appropriate account of the receiving Clearing Member and (2) the transfer of any related funds has been finalized.

Amended April 27, 1983; September 6, 1986; December 18, 1986; March 12, 1987; July 22, 1987; August 21, 1987; October 18, 1995; August 20, 2001; October 19, 2001; May 16, 2002; June 9, 2004; October 26, 2005; March 20, 2009; March 25, 2009; January 3, 2012; December 14, 2012; September 25, 2013.

Responsibility of Clearing Members for Confirmed Trades

SECTION 2. Every Clearing Member shall be responsible for the clearance of the confirmed trades of the Clearing Member and the confirmed trades transferred to one of its accounts pursuant to a registered CMTA arrangement as further specified in Rule 407.

Amended June 9, 2004; December 12, 2014; May 24, 2018.

Maintenance of Accounts

SECTION 3. Every Clearing Member may establish and maintain with the Corporation one or more of the following accounts:

(a) A firm account, which shall be confined to (i) the confirmed trades in cleared securities other than security futures of such Clearing Member's non-customers, (ii) the confirmed trades in (x) futures other than security futures and (y) futures options and commodity options of persons whose transactions are not required to be treated as the transactions of futures customers, and (iii) the confirmed trades in security futures of persons whose transactions are not required to be treated as the transactions either of securities customers or of futures customers. The Clearing Member, on behalf of itself and each other non-customer on whose behalf positions may be maintained in the firm account, agrees that the Corporation shall have a general lien on all positions and on all other securities, margin and other funds and property in such account, the Corporation shall have the right to net all writing transactions against all purchase transactions effected in such account in accordance with the Rules, and the Corporation may close out the positions in the account and apply the proceeds thereof at any time without prior notice to the

Article VI – Clearance of Confirmed Trades

Clearing Member or any other non-customer. Such firm account shall be a “firm lien account.” The Corporation may also permit each Clearing Member to establish a “firm non-lien account,” which shall be confined to those confirmed trades of non-customers of the Clearing Member in respect of which the Clearing Member does not intend to give the Corporation a lien on the segregated long positions in the account (although the Corporation shall have a restricted lien on the unsegregated long positions in securities options and on other securities (including security futures) therein and the proceeds thereof and a general lien on all other property (other than segregated long positions) in such account. The firm non-lien account shall be subject to the same margin requirements as the Clearing Member’s customers’ account.

(b) A separate Market-Maker’s account, which shall be confined to the confirmed trades of the Market-Maker for which it is established. In addition, a Clearing Member who is registered with a Securities Exchange or security futures market as a Market-Maker may maintain a separate Market-Maker’s account, which shall be confined to such Clearing Member’s confirmed trades as such Market-Maker (including the confirmed trades of a specialist unit in which such Clearing Member is a participant). The Clearing Member agrees, and represents to the Corporation that it has obtained the agreement of each Market-Maker on whose behalf positions may be maintained in a Market-Maker’s account, that (i) the Corporation shall have a restricted lien on long positions in securities options and on other securities (including security futures) in such Market-Maker’s account and the proceeds thereof and a general lien on all other funds and property in such Market-Maker’s account, (ii) the Corporation shall have the right to net all writing transactions against all purchase transactions effected in such account in accordance with the Rules, and (iii) the Corporation may close out the positions in the account, and apply the proceeds thereof, at any time without prior notice to the Clearing Member or Market-Maker, and (iv) notwithstanding the provisions of clause (i) hereof, if the Market-Maker is the Clearing Member or a proprietary Market-Maker, the Corporation shall have a general lien on all positions and on all other securities, margin, and other funds and property in such account, and the account shall be a “firm lien account.”

(c) A combined Market-Makers’ account, which shall be confined to the confirmed trades of the Market-Makers for which it is established. No confirmed trades of the Clearing Member or proprietary Market-Makers shall be included in a combined Market-Makers’ account that is used for the confirmed trades of Market-Makers that are not proprietary Market-Makers. Likewise, no confirmed trades of associated Market-Makers shall be included in a combined Market-Makers’ account that is used for the confirmed trades of Market-Makers that are not associated Market-Makers. The Clearing Member agrees, and represents to the Corporation that it has obtained the agreement of each Market-Maker on whose behalf positions may be maintained in a combined Market-Makers’ account, that (i) the positions of such Market-Maker may be commingled in a combined Market-Makers’ account with the positions of the Clearing Member acting as Market-Maker or of other proprietary Market-Makers if such Market-Maker is a proprietary Market-Maker; with the positions of other associated Market-Makers if such Market-Maker is an associated Market Maker, or with other Market-Makers that are not proprietary or associated Market-Makers if such Market-Maker is not a proprietary or associated Market-Maker; (ii) the Corporation shall have a restricted lien on all long positions in securities options and on other securities (including security futures) in such combined Market-Makers’ account and the proceeds thereof and a general lien on all other funds and property in such combined Market-Makers’ account, (iii) the Corporation shall have the right to net all writing transactions against all purchase transactions effected in such account in accordance with the Rules, (iv) the Corporation may close out the positions in the account, and apply the proceeds thereof, at any time without prior notice to the Clearing Member or Market-Maker, and (v) notwithstanding the provisions of clause (i) hereof, if a combined Market-Makers’ account is confined to the confirmed trades of the Clearing Member and proprietary Market-Makers, the Corporation shall have a general lien on all positions and on all other securities, margin, and other funds and property in such account, and the account shall be a “firm lien account.”

(d) A Clearing Member may also establish and maintain separate "Pledge Accounts" to the extent permitted by the Rules and subject to the provisions thereof.

(e) Every Clearing Member conducting a public business in which it effects confirmed trades for securities customers shall also establish and maintain a customers' account, which shall be confined to the confirmed trades of such Clearing Member's securities customers. The Clearing Member, on behalf of itself and each securities customer on whose behalf positions may be maintained in the customers' account, agrees that the Corporation shall have a restricted lien on all unsegregated long positions in securities options and on all other securities (other than segregated long positions) (including security futures) in such account and the proceeds thereof, and on all other funds and property in such account (other than segregated long positions).

(f) Every Clearing Member conducting a public business in which it effects confirmed trades for futures customers shall also establish and maintain a segregated futures account, which shall be confined to the confirmed trades in futures, futures options and commodity options of such Clearing Member's futures customers. Notwithstanding the preceding sentence, in the case of those futures customers for which a Clearing Member effects transactions that are futures professionals, the Clearing Member is not required to maintain a segregated futures account under this paragraph (f), but instead may maintain a segregated futures professional account, as provided in paragraph (j) below. The Clearing Member, on behalf of itself and each futures customer on whose behalf positions may be maintained in the segregated futures account, agrees that the Corporation shall have a restricted lien on all positions, margin and other funds and property in such account as security for the Clearing Member's obligations to the Corporation for the positions in that account and in any segregated futures professional account maintained by the Clearing Member pursuant to paragraph (j) below. The Corporation shall comply with applicable provisions of the CEA and applicable regulations and orders of the Commodity Futures Trading Commission pertaining to the holding of segregated funds by clearing organizations of contract markets.

(g) A Clearing Member may also establish and maintain an "OCC proprietary X-M account," an "OCC non-proprietary X-M account" and an "internal non-proprietary cross-margining account" to the extent permitted by the By-Laws and Rules and subject to the provisions thereof.

(h) A JBO Participants' account, which shall be confined to the confirmed trades of the JBO Participants for which it is established. The Clearing Member agrees, and represents to the Corporation that it has obtained the agreement of each JBO Participant on whose behalf positions may be maintained in the JBO Participants' account, that (i) the positions of such JBO Participant may be commingled with the positions of other JBO Participants, (ii) the Corporation shall have a restricted lien on all long positions in securities options and on all other securities (including security futures), in such JBO Participants' account and a general lien on all other funds and property in such JBO Participants' account with the Clearing Member (iii) the Corporation shall have the right to net all writing transactions against all purchase transactions effected in such accounts in accordance with the Rules, and (iv) the Corporation may close out positions in the account, and apply the proceeds thereof, at any time without prior notice to the Clearing Member or JBO Participant. Except for purposes of Chapter IV of the Rules, or where the context requires otherwise, all provisions in the By-Laws and the Rules which apply to Market-Makers or a Market-Maker account with the Corporation shall be deemed to apply with equal force to JBO Participants and to a JBO Participants' account with the Corporation, and all references in the By-Laws and the Rules to Market-Makers shall be deemed to also refer to JBO Participants.

(i) A customers' lien account for those securities customers that are eligible, and that have elected, to carry accounts with the Clearing Member that are margined on a portfolio risk basis or pursuant to a cross-margining arrangement, in accordance with Exchange Rules. The Clearing

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Member, on behalf of itself and each customer on whose behalf positions may be maintained in the customers' lien account, agrees that (i) the positions of such customer may be commingled with the positions of other eligible customers, (ii) the Corporation shall have a restricted lien on all long positions in securities options and on all other securities (including security futures) in such account, and on all other funds and property in such account, and (iii) the Corporation may close out positions in such account and apply the proceeds thereof at any time without prior notice to the Clearing Member or customer. A separate customers' lien account may be established in connection with a cross-margining program for eligible customers between the Corporation and one or more Participating CCOs, and any such account shall be subject to such additional provisions and security interests as may be set forth in the By-Laws and Rules and in the applicable Participating CCO Agreement.

(j) A segregated futures professional account, which shall be confined to the confirmed trades in futures, futures options and commodity options of the Clearing Member's futures customers who are futures professionals. The Clearing Member, on behalf of itself and each futures professional on whose behalf positions may be maintained in the segregated futures professional account, agrees that the Corporation shall have a restricted lien on all positions, margin and other funds in such account as security for the Clearing Member's obligations to the Corporation arising from that account and any segregated futures account maintained by the Clearing Member pursuant to paragraph (f) above and that the Corporation may close out the positions in the account and apply the proceeds thereof at any time without prior notice to the Clearing Member or any futures professional. The Corporation shall comply with applicable provisions of the CEA and applicable regulations and orders of the Commodity Futures Trading Commission pertaining to the holding of segregated funds by clearing organizations of contract markets.

(k) A proprietary futures professional account, which shall be confined to the confirmed trades of futures professionals whose transactions are not required to be treated as the transactions of securities customers or of futures customers. The Clearing Member, on behalf of itself and each other futures professional on whose behalf positions may be maintained in the proprietary futures professional account, agrees that the Corporation shall have a general lien on all positions and on all other securities, margin and other funds in such account, and the Corporation may close out the positions in the account and apply the proceeds thereof at any time without prior notice to the Clearing Member or any futures professional. Such account shall be a "firm lien account."

. . . Interpretations and Policies:

.01 The following requirements shall apply to carrying the following types of accounts: (i) a Clearing Member must be registered as a broker-dealer under Section 15(b)(1) or (2) of the Securities Exchange Act of 1934 in order to carry an account under paragraph (e) of this Section; and (ii) a Clearing Member must be registered as a futures commission merchant under Section 4f(a)(1) of the Commodity Exchange Act in order to carry an account under paragraphs (f) or (j) of this Section.

.02 In any "proprietary account" a Clearing Member is permitted to carry both cleared contracts that are "securities" as defined in Section 3(a)(10) of the Securities Exchange Act of 1934 and cleared contracts that are commodity futures, futures options or commodity options subject to regulation under the Commodity Exchange Act, and the margin requirements applicable to any such proprietary account shall be determined under Rule 601 based upon the net liquidating value of all positions carried in the account. Accordingly, all such proprietary accounts are deemed to be held subject to a "cross-margining agreement or similar arrangement" for purposes of Section 561(b)(3)(A) of the United States Bankruptcy Code (11 U.S.C. § 561(b)(3)(A)) and any netting performed between cleared contracts that are securities, on the one hand, and cleared contracts that are commodity futures, futures options or commodity options, on the other, including any close-out netting that is performed in accordance with Section 27 of Article VI of the

By-Laws or Chapter XI of the Rules, shall be deemed to occur pursuant to such cross-margining agreement or similar arrangement. For purposes of this interpretation, a “proprietary account” includes (i) a firm account, (ii) a separate Market-Maker’s account for which the Market-Maker is a Clearing Member or a proprietary Market-Maker trading for his own account, (iii) a combined Market-Maker’s account confined to the confirmed trades of Market-Makers who are Clearing Members or proprietary Market-Makers trading for their own accounts, (iv) an OCC proprietary X-M account (together with the corresponding proprietary X-M account at a participating futures clearing organization), or (v) a proprietary futures professional account and any other account that does not contain positions or other property of any person who is a “customer” within the meaning of the Commodity Exchange Act and regulations thereunder.

.03 The fact that a Clearing Member may have accounts under more than one Clearing Member number shall have no significance for purposes of a liquidation of a Clearing Member’s accounts under Chapter XI of the Rules, and all such accounts—whether or not representing separate business segments or divisions—shall be treated as accounts of the same suspended Clearing Member. Although a Clearing Member may maintain more than one firm lien account with the Corporation, all of the Clearing Member’s firm lien accounts established under paragraphs (a), (b)(iv), (c)(v), and (k) of this Section 3 shall be treated as a single firm lien account in the event of such a liquidation. Similarly, in such an event, all of the Clearing Member’s firm non-lien accounts established under paragraph (a) of this Section 3 shall be treated as a single firm non-lien account, all of the Clearing Member’s combined Market-Makers’ accounts established under paragraph (c) of this Section 3 for associated Market-Makers will be treated as a single combined Market-Makers’ Account, all of the Clearing Member’s combined Market-Makers’ accounts established under paragraph (c) of this Section 3 for Market-Makers that are not proprietary or associated Market-Makers will be treated as a single combined Market-Makers’ Account, all of the Clearing Member’s customers’ accounts established under paragraph (e) of this Section 3 shall be treated as a single customers’ account, all of the Clearing Member’s segregated futures accounts established under paragraphs (f) and (j) of this Section 3 shall be treated as a single segregated futures account, all of the Clearing Member’s JBO Participants’ accounts established under paragraph (e) of this Section 3 shall be treated as a single JBO Participants’ account, and all of the Clearing Member’s customers’ lien accounts established under paragraph (i) of this Section 3 shall be treated as a single customers’ lien account. Each separate account maintained by a Clearing Member under paragraph (b) or (d) of this Section 3, with the exception of a proprietary Market-Maker account, shall be treated in a liquidation as a separate account. Whenever a group of restricted lien accounts is treated as a single account in accordance with this Interpretation .02, all assets subject to the restricted lien shall secure obligations arising in any of the accounts within such group of accounts.

.04 The Corporation may permit a Clearing Member to maintain one or more sub-accounts in respect of the accounts and for the purposes described herein. Clearing Members may not maintain sub-accounts in respect of firm non-lien accounts, CCO cross-margining accounts or separate Market-Maker’s accounts. Within any account other than a firm non-lien account, CCO cross-margin account, or separate Market-Maker’s account, a Clearing Member may elect to maintain one or more separate sub-accounts for position reporting purposes. The account within which such sub-accounts are created shall be referred to as the “parent account.”

A Clearing Member may elect to have any sub-account, other than a sub-account in a combined Market-Makers’ account: (i) “margin enabled”, (ii) “margin and collateral enabled,” or (iii) “margin, collateral and settlement enabled.” A sub-account must be margin-enabled in order to be collateral enabled, and collateral enabled in order to be settlement enabled. If a sub-account is margin enabled, the Corporation will calculate and report to the Clearing Member a separate margin requirement considering only the positions in such sub-account. If a sub-account is margin and collateral enabled, the Clearing Member may direct that collateral deposited by the Clearing Member to satisfy its margin requirement be identified as being in the particular sub-

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account. If a sub-account is settlement enabled, separate daily cash settlement amounts, including, without limitation, premium, futures variation, escrow and exercise settlement amounts, will be calculated by the Corporation for such sub-account. Positions in a sub-account that is margin enabled (whether or not the account is also collateral enabled and/or settlement enabled) will not be combined with positions in any other sub-account for purposes of calculating required margin for any such sub-account or the parent account, and margin excesses in a sub-account will not be applied toward a margin deficit in any other sub-account or the parent account.

Escrow deposits, specific deposits and segregation instructions in respect of, and pledges of, positions in an account divided into sub-accounts must specify the applicable sub-account regardless of the functions enabled for such sub-accounts pursuant to this Interpretation and Policy. Clearing Members should refer to OCC's operating procedures or ask OCC staff for more detailed information as to the operation and functionality of sub-accounts.

The fact that a Clearing Member may carry sub-accounts shall have no significance for purposes of a liquidation of a Clearing Member's accounts under Chapter XI of the Rules or for purposes of close-out netting under Article VI, Section 27 of the By-Laws. Although a Clearing Member may maintain one or more sub-accounts in respect of a particular parent account, the parent account (including all such sub-accounts) will be treated as a single account in the event of a liquidation of the Clearing Member. For systemic or operational reasons, the Corporation may restrict the number of sub-accounts that a Clearing Member may maintain in respect of any account.

.05 In connection with its clearing agreement with the Corporation, a futures market may require that cleared contracts traded on such futures market be carried by Clearing Members separately from cleared contracts traded on other Exchanges. A Clearing Member may elect to hold such cleared contracts in accounts under more than one Clearing Member number, subject to the provisions of Interpretations and Policies .03 above and .06 below, or in one or more separate sub-accounts. The futures market may require that any such sub-account be margin enabled, but Clearing Members may elect whether or not such sub-accounts will also be collateral enabled or collateral and settlement enabled within the meaning of Interpretation and Policy .04 above.

.06 Paragraph I of this Section 3 provides, in effect, for three separate types of combined Market-Maker accounts: (i) a combined account limited to Market-Makers that are neither proprietary Market-Makers nor associated Market-Makers (as defined in Article I of the By-Laws); (ii) a combined account limited to proprietary Market-Makers; and (iii) a combined account limited to associated Market-Makers. Each of these is a separate account for purposes of holding positions and collateral and determining margin requirements, and each such account type would be liquidated separately under the provisions of Chapter XI of the Rules. The Corporation may use its system sub-accounting function, with each account margin, collateral and settlement enabled, in order to maintain these three separate account types under the same Clearing Member number, and each account would nevertheless be treated as a separate account for all purposes under the By-Laws and Rules. If these separate account types are maintained under the same Clearing Member number, in addition to depositing collateral in respect of a specific account type, the Clearing Member may deposit collateral in respect of all three combined Market-Maker account types, provided that collateral deposited in respect of all three account types must be limited to proprietary collateral, and shall be so treated for all purposes under the By-Laws and Rules, including, without limitation, for purposes of a liquidation of a Clearing Member's accounts under Chapter XI of the Rules and for purposes of close-out netting under Article VI, Section 27 of the By-Laws.

.07 Each Clearing Member that effects transactions or carries assets on behalf of any person in any account established and maintained pursuant to this Section 3 shall be deemed to represent and warrant to the Corporation that it has obtained any necessary agreement or consent from each person for whom such transaction is effected or assets are carried to the provisions of this

Section 3 applicable to such account (including without limitation the granting of a security interest to the Corporation in such account) and that effecting such transaction and carrying such assets for such person in such account is in compliance with applicable laws, regulations and rules by which such Clearing Member is bound. The rights of the Corporation under the By-Laws and Rules shall be enforceable in accordance with their terms notwithstanding the failure of a Clearing Member to obtain any required agreement or consent of any such person and notwithstanding any defect or limitation in any such agreement or consent.

.08 As used in this Section 3: (i) the phrase “all long positions, securities, margin and other funds” is deemed to include any “investment property” as that term is defined in Article 9 of the Uniform Commercial Code (including long and short positions in security futures) and any other asset in the applicable account; (ii) the phrase “obligations to the Corporation in respect of all confirmed trades” includes any and all obligations arising directly or indirectly from a confirmed trade, including, without limitation, (a) obligations relating to any long or short position in any cleared contract that is created in a confirmed trade, (b) any obligation to make a cash payment, or physical delivery of an underlying interest, resulting from the exercise of, assignment of an exercise notice to, or maturity of such a cleared contract, and (c) any fees or charges imposed by the Corporation with respect to such confirmed trades; and (iii) references to securities or other property “in” an account includes any securities or other property that are identified as deposited as margin in respect of such account.

.09 Notwithstanding anything to the contrary in this Section 3, confirmed trades in OTC options shall be effected, and positions in OTC options shall be maintained, only in a Clearing Member’s firm account, separate Market-Maker’s account, combined Market-Makers’ account or securities customers’ account, as applicable. Confirmed trades in certain classes of OTC options, as specified by the Corporation from time to time, for which resulting positions are to be carried in a securities customers’ account must be submitted to the Corporation with a customer ID assigned by the OTC Trade Source for the limited purpose of identifying whether a transaction in an OTC Option was an opening transaction or a closing transaction.

.10 As provided in CFTC Rule 1.20(d), in its capacity as the depository of any futures customer funds deposited in a segregated futures account or segregated futures professional account by a Clearing Member, the Corporation agrees: (i) that segregated futures accounts and segregated futures professional accounts containing customer funds may be examined at any reasonable time by the director of the CFTC’s Division of Swap Dealer and Intermediary Oversight or the director of the CFTC’s Division of Clearing and Risk, or any successor divisions, or such directors’ designees, or an appropriate officer, agent or employee of the Clearing Member’s designated self-regulatory organization; and (ii) to reply promptly and directly to any request from the director of the CFTC’s Division of Swap Dealer and Intermediary Oversight or the director of the CFTC’s Division of Clearing and Risk, or any successor divisions, or such directors’ designees, or an appropriate officer, agent or employee of the Clearing Member’s designated self-regulatory organization, for confirmation of account balances or provision of any other information regarding or related to a segregated futures account or segregated futures professional account. The Corporation is authorized and directed by each such Clearing Member to permit such examinations and to release the requested information without further notice or consent from the Clearing Member.

Amended September 26, 1989; November 26, 1991; January 19, 1994; May 26, 1999; August 20, 2001; May 16, 2002; October 15, 2002; October 16, 2002; September 22, 2003; March 9, 2004; October 8, 2004; July 14, 2005; October 13, 2005; September 1, 2006; September 28, 2007; October 23, 2007; March 20, 2009; March 25, 2009; December 14, 2012; March 13, 2014.

SECTION 4. Reserved.

SECTION 5. Reserved.

SECTION 6. Reserved.

SECTION 7. Reserved.

SECTION 8. Reserved.

General Rights and Obligations of Holders and Writers

SECTION 9. (a) *Call Option Contracts.* Subject to the provisions of the By-Laws and Rules of the Corporation, the holder of a single American-style call option contract has the right, beginning at the time such option contract is issued pursuant to this Article VI and expiring at the expiration time therefor on the expiration date of such option contract, to purchase from the Corporation at the aggregate exercise price the number of units of the underlying security represented by such option contract, all in accordance with Exchange Rules and the By-Laws and Rules. Subject to the provisions of the By-Laws and Rules of the Corporation, the holder of a single European-style call option contract has the right on (and only on) the expiration date, expiring at the expiration time therefor on such date, to purchase from the Corporation at the aggregate exercise price the number of units of the underlying security represented by such option contract, all in accordance with Exchange Rules and the By-Laws and Rules. The writer of a single call option contract is obligated, upon the assignment to him of an exercise notice in respect of such option contract, to deliver the number of units of the underlying security represented by such option contract against payment of the aggregate exercise price, all in accordance with Exchange Rules and the By-Laws and Rules.

(b) *Put Option Contracts.* Subject to the provisions of the By-Laws and Rules of the Corporation, the holder of a single American-style put option contract has the right, beginning at the time such option contract is issued pursuant to this Article VI and expiring at the expiration time therefor on the expiration date of such option contract, to sell to the Corporation at the aggregate exercise price the number of units of the underlying security represented by such option contract, all in accordance with Exchange Rules and the By-Laws and Rules. Subject to the provisions of the By-Laws and Rules of the Corporation, the holder of a single European-style put option contract has the right on (and only on) the expiration date, expiring at the expiration time therefor on such date, to sell to the Corporation at the aggregate exercise price the number of units of the underlying security represented by such option contract, all in accordance with Exchange Rules and the By-Laws and Rules. The writer of a single put option contract is obligated upon the assignment to him of an exercise notice in respect of such option contract, to pay the aggregate exercise price against delivery of the number of units of the underlying security represented by such option contract, all in accordance with Exchange Rules and the By-Laws and Rules.

(c) *Governing Law; Ownership and Security Interests.* (1) Choice of law rules governing, among other things, the rights and obligations of the Corporation and Clearing Members with respect to ownership and transfer of, and the creation, attachment, perfection and priority of security interests in, cleared securities, commodity futures contracts, futures options and commodity options contracts are set forth in Article IX, Section 10 of the By-Laws.

(2) Persons desiring to perfect security interests in cleared securities should obtain the advice of counsel as to applicable legal requirements.

. . . Interpretations and Policies:

.01 Subsections (a) and (b) above apply only to stock option contracts (including fund options). Similar provisions for other cleared contracts appear in the Articles of the By-Laws pertaining to such products.

Amended August 1, 1977; October 31, 1977; November 2, 1995; June 16, 1989; June 25, 1998; October 23, 1998; March 3, 1999; August 20, 2001; May 16, 2002; November 26, 2002; July 12, 2005; December 7, 2007; March 20, 2009; December 14, 2012.

Terms of Cleared Contracts

SECTION 10. (a) The applicable provisions of the By-Laws and the Rules, including, without limitation, the liens on cleared contracts and the liquidation rights of the Corporation provided for therein, shall constitute part of the terms of each cleared contract issued by the Corporation.

(b) Except to the extent provided otherwise in the next sentence with respect to delayed start options and except to the extent provided otherwise in the By-Laws and Rules with respect to transactions in flexibly structured options or OTC options, the expiration date and exercise price and, (i) in the case of capped option contracts, the cap interval (as defined, in the case of capped cash-settled option contracts, in Article XVII of the By-Laws), and (ii) in the case of packaged spread options, the base exercise price and spread interval (as defined in Article XXVI of the By-Laws), of option contracts of each series of options shall be determined by each Exchange at the time such series of options is first opened for trading on that Exchange, provided that the expiration date is not a date specified by the Corporation as ineligible to be an expiration date. In the case of delayed start options, the exercise price setting date and the exercise price setting formula of option contracts of each series shall be determined by the Exchange at or before the time such series of options is first opened for trading on that Exchange. The unit of trading of option contracts of each series of options shall be designated by the Corporation prior to the time such series of options is first opened for trading, and in the absence of such designation for a series of options in which the underlying security is a common stock, the unit of trading shall be 100 shares. The unit of trading and exercise price established for an option contract are subject to adjustment in accordance with the By-Laws.

(c) The variable terms of each series of BOUNDS shall be determined by each Exchange at the time such series is first opened for trading on that Exchange, provided that the expiration date is not a date specified by the Corporation as ineligible to be an expiration date. The unit of trading of BOUNDS of each series shall be designated by the Corporation prior to the time such series of BOUNDS is first opened for trading, and in the absence of such designation for a series of BOUNDS in which the underlying security is a common stock, the unit of trading shall be 100 shares. The unit of trading and exercise price initially established for a BOUND are subject to adjustment in accordance with Section 4 of Article XXIV of the By-Laws.

(d) Except to the extent provided otherwise in the By-Laws and Rules with respect to transactions in flexibly structured futures, the variable terms of each series of futures shall be determined by each Exchange at the time such series is first opened for trading on that Exchange, provided that the maturity date is not a date specified by the Corporation as ineligible to be a maturity date. The unit of trading of each series of stock futures shall be designated by the Corporation prior to the time such series of stock futures is first opened for trading. In the absence of such designation for a series of stock futures, the unit of trading shall be 100 shares. The multiplier for each series of index futures and variance futures shall be determined by each Exchange at the time such series is first opened for trading on such Exchange.

(e) Except to the extent provided otherwise in the By-Laws and Rules with respect to transactions in binary options, the expiration date, exercise price (if any) and exercise settlement amount(s) of each series of binary options shall be determined by the Exchange that first introduces such series of options for trading at the time such series is opened for trading, provided that the expiration date is not a date specified by the Corporation as ineligible to be an expiration date. The exercise price (if any) and exercise settlement amount (including each component exercise settlement amount for a credit default basket option as defined in Article XIV of the By-Laws) for a

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binary option are subject to adjustment in accordance with applicable provisions of Article XIV of the By-Laws.

(f) Except to the extent provided otherwise in the By-Laws and Rules with respect to transactions in range options, the variable terms of each series of range options shall be determined by the Exchange that first introduces such series of options for trading at the time such series is opened for trading, provided that the expiration date is not a date specified by the Corporation as ineligible to be an expiration date. Certain variable terms established for a series of range options are subject to adjustment in accordance with applicable provisions of Article XIV of the By-Laws.

(g) New series of cleared contracts may generally be opened on a same day or next day basis; provided, however, that no series of cleared contracts shall be opened for trading without the consent of the Corporation unless the Corporation shall have received prior notice thereof from the Exchange not later than the applicable deadline for new series established from time to time by the Corporation. The Corporation may require a longer notice period for new series of cleared contracts having as a contract month, maturity date or expiration month a calendar month that is not then, or was not during the prior calendar year, in use for any other series of cleared contract. Series of flexibly structured cleared contracts may be subject to different notice periods than those applicable to other cleared contracts. Notwithstanding any other provision of this Section 10, a new series of OTC options may be opened on the date a confirmed trade in OTC options is accepted by the Corporation for clearing and all OTC options covering the same underlying interest and having identical terms shall be considered to be in the same series.

. . . Interpretations and Policies:

.01 For series of fund options, the unit of trading shall be the amount of the underlying security deliverable upon the exercise of such option as specified by the Exchange on which the option is traded, unless otherwise specified by the Corporation pursuant to the By-Laws and Rules.

.02 The Corporation will not adjust the exercise price of delayed start options fixed by the Exchange, even if that price is subsequently found to have been erroneous, except in extraordinary circumstances. Such circumstances might be found to exist where, for example, the closing price or current index value used in the calculation of the exercise price is clearly erroneous and inconsistent with prices or values reported earlier in the same trading day. In no event will the exercise price of a series of delayed start options be adjusted after the opening of regular trading hours (as determined by the Corporation) on the trading day following the exercise price setting date.

Amended October 28, 1991; February 22, 1993; February 23, 1993; November 1, 1994; August 26, 1996; September 24, 1997; June 25, 1998; October 23, 1998; August 20, 2001; May 16, 2002; November 26, 2002 December 23, 2005; June 6, 2007; August 20, 2007; November 28, 2007; November 30, 2007; January 24, 2008; June 23, 2008; March 20, 2009; December 14, 2012; June 17, 2013.

Adjustment Policies and Procedures

SECTION 11. (a) Unless otherwise provided in the By-Laws or Rules of the Corporation, all adjustments to the terms of outstanding cleared contracts shall be made by the Corporation, which shall determine whether to make adjustments to reflect particular events in respect of an underlying interest, and the nature and extent of any adjustment, based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to holders and writers (or purchasers and sellers) of the affected contracts, the maintenance of a fair and orderly market in the affected contracts, consistency of interpretation and practice, efficiency of exercise settlement procedures, and the coordination with other clearing agencies of the clearance and settlement of transactions in the underlying interest. The

Securities Committee shall be authorized to adopt statements of policy or interpretations having general application to specified types of events or specified kinds of cleared contracts. In making any adjustment determination, the Corporation shall apply the factors set forth in this Section 11 and the policies and interpretations of the Securities Committee in light of the circumstances known to it at the time such determination is made, subject to the discretion of the Corporation to depart from policy or precedent where the Corporation determines that unusual circumstances make such a departure appropriate.

(b) Every adjustment determination under the By-Laws or Rules of the Corporation shall be within the sole discretion of the Corporation and shall be conclusive and binding on all investors and not subject to review. If the Corporation does not learn, or does not learn in a timely manner, of an event for which the Corporation would have otherwise made an adjustment, the Corporation shall not be liable for any failure to make such adjustment or delay in making such adjustment.

(c) The composition and manner of acting of the Securities Committee and panels comprised of representatives of Securities Exchanges that have authority under the By-Laws and Rules to make certain determinations with respect to cleared contracts shall be as set forth below, unless otherwise provided in the By-Laws and Rules of the Corporation:

(1) The Securities Committee shall consist of one designated representative of each Securities Exchange and the Executive Chairman. The Executive Chairman shall not be a voting member of the Committee or of any panel except in the case of a tie vote, in which case the Executive Chairman shall have the right to cast a vote to break the tie and shall, for such purpose, be deemed to be a voting member.

(2) The vote of a majority of the voting members of the Securities Committee shall constitute the determination of the Securities Committee. With respect to a panel convened for the purpose of determining a required amount or value (other than as provided for in Article VI, Section 11A of the By-Laws), a majority of the Securities Exchanges on which such cleared contract is open for trading shall constitute a quorum for purposes of acting.

(3) The Securities Committee or any panel may transact its business by telephone or such other means as may be designated by the Securities Committee from time to time.

(4) Notwithstanding the foregoing provisions of this Section 11 or any other requirements of the By-Laws and Rules, the Executive Chairman may designate any other representative of the Corporation, and any representative of an Exchange may designate any other representative of such Exchange, to serve in his place at any meeting of the Securities Committee or of any panel. In the event of such designation, the designee shall, for the purposes of such meeting, have all of the powers and duties under this Section 11 of the person designating him. Neither the Corporation nor any Exchange shall designate to serve on any panel (i) any Exchange member or Clearing Member, or any director, officer, partner, or employee of any Exchange member or Clearing Member, or (ii) any person who, to the knowledge of the self-regulatory organization designating such person, is the beneficial holder of a long or short position in the cleared contracts as to which such panel is to make a determination.

Amended February 8, 1996; December 23, 2005; December 23, 2006; March 20, 2009; July 2, 2012, March 6, 2014, November 12, 2018; February 15, 2019.

Adjustments for Stock Option Contracts

SECTION 11A. (a) Whenever there is a dividend, stock dividend, stock distribution, stock split, reverse stock split, rights offering, distribution, reorganization, recapitalization, reclassification or similar event in respect of any underlying security, or a merger, consolidation, dissolution or liquidation of the issuer of any underlying security, the number of option contracts, the unit of

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trading, the exercise price, and the underlying security, or any of them, with respect to all outstanding option contracts open for trading in that underlying security may be adjusted in accordance with this Section 11A.

(b) All adjustments hereunder shall be made by the Corporation in accordance with the policies and procedures set forth in Section 11.

(c) It shall be the general rule that there will be no adjustment to reflect (x) ordinary cash dividends or distributions or ordinary stock dividends or distributions (collectively, “ordinary distributions”) by the issuer of the underlying security or (y) any cash dividend or distribution by the issuer of the underlying security if such dividend or distribution is less than \$0.125 per share provided that, in the case of a contract that is originally listed with a unit of trading larger than 100 shares, the applicable threshold shall be \$12.50 per contract.

(d) It shall be the general rule that in the case of:

(i) a stock dividend, stock distribution or stock split whereby a whole number of additional shares of the underlying security is issued with respect to each outstanding share, each option contract covering that underlying security shall be increased by the same number of additional option contracts as the additional number of shares issued with respect to each share of the underlying security, the exercise price per share in effect immediately prior to such event shall be proportionately reduced, and the unit of trading shall remain the same.

(ii) a stock dividend, stock distribution or stock split whereby other than a whole number of shares of the underlying security is issued in respect of each outstanding share, the exercise price in effect immediately prior to such event shall be proportionately reduced and the unit of trading shall be proportionately increased.

(iii) reverse stock splits, combinations of shares, or similar events, option contracts shall be adjusted solely for purposes of determining the property deliverable upon exercise of the option, by decreasing the unit of trading to reflect the number of shares eliminated. If an adjustment is made in accordance with the preceding sentence, the unit of trading for all such adjusted series of options shall remain unchanged for purposes of determining the aggregate exercise price of the option and for purposes of determining the premium for any such option purchased and sold.

(e) It shall be the general rule that in the case of any distribution made with respect to shares of an underlying security, other than ordinary distributions and other than distributions for which adjustments are provided in paragraph (d) of this Section 11A, if an adjustment is determined by the Corporation to be appropriate, (i) the exercise price in effect immediately prior to such event shall be reduced by the value per share of the distributed property, in which event the unit of trading shall not be adjusted, or (ii) the unit of trading in effect immediately prior to such event shall be adjusted so as to include the amount of property distributed with respect to the number of shares of the underlying security represented by the unit of trading in effect prior to such adjustment, in which event the exercise price shall not be adjusted. The Corporation shall, with respect to adjustments under this paragraph or any other paragraph of this Section 11A, have the authority to determine the value of distributed property.

(f) In the case of any event for which adjustment is not provided in any of the foregoing paragraphs of this Section 11A, the Corporation may make such adjustments, if any, with respect to the option contracts affected by such event as the Corporation determines.

(g) Adjustments pursuant to this Section 11A shall as a general rule become effective in respect of option contracts outstanding on the “ex-date” established by the primary market for the underlying security.

(h) It shall be the general rule that (1) all adjustments of the exercise price of an outstanding option contract shall be rounded to the nearest adjustment increment, (2) when an adjustment causes an exercise price to be equidistant between two adjustment increments, the exercise price shall be rounded up to the next highest adjustment increment, (3) all adjustments of the unit of trading shall be rounded down to eliminate any fraction, and (4) if the adjustment is made pursuant to subparagraph (d)(ii) above and the unit of trading is rounded down to eliminate a fraction, the adjusted exercise price may be further adjusted, to the nearest adjustment increment, to reflect any diminution in the value of the option contract resulting from the elimination of the fraction, or if the adjustment is made pursuant to subparagraph (d)(iii) above and the unit of trading is rounded down to eliminate a fraction, the value of the fractional share so eliminated as determined by the Corporation shall be added to the unit of trading.

(i) Notwithstanding the general rules set forth in paragraphs (c) through (h) of this Section 11A or which may be set forth as interpretations and policies under this Section 11A, the Corporation shall have the power to make exceptions in those cases or groups of cases (which may include making exceptions for one or more series of flexibly structured options) in which, in applying the standards set forth in Section 11(a) hereof, the Corporation shall determine such exceptions to be appropriate. However, the general rules shall be applied unless the Corporation affirmatively determines to make an exception in a particular case or group of cases.

. . . Interpretations and Policies:

.01 Cash dividends or distributions (regardless of size) by the issuer of the underlying security which the Corporation believes to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly or other regular basis or which the Corporation believes represents an acceleration or deferral of such payments will, as a general rule, be deemed to be "ordinary cash dividends or distributions" within the meaning of paragraph (c) of Section 11A. Stock dividends or distributions by the issuer of the underlying security (i) in an aggregate amount per dividend or distribution which does not exceed 10% of the number of shares or other units of the underlying security outstanding as of the close of trading on the declaration date, and (ii) which the Corporation believes to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis or which the Corporation believes represents an acceleration or deferral of such payments will, as a general rule, be deemed to be "ordinary stock dividends or distributions" within the meaning of paragraph (c) of Section 11A. The Corporation will determine on a case-by-case basis whether other dividends or distributions are "ordinary distributions" or whether they are dividends or distributions for which an adjustment should be made. Where the Corporation determines to adjust for a dividend or distribution, the adjustment shall be made in accordance with paragraph (e) of Section 11A. Any issue as to whether a particular dividend or distribution was declared pursuant to a policy of paying such dividends or distributions on a quarterly or (where applicable) other regular basis shall be referred to the Corporation for a determination.

In making such determinations, the Corporation may take into account such factors as it deems appropriate, including, without limitation, the issuer's stated dividend payment policy, the issuer's characterization of a particular dividend or distribution as "regular," "special," "accelerated" or "deferred," whether the dividend can be differentiated from other dividends (if any) paid on a quarterly or other regular basis, and the issuer's dividend payment history. Normally, the Corporation shall classify a dividend or distribution as non-ordinary when it believes that similar dividends or distributions will not be paid on a quarterly or other regular basis.

.02 Adjustments will not ordinarily be made to reflect the issuance of so-called "poison pill" rights that are not immediately exercisable, trade as a unit or automatically with the underlying security, and may be redeemed by the issuer. In the event such rights become exercisable, begin to trade

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separately from the underlying security, or are redeemed, the Corporation will determine whether an adjustment is appropriate.

.03 Adjustments will not be made to reflect a tender offer or exchange offer to the holders of the underlying security, whether such offer is made by the issuer of the underlying security or by a third person or whether the offer is for cash, securities or other property. This policy will apply without regard to whether the price of the underlying security may be favorably or adversely affected by the offer or whether the offer may be deemed to be "coercive." Outstanding options ordinarily will be adjusted to reflect a merger, consolidation or similar event that becomes effective following the completion of a tender offer or exchange offer.

.04 Adjustments will not be made to reflect changes in the capital structure of an 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. For example, adjustments will not be made merely to reflect the issuance (except as a distribution on an underlying security) of new or additional debt, stock, or options, warrants or other securities convertible into or exercisable for the underlying security, the refinancing of the issuer's outstanding debt, the repurchase by the issuer of less than all of the underlying securities outstanding, or the sale by the issuer of significant capital assets.

.05 When an underlying security is converted into a right to receive a fixed amount of cash, such as in a merger or a call or redemption of an entire class of index-linked securities, outstanding options will be adjusted to require the delivery upon exercise of cash in an amount per share or unit equal to the conversion or redemption price. As a result of such adjustment, the value of all outstanding in-the-money options will become fixed, and all at-the-money and out-of-the-money options will become worthless. No adjustment will ordinarily be made in the event of a call of less than an entire class of index-linked securities.

.06 In the case of a corporate reorganization, reincorporation or similar occurrence by the issuer of an underlying security which results in an automatic share-for-share exchange of shares in the issuer for shares in the resulting company, the options on the underlying security will ordinarily be adjusted to require delivery upon exercise of a like number of units of the shares of the resulting company. Because the securities are generally exchanged only on the books of the issuer and the resulting company, and are not generally exchanged physically, deliverable shares will ordinarily include certificates that are denominated on their face as shares in the original issuer, but which, as a result of the corporate transaction, represent shares in the resulting company.

.07 When an underlying security is converted in whole or in part into a debt security and/or a preferred stock, as in a merger, and interest or dividends on such debt security or preferred stock are payable in the form of additional units thereof, outstanding options that have been adjusted to call for delivery of such debt security or preferred stock shall be further adjusted, effective as of the ex-date for each payment of interest or dividends thereon, to call for delivery of the securities distributed as interest or dividends thereon.

.08 Notwithstanding Interpretation and Policy .01 under Section 11A of Article VI of the By-Laws, (i) distributions of short-term or long-term capital gains in respect of fund shares by the issuer thereof shall not, as a general rule, be deemed to be "ordinary distributions" within the meaning of paragraph (c) of Section 11A, and (ii) other distributions in respect of fund shares by the issuer thereof shall not, as a general rule, be deemed to be "ordinary distributions" within the meaning of paragraph (c) of this Section 11A if (x) the fund tracks the performance of an index that underlies a class of index options or index futures, and the distribution on the fund shares includes or reflects a dividend or other distribution on a portfolio security that resulted in an adjustment of the index divisor; or (y) the distribution on the fund shares includes or reflects a dividend or other distribution on a portfolio security (I) that results in an adjustment of options on other fund shares pursuant to clause (ii)(x), or (II) that is not deemed an ordinary distribution under Interpretation

.01 above. Adjustments of the terms of options on such fund shares for distributions described in clause (i) or (ii) above shall be made in accordance with paragraph (e) of Section 11A, unless the Corporation determines, on a case-by-case basis, not to adjust for such a distribution; provided, however, that no adjustment shall be made for any such distribution that is less than \$.125 per fund share and provided that, in the case of a contract that is originally listed with a unit of trading larger than 100 fund shares, the applicable threshold shall be \$12.50 per contract.

.09 Interest payments on index-linked securities will, as a general rule, be deemed to be “ordinary cash dividends or distributions” within the meaning of paragraph (c) of this Section 11A.

Amended July 8, 1982; July 13, 1985; January 23, 1987; June 16, 1988; February 8, 1996; September 3, 1996; July 15, 1998; October 23, 1998; September 11, 2000; May 31, 2001; November 26, 2002; September 24, 2004; December 23, 2005; February 8, 2007; October 23, 2009; August 31, 2010; April 10, 2012; February 14, 2013; November 12, 2018.

Long Positions

SECTION 12. The long position of a Clearing Member in a series of cleared contracts in a particular account will be created upon the Corporation's issuance of one or more contracts of such series in such account. The amount of such long position shall be the number of contracts so issued, and such long position shall remain in force from day to day thereafter unless and until changed in accordance with the following:

- (a) The long position shall be increased by the number of contracts of such series thereafter issued by the Corporation in such account;
- (b) The long position, in the case of options or BOUNDS, shall be reduced by the number of contracts of such series which have been exercised in such account;
- (c) The long position shall be reduced by the number of contracts of such series subject to closing sale transactions of the Clearing Member in such account which are thereafter accepted by the Corporation;
- (d) The long position shall be eliminated at the expiration or maturity date for such series;
- (e) The long position shall be increased by the number of contracts transferred to such account from another account of the Clearing Member or an account of another Clearing Member;
- (f) The long position shall be reduced by the number of contracts transferred from such account upon the authorization of the Clearing Member to another account of the Clearing Member or an account of another Clearing Member;
- (g) The number of contracts in the long position may be adjusted from time to time in accordance with the By-Laws and Rules; and
- (h) The long position may be closed out or transferred by the Corporation in accordance with the By-Laws and Rules.

Subject to the By-Laws and the Rules, (i) any American option contract held in a long position, other than a delayed-start option, may be exercised at any time between its acceptance by the Corporation and its expiration, (ii) an American delayed-start option contract may be exercised at any time after its exercise price has been set until its expiration, (iii) any European option contract held in a long position may be exercised on its expiration date, and (iv) any capped cash-settled option contract held in a long position shall be automatically exercised on any day on which the current underlying interest value (as defined in Article XVII of the By-Laws) equals or exceeds the

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cap price (as defined in Article XVII of the By-Laws), in the case of a call, or equals or is less than the cap price, in the case of a put, and may be exercised on its expiration date.

Amended August 28, 1985; August 20, 2001; October 28, 1991; August 26, 1996; August 20, 2001; November 28, 2007; March 20, 2009; May 24, 2018.

Short Positions

SECTION 13. The short position of a Clearing Member in a series of cleared contracts in a particular account will be created upon the Corporation's acceptance of such Clearing Member's opening sale transaction in such account in respect of one or more contracts of such series. The amount of such short position shall be the number of such contracts involved in such transaction, and the short position shall remain in force from day to day thereafter unless and until changed in accordance with the following:

- (a) The short position shall be increased by the number of contracts of such series which are the subject of opening sale transactions in such account which are thereafter accepted by the Corporation;
- (b) The short position, in the case of options or BOUNDS, shall be reduced by the number of contracts of such series which are the subject of exercises thereafter assigned to the Clearing Member in such account in accordance with the Rules for application against such short position;
- (c) The short position shall be reduced by the number of contracts of such series subject to closing purchase transactions of the Clearing Member in such account which are thereafter accepted by the Corporation;
- (d) The short position shall be eliminated at the expiration or maturity date for such series;
- (e) The short position shall be increased by the number of contracts transferred to such account with the consent of the Clearing Member and the Corporation from another account of the Clearing Member or an account of another Clearing Member;
- (f) The short position shall be reduced by the number of contracts transferred from such account pursuant to the By-Laws or Rules or with the consent of the Corporation to another account of the Clearing Member or an account of another Clearing Member;
- (g) The number of contracts in such short position may be adjusted from time to time in accordance with the By-Laws and Rules; and
- (h) The short position may be closed out or transferred by the Corporation in accordance with the By-Laws and Rules.

The Corporation shall have the right to assign, in accordance with the By-Laws, Rules and the procedures of the Corporation, its obligations in respect of any option contract upon the exercise of such contract to any Clearing Member having a short position in the same series of options in any account.

Amended June 1, 1975; October 28, 1991; August 26, 1996; August 20, 2001; May 16, 2002.

Agreements of Selling Clearing Member in an Opening Sale Transaction

SECTION 14. The Selling Clearing Member in an opening sale transaction agrees with the Corporation that (a) upon the Corporation's acceptance of such transaction, the short position of the Clearing Member in the account in which the transaction is effected shall be created or increased, and subsequently maintained, in accordance with Section 13 of this Article VI, (b) so

long as such short position is thereafter maintained, the Selling Clearing Member shall make all required initial and maintenance margin payments, and variation payments in the case of futures, in accordance with the Rules, and (c) in the event any exercise is assigned to such Clearing Member, it shall perform, on behalf of the Corporation, the option contract so assigned in accordance with its terms and in accordance with the By-Laws and Rules.

Amended October 28, 1991; August 20, 2001.

Closing Sale Transactions

SECTION 15. A Clearing Member shall not effect a closing sale transaction in an account unless, at the time of such transaction, such Clearing Member has a long position in such account for at least the number of cleared contracts involved in such transaction. In the event any transaction of a Clearing Member is recorded as a closing sale transaction in the confirmed trade information reported in respect of such transaction and the Clearing Member does not have a long position in the applicable account for at least the number of cleared contracts involved in such transaction, then the transaction shall be deemed to be an opening sale transaction to the extent that the number of cleared contracts involved in such transaction exceeds the number of cleared contracts in such long position. A Selling Clearing Member in a closing sale transaction involving a cleared contract agrees that, upon the Corporation's acceptance of such transaction, the Corporation shall reduce the Clearing Member's long position in the account through which the transaction was effected by the number of cleared contracts involved.

Amended September 20, 1982; April 11, 1989; October 26, 1989; March 3, 1999; August 20, 2001; December 18, 2001; May 16, 2002; October 28, 2002; December 14, 2012.

Closing Purchase Transactions

SECTION 16. A Clearing Member shall not effect a closing purchase transaction in an account unless, at the time of such transaction, such Clearing Member has a short position in such account for at least the number of cleared securities involved in such transaction. In the event any transaction of a Clearing Member is recorded as a closing purchase transaction in the confirmed trade information reported in respect of such transaction and the Clearing Member does not have a short position in the applicable account for at least the number of cleared securities involved in such transaction, then the transaction shall be deemed to be an opening purchase transaction to the extent the number of cleared securities involved in such transaction exceeds the number of cleared securities in such short position.

Amended April 11, 1989; October 26, 1989; March 3, 1999; May 16, 2002; October 28, 2002; December 14, 2012.

Exercise Restrictions

SECTION 17. (a) Anything in the By-Laws or Rules to the contrary notwithstanding, whenever an Exchange acting pursuant to Exchange Rules imposes a restriction on the exercise of one or more series of American options and advises the Corporation thereof, option contracts of such series shall not be exercisable except in accordance with the terms of such restriction, whether or not the Clearing Member in whose accounts the option contracts are maintained is a member of such Exchange. Notwithstanding the foregoing, no restriction on exercise shall remain in effect with respect to any series of options on the expiration date or during the business day (in the case of a cash-settled option or futures option), or the ten business days (in the case of any other option), immediately prior to the expiration date of such series.

(b) Anything in the By-Laws or Rules to the contrary notwithstanding, the Corporation shall be empowered to impose such restrictions on exercises in one or more series of American options

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as the Board of Directors in its judgment deems advisable in the interests of maintaining a fair and orderly market in option contracts or in underlying securities or otherwise deems advisable in the public interest or for the protection of investors. During the effectiveness of any such restriction, no Clearing Member shall, for any account in which it has an interest or for the account of any customer, effect an exercise in contravention of such restriction. Notwithstanding the foregoing, except for restrictions imposed pursuant to Section 19 of this Article VI on the exercise of put option contracts by Clearing Members who would be unable to deliver the underlying securities on the exercise settlement date, no restriction on exercise shall remain in effect with respect to any series of options on the expiration date or during the business day (in the case of a cash-settled option) or the ten business days (in the case of any other option) immediately prior to the expiration date of such series.

. . . Interpretations and Policies:

.01 The Chief Executive Officer, Chief Operating Officer, or the delegate of any of the foregoing shall have the authority to act on behalf of the Corporation in imposing exercise restrictions pursuant to this Section 17(b).

Amended April 4, 1977; September 5, 1980; March 11, 1983; August 28, 1985; August 21, 1987; January 27, 1993; December 10, 1998; January 27, 1993; May 16, 2002; March 20, 2009; March 6, 2014; September 16, 2016; April 26, 2017; February 15, 2019.

Certain Delays

SECTION 18. (a) Anything in these By-Laws or the Rules notwithstanding, in the event that the Corporation is unable for any reason (i) to make available, pursuant to Chapter VIII of the Rules, any Expiration Exercise Report, or (ii) to receive properly submitted exercise instructions from Clearing Members, prior to the time specified by the Corporation pursuant to Rule 805(a) or any rule supplementing or replacing Rule 805(a), the Corporation shall make available the delayed report or accept such exercise instructions as soon as practicable thereafter, provided that the Corporation may, in its discretion, defer making the delayed report available or accepting such instructions until such other time and day (including a non-business day) as the Corporation shall determine (the “anticipated report time”), in which case the Corporation shall further specify a time and day representing the latest time and day at which the Corporation may make the delayed report available or accept such instructions (in the event the Corporation is not able to take such action by the anticipated report time) (the “cutoff time”). In any such event, Clearing Members shall submit exercise instructions to the Corporation on such day within such times and in such manner as the Corporation shall prescribe. Exercise instructions submitted by a Clearing Member to the Corporation within time limits fixed pursuant to this subsection shall be deemed to have been duly given prior to the expiration of the option contracts to which they relate.

(b) In the event that the Corporation (i) fails to make Expiration Exercise Reports available to Clearing Members, or is unable to receive properly submitted exercise instructions from Clearing Members in response to such reports prior to the cutoff time (in cases to which subsection (a) applies) or on the expiration date (in all other cases), and (ii) has failed to prescribe alternative procedures for exercising expiring options pursuant to Rule 805, or determines in its discretion, and so advises Clearing Members, that procedures so prescribed were inadequate, then each Clearing Member shall be deemed to have properly and irrevocably tendered to the Corporation, on a timely basis, an exercise notice with respect to:

(1) every expiring option contract in each of the Clearing Member's accounts which meets the “exercise by exception” threshold for such contracts for purposes of Rule 805(d)(2) as supplemented, in the case of options contracts other than stock options, by the Rules in the Chapter applicable to such other option contracts, except to the extent that the Clearing Member has given the Corporation written instructions, prior to the cutoff time (in cases to which

subsection (a) applies) or on the expiration date (in all other cases) to exercise none, or fewer than all, of the option contracts in such series carried in such account; and

(2) every other expiring option contract in any of the Clearing Member's accounts which the Clearing Member has given the Corporation written instructions to exercise prior to the cutoff time (in cases to which subsection (a) applies) or on the expiration date (in all other cases).

Exercise notices deemed to have been tendered pursuant to this subsection shall be deemed to have been duly filed prior to the expiration of the option contracts to which they relate. No exercise notice shall be deemed to have been tendered to the Corporation in respect of any non-equity securities option contract pursuant to subsection (b)(1) above if the Corporation has not established price intervals applicable to such option contract for the purposes of Rule 805(d)(2).

(c) In the event the Corporation should for any reason be unable to assign an exercise notice prior to any hour prescribed in the Rules, the Corporation shall assign such exercise notice as soon as practicable thereafter and shall fix such date of assignment and exercise settlement date as it, in its discretion, shall deem fair and reasonable in the circumstances.

(d) Any action taken by the Corporation pursuant to this Section 18 shall be reported by the Corporation to the Securities and Exchange Commission within two business days thereafter.

(e) Paragraphs (a) and (b) of this Section 18 shall be inapplicable to options that are subject to automatic exercise. Automatic exercise of such options shall be effected without regard to any delay in making available an Expiration Exercise Report with respect to such options.

Adopted June 1, 1975. Amended January 12, 1977; October 31, 1977; August 6, 1981; November 24, 1982; December 14, 1982; February 4, 1983; March 12, 1986; January 29, 1991; July 9, 1993; October 18, 1995; September 24, 1997; July 12, 2005; December 14, 2012; June 17, 2013.

Shortage of Underlying Securities

SECTION 19. (a) If the Corporation shall in its discretion determine that an imminent or pending tender offer, exchange offer, suspension of trading, or other event affecting an underlying security (the "affected security") threatens to reduce the available supply of the affected security to a level insufficient to permit (i) performance of the exercise settlement obligations with respect to outstanding option contracts for the affected security if all such option contracts were to be exercised or to permit delivery of the underlying security at maturity of all outstanding physically-settled stock futures on the affected security, then, in addition to any other actions that the Corporation may be entitled to take under the By-Laws and the Rules, the Corporation shall be empowered to do any or all of the following:

(1) The Corporation may direct that all exercises of option contracts and settlement obligations under matured, physically-settled stock futures for the affected security be settled directly between the exercising Clearing Member and the assigned Clearing Member in accordance with the procedures for direct settlements prescribed in Chapter IX of the Rules, rather than through the facilities of the correspondent clearing corporation.

(2) The Corporation may suspend the settlement obligations of those Clearing Members that exercise put option contracts for the affected security and are unable to deliver the underlying securities on the exercise settlement date. In the event of any such suspension, the settlement obligations of the assigned Clearing Members shall also be suspended, and the exercised option contracts shall not be settled thereafter except in such manner as the Corporation shall direct pursuant to subsections (b) or (c) hereof.

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(3) The Corporation may suspend the settlement obligations of those Clearing Members that are assigned exercise notices in respect of call option contracts for the affected security and are unable to deliver the underlying securities on the exercise settlement date. In the event of any such suspension, the settlement obligations of the exercising Clearing Members shall also be suspended, and the exercised option contracts shall not be settled thereafter except in such manner as the Corporation shall direct pursuant to subsections (b) or (c) hereof.

(4) The Corporation may suspend the settlement obligations of those Clearing Members that are required to deliver the affected security pursuant to a physically-settled stock future that has reached maturity and are unable to deliver the underlying securities on the delivery date. In the event of any such suspension, the obligations of Clearing Members to pay the aggregate purchase price shall also be suspended, and the matured physically-settled stock futures shall not be settled thereafter except in such manner as the Corporation shall direct pursuant to subsections (b) or (c) hereof.

Any action taken by the Corporation pursuant to subsection (a) may be continued in effect beyond the respective expiration times of the option contracts affected thereby. Settlement obligations in respect of exercised option contracts that have been suspended by the Corporation pursuant to subsection (a)(2) or (a)(3) hereof shall remain in existence until such obligations are discharged in accordance with directions issued by the Corporation pursuant to subsection (b) or (c) below, regardless of whether such directions are issued before or after the respective expiration times of the option contracts to which they apply. Settlement obligations in respect of matured physically-settled stock futures that have been suspended by the Corporation pursuant to subsection (a)(4) hereof shall remain in existence until such obligations are discharged in accordance with directions issued by the Corporation pursuant to subsection (b) or (c) below.

(b) If, after taking any action pursuant to subsection (a) hereof, the Corporation shall determine that a sufficient supply of the underlying security has become available to warrant the termination of such action, the Corporation shall promptly terminate such action and notify all Clearing Members thereof. If settlement obligations shall have been suspended pursuant to subsection (a)(2), (a)(3), or (a)(4) hereof, the Corporation shall fix a new delivery date for the contracts affected by such suspension. On the new delivery date.

(1) in the case of call options, the assigned Clearing Members shall be obligated to deliver, and the exercising Clearing Members shall be obligated to receive, and, in the case of put options, the exercising Clearing Members shall be obligated to deliver, and the assigned Clearing Members shall be obligated to receive, the underlying securities covered by such exercised option contracts;

(2) in the case of physically-settled stock futures, the Delivering Clearing Member shall be obligated to deliver the underlying securities and receive the aggregate purchase price, and the Receiving Clearing Member shall be obligated to receive the underlying securities and pay the aggregate purchase price;

provided, however, that if the Corporation determines that it would be inequitable to any class of Clearing Members to require such Clearing Members to deliver or accept delivery of the affected securities, the Corporation shall instead fix cash settlement prices which such Clearing Members shall be obligated to pay or accept, as the case may be, in lieu of delivery or receipt of such securities, on the new delivery date.

(c) If, after suspending settlement obligations pursuant to subsection (a)(2), (a)(3), or (a)(4) hereof, the Corporation shall determine that there is no reasonable likelihood that a sufficient supply of the underlying security will become available within the foreseeable future to permit the Clearing Members affected by such suspension to discharge their obligations by delivery or receipt of the underlying security, the Corporation shall (i) fix cash settlement prices for the

exercised option contracts affected by the suspension, which exercising and assigned Clearing Members shall be obligated to pay or accept, as the case may be, in lieu of delivery or receipt of the underlying securities, at a new exercise settlement date or dates to be set by the Corporation and/or (ii) terminate all rights and obligations to deliver or receive underlying securities in respect of matured, physically-settled stock futures affected by the suspension, in which event payment and receipt of the final variation payment shall be deemed to fully discharge the rights and obligations under such contract; provided, however, that the Corporation may fix the final settlement price or adjust a previously-determined final settlement price as necessary or appropriate to achieve fairness to buyers and sellers of such futures, and may set a date for the settlement of any additional variation payment required as the result of the fixing or adjustment of such final settlement price.

. . . Interpretations and Policies:

.01 It is the policy of the Corporation to continue to provide for the settlement of all exercises of options contracts and of all physically-settled stock futures at maturity through the facilities of the correspondent clearing corporation during and following a cash tender offer for the securities underlying the contracts. In those situations in which the application of that policy would, in the judgment of the Corporation, be inequitable or impractical, the Corporation may take such actions, consistent with the By-Laws and Rules, as it deems equitable and feasible in the circumstances and will be guided in accordance with the provisions of Interpretation and Policy .02 set forth below.

.02 In those situations in which the Corporation determines that the application of the Interpretations and Policies set forth at .01 above would be inequitable or impractical, the Corporation will act in accordance with the policies set forth below.

1. *Action under Article VI, Section 19.* When the Corporation determines that an impending tender offer threatens to create a shortage of underlying securities, the Corporation will ordinarily take all relevant actions provided for in subsection (a) of Article VI, Section 19 of the By-Laws. The Corporation may act before the formal announcement of the tender offer if it appears that the underlying security is already in short supply.

2. *Waiting Period.* Action under Article VI, Section 19 of the By-Laws will ordinarily be followed by a “waiting period” to enable the Corporation to monitor the progress of the tender offer and the extent to which open positions in options and long positions in physically-settled stock futures for the target security are reduced through closing transactions and, in the case of options, exercises that proceed to settlement in due course.

3. *Where Shortage Ceases to Exist.* If the tender offer is withdrawn, or if open positions in options and physically-settled stock futures for the target security are reduced after its commencement to the point where a shortage of underlying securities no longer appears to exist, the restrictions previously imposed by the Corporation will be terminated. If any exercise settlements or deliveries under physically-settled stock futures that had reached maturity had been suspended while the restrictions remained in effect, and, in the case of options, cash settlement prices had not previously been fixed for those exercises, or, in the case of physically-settled stock futures, final settlement prices had not previously been fixed for those matured contracts (see paragraph 6 below), the Corporation would fix a new delivery date for the contracts affected by the suspension, and would direct that settlement be made on that date either by delivery of the underlying securities against payment of the aggregate purchase price, or, in circumstances where the Corporation determined that it would be unfair to require the exercising or Receiving Clearing Member to accept delivery of the underlying securities (see, e.g., paragraph 5.C.(2) below), by the payment of a cash settlement price fixed by the Corporation or final variation payment derived using a final settlement price fixed by the Corporation.

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4. *Where Shortage Appears to be Permanent.* If the Corporation determines that there is no reasonable likelihood that a shortage of underlying securities will abate within the foreseeable future (e.g. in the case of a successful cash tender offer for all or substantially all of the target company's outstanding stock), the Corporation will fix cash settlement prices to be paid in settlement of the exercised call option contracts for which settlement had previously been suspended. Settlement obligations in respect of matured physically-settled stock futures contracts for which settlement had previously been suspended will be cancelled, and buyers and sellers of such futures will be deemed to have discharged their obligations, and received full performance, in respect thereof when settlement of the final variation payment has been completed.

5. *Fixing of Cash Settlement Prices.* In fixing cash settlement prices, the Corporation will ordinarily distinguish between those Clearing Members who file exercise notices in sufficient time to tender the underlying securities and those who file exercise notices thereafter. The term "cut-off date," as used below, refers to the latest date when a Clearing Member could have exercised a call option contract and tendered the underlying securities in accordance with applicable SEC regulations and the terms of the tender offer.

The Corporation will generally observe the following policies in fixing cash settlement prices:

A. *Tender Offers Where All Shares Tendered are Accepted and Paid For.* (1) Holders of calls who exercised on or before the cut-off date will be entitled to receive the tender offer price.

(2) Holders who exercised after the cut-off date will be entitled to receive:

(a) the market value (see subsection D. below) of the underlying security on the normal exercise settlement date, if a reported market existed for the affected security on that date; or

(b) the tender offer price, if no reported market existed for the underlying security on the normal exercise settlement date.

B. *Tender Offers Where a Portion of the Shares Tendered are Accepted and Paid For.* (1) Holders who exercised on or before the cut-off date will be entitled to receive a weighted average of (i) the tender price and (ii) the market value of the underlying security on the first trading day following the date of the announcement of proration by the offeror, the weighting being proportionate to the percentage of tendered shares accepted by the offeror.

(2) Holders who exercised after the cut-off date will be entitled to receive:

(a) the market value of the underlying security on the normal exercise settlement date, if a reported market existed for the underlying security on that date; or

(b) the same cash settlement price as holders who exercised on or before the cut-off date, if no reported market existed for the underlying security on the normal exercise settlement date.

C. *Tender Offers Where None of the Tendered Shares are Accepted and Paid For.* (1) Holders who exercised on or before the cut-off date will be entitled to receive the underlying securities on a new exercise settlement date fixed in accordance with Paragraph 3 above.

(2) Holders who exercised after the cut-off date will be entitled to receive:

(a) the market value of the underlying security on the normal exercise settlement date, if a reported market existed for the underlying security on that date (notwithstanding that underlying securities would again be available for delivery); or

(b) the underlying securities, if no reported market existed for the underlying security on the normal exercise settlement date.

D. Determination of Market Value of Underlying Security. If trading takes place in an underlying security on one or more national securities exchanges or national securities associations on an exercise settlement date, the “market value” of the underlying security on that date, for the purpose of fixing a cash settlement price, will ordinarily be the mean between the high and the low sale prices reported for the underlying security for that date on the composite tape. However, if the Corporation determines that there are special circumstances that would make the application of the foregoing policies unfair to exercising Clearing Members or assigned Clearing Members, the Corporation may use a different method to determine the market price of the underlying security, or may determine that it is impossible to fix a market value for the underlying security on the date in question. In the latter case, the Corporation will take such action as would be taken if there had been no reported market for the underlying security on the exercise settlement date.

6. Early Payment of Cash Settlement Price to Some Holders. Where a holder of a call option exercises it after the cut-off date, and a reported market exists for the underlying security on the normal exercise settlement date, the exercising holder will be entitled to receive a cash settlement price based on the underlying security’s market value on the normal exercise settlement date regardless of the ultimate outcome of the tender offer (see subparagraphs 5.A.(2)(a), 5.B.(2)(a), and 5.C.(2)(a) above). Accordingly, there will generally be no need to defer fixing cash settlement prices for those holders until the outcome of the tender offer is known. The Corporation’s policy will be to fix cash settlement prices and establish new exercise settlement dates for those holders at as early a date as possible.

7. Fixing of Final Settlement Prices for Stock Futures. In fixing final settlement prices, the Corporation will not ordinarily distinguish between physically-settled stock futures that mature in sufficient time to tender the underlying securities and those stock futures that mature thereafter.

The Corporation will generally observe the following policies in fixing final settlement prices:

A. Tender Offers Where All Shares Tendered are Accepted and Paid For. The final settlement price will be the tender offer price.

B. Tender Offers Where a Portion of the Shares Tendered are Accepted and Paid For. The final settlement price will be the weighted average of (i) the tender price and (ii) the market value of the underlying security on the first trading day following the date of the announcement of proration by the offeror, the weighting being proportionate to the percentage of tendered shares accepted by the offeror.

C. Tender Offers Where None of the Tendered Shares are Accepted and Paid For. Buyers will be entitled to receive the underlying securities on a new delivery date fixed in accordance with Paragraph 3 above. The final settlement price will be the market value of the underlying security on the normal delivery date, if a reported market existed for the underlying security on that date or if no reported market existed for the underlying security on the normal delivery date, such final settlement price as may be determined by the Corporation.

D. Determination of Market Value of Underlying Security. The provisions of 5.D above will apply to the determination of the market value for underlying securities for the purpose of fixing a final settlement price for physically-settled stock futures.

8. Situations Not Otherwise Provided For.

A. Exchange Offers. To the extent that it is feasible to do so, the Corporation will deal with exchange offers in the same manner as tender offers. Where, in the case of a tender offer, the cash or final settlement price would be based in whole or in part on the tender offer price, the cash or final settlement price in the case of an exchange offer would be fixed (where possible) by

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reference to the market value of the exchanged securities on the date on which they were first issued in exchange for underlying securities.

B. *Other Situations.* In other situations not provided for above (including suspensions of trading and situations where competing tender offers are made for the same underlying security), cash or final settlement prices will be fixed in such manner as the Corporation determines to be equitable in the circumstances.

Adopted September 5, 1980. Amended October 29, 1982; September 15, 2000; August 20, 2001; October 19, 2001; January 24, 2008.

Clearance of International Transactions

SECTION 20. Reserved.

Cash Payments

SECTION 21. Except where otherwise expressly indicated, all payments made or required to be made in cash by a Clearing Member to the Corporation or by the Corporation to a Clearing Member shall be made in immediately available funds.

Adopted September 5, 1986.

Classes of Options Cleared Through ICS

SECTION 22. Reserved.

SECTION 23. Reserved.

Cross-Margining with Participating CCOs

SECTION 24. (a) The Corporation may establish cross-margining programs with one or more Participating CCOs permitting Joint Clearing Members and Pairs of Affiliated Clearing Members to subject eligible positions (as specified in the applicable Participating CCO Agreement) to cross-margining treatment. Each such cross-margining program shall be conducted in accordance with a Participating CCO Agreement executed by the Corporation and one or more Participating CCOs.

(b) Each Joint Clearing Member and each Pair of Affiliated Clearing Members desiring to elect cross-margining as described in this Section shall execute a "Cross-Margin Account Agreement" for each set of X-M accounts established as provided in Chapter VII of the Rules and other documents in such form as the Corporation and the Participating CCO(s) shall specify. Such election shall be subject to the approval of the Corporation and the Carrying CCO(s) and shall remain in effect until the applicable Cross-Margin Account Agreement is terminated or until cross-margining arrangements are terminated by the Corporation or by a Participating CCO pursuant to the Participating CCO Agreement. The provisions of this Section and of Chapter VII of the Rules shall apply to all Contracts carried in OCC X-M accounts and shall supersede all other provisions of the By-Laws and Rules to the extent inconsistent therewith. Any Clearing Member (a "non-cross-margining Clearing Member") that is an affiliate of a Clearing Member that elects cross-margining will be deemed to have consented to any provisions of the applicable Participating CCO Agreement that would permit or require the Corporation to furnish information relating to the non-cross-margining Clearing Member to the Participating CCO(s).

(c) Eligible cleared contracts carried in any OCC proprietary X-M account shall be margined together with contracts carried by the Carrying CCOs in each corresponding CCO proprietary X-M account of the Joint Clearing Member or of the CCO Clearing Member of a Pair of Affiliated

Clearing Members. Eligible cleared contracts carried in any OCC non-proprietary X-M account shall be margined together with contracts carried by the Carrying CCO(s) in each corresponding CCO non-proprietary X-M account of the Joint Clearing Member or of the CCO Clearing Member of such Pair of Affiliated Clearing Members. The Corporation shall calculate the margin required in respect of all other accounts of a Joint Clearing Member or the OCC Clearing Member of a Pair of Affiliated Clearing Members without regard to any contracts carried in such X-M accounts. For purposes of this paragraph (c), “eligible cleared contracts” shall mean options, security futures on exchange-traded funds based on broad-based securities indices, and such other cleared contracts as may be authorized from time to time by the Board of Directors of the Corporation.

Adopted October 3, 1988. Amended September 26, 1989; November 26, 1991; June 28, 1993; January 29, 2009.

Internal Cross-Margining for Non-Proprietary Market Professionals

SECTION 25. (a) The Corporation may establish a cross-margining program permitting a Clearing Member and a Pair of Affiliated Clearing Members to establish an internal non-proprietary cross-margining account with the Corporation for the purpose of receiving cross-margining treatment for positions of non-proprietary Market Professionals in cleared contracts that have been designated by the Corporation as eligible for inclusion in such account. An internal cross-margining account for non-professionals shall be a segregated futures account carried by the Corporation in accordance with orders of the Commodity Futures Trading Commission and each Clearing Member, and each one of a Pair of Clearing Members, establishing such an account with the Corporation shall be registered as both a futures commission merchant under the Commodity Exchange Act and as a broker-dealer under the Securities Exchange Act of 1934.

(b) Each Clearing Member and each Pair of Affiliated Clearing Members desiring to elect internal non-proprietary cross-margining as described in this Section shall so notify the Corporation in accordance with the procedures specified by the Corporation. Such election shall be subject to the approval of the Corporation and shall remain in effect until terminated by the Corporation. Such election shall also be subject to the execution by each non-proprietary Market Professional whose positions are included in the internal non-proprietary cross-margining account of a “Market Professional’s Agreement for Internal Cross-Margining” in the form specified from time to time by the Corporation. The provisions of this Section shall apply to all cleared contracts carried in any internal non-proprietary cross-margining account and shall supersede all other provisions of the By-Laws and Rules to the extent inconsistent therewith.

(c) Eligible security options positions and eligible positions in security futures, commodity futures and options on commodity futures carried in an internal non-proprietary cross-margining account of a Clearing Member or Pair of Affiliated Clearing Members shall be margined together as a single portfolio. The Corporation shall calculate the margin required in respect of all other accounts of the Clearing Member or Pair of Affiliated Clearing Members without regard for any contracts carried in any internal non-proprietary cross-margining account.

(d) The internal non-proprietary cross-margining account shall be limited to transactions and positions carried by the Clearing Member or Pair of Affiliated Clearing Members with the Corporation on behalf of Market Professionals who are not non-customers of the Clearing Member or Pair of Affiliated Clearing Members and who have signed a “Market Professional’s Agreement for Internal Cross-Margining” as referred to in paragraph (b) above.

(e) On behalf of itself and each Market Professional on whose behalf positions may be maintained in the internal non-proprietary cross-margining account, the Clearing Member or Pair of Affiliated Clearing Members agrees that (i) the Corporation shall have a lien on, security interest in, and right of setoff against such account, including all security option contracts, futures contracts, options on futures contracts and security futures products purchased or carried in such

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account from time to time, all cash, securities and other property deposited with or held by the Corporation as margin in respect thereof, and all proceeds of any of the foregoing, as security for the obligations of the Clearing Member or Pair of Affiliated Clearing Members to the Corporation in respect of such account, (ii) the Corporation shall have the right to net all writing transactions against all purchase transactions effected in such account in accordance with the Rules, and (iii) the Corporation may close out the positions in the account and apply the proceeds thereof at any time without prior notice to the Clearing Member, Pair of Affiliated Clearing Members or Market Professional.

(f) In the case of an internal non-proprietary cross-margining account that is maintained by a Pair of Affiliated Clearing Members, the Clearing Members shall select one of them (the “Agent Member”) to act as the agent for both of them with respect to such account including, without limitation, to provide instructions to, and receive information from, the Corporation with respect to such account. The Agent Member shall be responsible for meeting all settlement obligations and all other obligations to the Corporation in respect of such account pursuant to the By-Laws and Rules of the Corporation. Notwithstanding the foregoing, such internal non-proprietary cross-margining account shall be a joint account of the two Clearing Members, and each Clearing Member shall be jointly and severally liable to the Corporation with respect to any obligation arising in the account. Each Clearing Member authorizes the Corporation to draft the bank account designated by them for any amount due from such Clearing Members in respect of their internal non-proprietary cross-margining account, and the Corporation is authorized to pay to such account any amount owed to the Clearing Members arising from transactions in such account. Similarly, in the event that eligible contracts include contracts that may require underlying securities to be received from or delivered to the Clearing Members, the Clearing Members shall identify the account at the correspondent clearing corporation to be used for such purpose.

(g) The Board of Directors or a Designated Officer (as defined in Rule 1102) of the Corporation may summarily suspend a Clearing Member if such Clearing Member is in default in the payment of funds or any other obligation in respect of an internal non-proprietary cross-margining account. In the case of an internal non-proprietary cross-margining account maintained by a Pair of Affiliated Clearing Members, if the Agent Member fails to meet any margin or settlement obligation to the Corporation in respect of such account, the Corporation may demand immediate payment or performance from its affiliated Clearing Member. If such obligation is not met, the Corporation may suspend such affiliated Clearing Member. Upon the suspension of a Clearing Member of a Pair of Affiliated Clearing Members, the Corporation shall have the right to liquidate the cleared contracts in the internal non-proprietary cross-margining account, and any margin deposited in respect of the internal non-proprietary cross-margining account, and shall deposit any proceeds of such liquidation in an Internal Non-Proprietary Cross-Margining Liquidating Settlement Account as provided for in Chapter XI of the Rules.

. . . Interpretations and Policies:

.01 The Corporation may designate from time to time those cleared contracts that it deems to be eligible for inclusion in an internal non-proprietary cross-margining account. The Corporation will so designate only those cleared contracts that the Corporation determines to have sufficient price correlation with one another to provide significant risk reduction when positions in one such cleared contract are maintained on the opposite side of the market from positions in one or more other such cleared contracts.

Adopted October 13, 2004. Amended March 20, 2009; June 21, 2011; June 21, 2012; March 19, 2015.

Limitation of Liability

SECTION 26 (a) Notwithstanding any other provision in the By-Laws and Rules, the Corporation will not be liable for any action taken, or any delay or failure to take any action, under the By-Laws and Rules or otherwise, to fulfill the Corporation's obligations to its Clearing Members, other than for losses caused directly by the Corporation's gross negligence, willful misconduct, or violation of federal securities laws for which there is a private right of action. Under no circumstances will the Corporation be liable for the acts, delays, omissions, bankruptcy, or insolvency of any third party, including, without limitation, any bank or other depository, custodian, sub-custodian, clearing or settlement system, data communication service, or other third party, unless the Corporation was grossly negligent, engaged in willful misconduct, or was in violation of federal securities laws for which there is a private right of action, in selecting such third party; and

(b) Under no circumstances will the Corporation be liable for any indirect, consequential, incidental, special, punitive or exemplary loss or damage (including, but not limited to, loss of business, loss of profits, trading losses, loss of opportunity and loss of use) however suffered or incurred, regardless of whether the Corporation has been advised of the possibility of such damages or whether such damages otherwise could have been foreseen or prevented.

Adopted January 5, 2006.

Close-Out Netting

SECTION 27. (a) *Default or Insolvency of the Corporation.* If at any time the Corporation: (i) fails to comply with an undisputed obligation to pay money or deliver property to a Clearing Member under the By-Laws or Rules for a period of thirty days from the date that OCC receives notice from the Clearing Member of the past due obligation, (ii) institutes or has instituted against it a proceeding seeking a judgment of insolvency or bankruptcy or any other relief under any bankruptcy or insolvency law or other similar law affecting creditors' rights, or a petition is presented for its winding up or liquidation, and, in the case of any such proceeding or petition presented against it, such proceeding or petition results in a judgment of insolvency or bankruptcy or the entry of an order for relief or the making of an order for the Corporation's winding-up or liquidation, or (iii) takes corporate action to authorize any proceeding or petition described in clause (ii) above, the Corporation or its representative shall promptly notify the Securities and Exchange Commission, the Commodity Futures Trading Commission, all Clearing Members, any clearing organizations with which the Corporation has cross-margining or cross-guarantee arrangements, and all Exchanges, futures markets and security futures markets for which the Corporation clears confirmed trades and all OTC Trade Sources from which OCC accepts confirmed trades for clearance.

(b) *Notice of Termination.* Upon the occurrence of any event described in clause (i) through (iii) of paragraph (a), a Clearing Member that is neither suspended nor in default with respect to any obligation owing to the Corporation may notify the Corporation in writing of its intention to terminate all cleared contracts and stock loan and borrow positions in all accounts of such Clearing Member; provided that a notice based on the Corporation's failure to comply with an obligation described in clause (i) may only be made by the Clearing Member to whom such obligation is owed. The Corporation shall promptly forward any such notice, specifying the date of receipt thereof, to the Securities and Exchange Commission, the Commodity Futures Trading Commission, all Clearing Members, any clearing organizations with which the Corporation has cross-margining or cross-guarantee arrangements, and all Exchanges, futures markets and security futures markets for which the Corporation clears confirmed trades and all OTC Trade Sources from which OCC accepts confirmed trades for clearance. Such notice shall have the effects hereinafter described in this Section with respect to all Clearing Members, without the necessity of a similar notice being sent by any other Clearing Member. As of the close of business on the third business day following the Corporation's receipt of such notice or such

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other termination time as may be established by the United States Bankruptcy Code in the case of a proceeding governed by such Code (the “Termination Time”), the Corporation shall accept no more confirmed trades for clearing, and all pending transactions, positions in cleared contracts and stock loan and borrow positions remaining in all accounts of all Clearing Members at the Termination Time shall be valued as of the Termination Time and liquidated in accordance with this Section. Such liquidated positions shall be netted to the maximum extent permitted by law and the By-Laws and Rules, and settlement of the net amounts shall be effected in the manner provided by this Section in satisfaction of all obligations owing between the Corporation and Clearing Members in respect of such positions. The provisions of this Section, other than paragraph (l) below, shall not apply to the disposition of assets and liabilities in any X-M account provided for in Article VI, Section 24 of the By-Laws. From and after the Termination Time the rights of Clearing Members against the Corporation shall be limited to those set forth in this Section. In the event that a Clearing Member is suspended by the Corporation pursuant to Chapter 11 of the Rules or the Corporation suffers a loss from any cause that is chargeable against the Clearing Fund in accordance with the By-Laws and Rules, whether such suspension or loss occurs before or after the Corporation gives a notice under this paragraph (a), the provisions of paragraph (m) below shall apply.

(c) *Valuation.* As promptly as reasonably practicable, but in any event within thirty days of the Termination Time, the Corporation shall fix a U.S. dollar amount (the “close-out value”) to be paid to or received from the Corporation with respect to each short or long position in cleared contracts and each stock loan and borrow position in each account of each Clearing Member. In fixing close-out values, the Corporation shall exercise its discretion, acting in good faith and in a commercially reasonable manner, in adopting methods of valuation expected to produce reasonably accurate substitutes for the values that would have been obtained from the relevant market if it were operating normally, including but not limited to the use of pricing models to determine a value for a cleared contract based on the market price of the underlying interest or the market prices of its components. In determining a close-out amount, the Corporation may consider any information that it deems relevant, including, but not limited to, any of the following:

- (1) prices for underlying interests in recent transactions, as reported by the market or markets for such interests;
- (2) quotations from leading dealers in the underlying interest, setting forth the price (which may be a dealing price or an indicative price) that the quoting dealer would charge or pay for a specified quantity of the underlying interest;
- (3) relevant historical and current market data for the relevant market, provided by reputable outside sources or generated internally; and
- (4) values derived from theoretical pricing models using available prices for the underlying interest or a related interest and other relevant data.

Amounts stated in a currency other than U.S. Dollars shall be converted to U.S. Dollars at the current rate of exchange, as determined by the Corporation. A position having a positive close-out value shall be an “asset position” and a position having a negative close-out value shall be a “liability position.”

(d) *Netting Within Accounts.* The Corporation shall net the close-out values of positions in each account of each Clearing Member to determine the net asset position or net liability position in each account as follows:

- (1) Aggregate the close-out values of all asset positions (excluding segregated long option positions in a securities customers’ account or firm non-lien account), aggregate the (negative)

close-out values of all liability positions, and net the aggregate asset position against the aggregate liability position.

(2) The aggregate close-out value of segregated long option positions in a securities customers' account or firm non-lien account shall be identified as constituting the property of the securities customers of the Clearing Member and held for distribution to the persons entitled thereto in accordance with applicable law.

(e) *Netting Across Accounts.* The Corporation shall determine the total net asset position or the total net liability of the Clearing Member by netting across the Clearing Member's accounts as follows:

(1) A net asset position in the firm account, a proprietary Market-Makers' account or any other proprietary account (other than a firm non-lien account or a proprietary X-M account) may be netted against a net liability in any other account or any other obligation of the Clearing Member to the Corporation.

(2) A net liability in a firm account, proprietary Market-Makers' account or any proprietary account may be netted against a net asset position in any other proprietary account (other than a firm non-lien account or a proprietary X-M account).

(3) A net asset position in a combined non-proprietary Market-Makers' account or a separate non-proprietary Market-Maker's account shall not be netted against a net liability position in any other account and shall be identified as the property of securities customers of the Clearing Member and held for distribution to the persons entitled thereto in accordance with applicable law.

(4) A net asset position in the segregated futures account may be netted against a net liability in a segregated futures professional account and vice versa, but a net asset position in such accounts shall not be netted against a net liability in any other account and shall be segregated and identified as property of the futures customers of the Clearing Member and held for distribution to the persons entitled thereto in accordance with applicable law.

(5) A net asset position in the internal non-proprietary cross-margining account shall not be netted against a net liability in any other account and shall be segregated and identified as property of the futures customers of the Clearing Member and held for distribution to the persons entitled thereto in accordance with applicable law.

The result of all permitted netting shall be the total net asset position or total net liability position of the Clearing Member with respect to its positions in cleared contracts and stock loan and borrow positions with the Corporation before application of margin assets as provided in paragraph (f) hereof.

(f) *Application of Cash Margin Assets.* Any restricted margin deposited by a Clearing Member in the form of cash shall be applied to the reduction of any net liability in the account or accounts of the Clearing Member to which such margin may be applied in accordance with the applicable restrictions, and the Clearing Member's total net liability position shall be reduced accordingly. The Clearing Member's total net liability position shall be further reduced by the amount of unrestricted cash margin deposited by the Clearing Member in respect of all of its accounts other than segregated futures accounts and X-M accounts. The resulting net amount shall be the Clearing Member's total net asset position or total net liability position (as the case may be) after application of cash margin assets. As used in this Section, the term "restricted margin" means any margin asset, whether in the form of cash, securities or a letter of credit, the use of which is limited to specified obligations of the Clearing Member either under the By-Laws and Rules, by any other agreement between the Corporation and the Clearing Member or by applicable law.

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(g) *Liquidation Settlement.* (1) A liquidation settlement date shall occur as promptly as practicable following the Termination Time.

(2) Any liquidated obligations of a Clearing Member to the Corporation, and any liquidated obligations of the Corporation to the Clearing Member, not included in the foregoing determination of the Clearing Member's total net asset position or total net liability position shall be reduced by netting to a single amount owed by the Clearing Member to the Corporation or by the Corporation to the Clearing Member. The resulting net amount shall be netted with the Clearing Member's total net asset position or total net liability position, as the case may be, to obtain a Net Settlement Amount.

(3) If a Clearing Member has a positive Net Settlement Amount, it has a claim against the Corporation for the value of that amount as of the Termination Time and, as a general unsecured creditor of the Corporation, may file a claim for the amount thereof in the Corporation's bankruptcy case.

(4) If a Clearing Member has a negative Net Settlement Amount after application of available cash margin as described above, it shall pay the value of such position to the Corporation on the liquidation settlement date. If the Clearing Member fails to pay the full amount of any negative Net Settlement Amount on the liquidation settlement date, the provisions of paragraph (h) hereof shall apply.

(h) *Failure of Clearing Member to Pay Net Settlement Amount—Application of Non-cash Margin Assets.* If a Clearing Member fails to pay any Net Settlement Amount to the Corporation when due, the Corporation shall liquidate all non-cash margin deposits as needed and shall apply the proceeds thereof to reduce the deficit; provided, however, that if the issuer of a letter of credit shall agree in writing to extend the irrevocability of its commitment thereunder in a manner satisfactory to the Corporation, the Corporation may, in lieu of demanding immediate payment of the face amount of the letter of credit, but reserving its right to do so, demand only such amounts as it may from time to time deem necessary to meet anticipated disbursements. Proceeds of any restricted margin deposited by a Clearing Member in a form other than cash shall be applied only to the reduction of any net liability arising from the account or accounts of the Clearing Member to which such margin may be applied in accordance with the applicable restrictions. If any portion of the Net Settlement Amount remains unsatisfied after application of margin deposits, the Corporation shall seek to satisfy the remaining deficit as follows: (i) first, apply the Clearing Member's clearing fund contribution (including any amounts obtained from the Clearing Member in satisfaction of its obligation to make good on any charges against its Clearing Fund contribution); and (ii) second, make a pro rata charge against the Clearing Fund contributions of other Clearing Members in accordance with the By-Laws and Rules.

(i) *Disposition of Remaining Margin Assets.* If the Clearing Member is solvent and has not been suspended pursuant to Chapter XI of the Rules, then any remaining restricted or unrestricted margin deposited by the Clearing Member and remaining after all permissible applications provided for above, shall be released to the Clearing Member to be treated and dealt with by the Clearing Member in accordance with applicable law. If the Clearing Member has been suspended by the Corporation pursuant to Chapter XI, then any restricted margin deposited by a Clearing Member and remaining after application of restricted margin to the full extent provided above shall be segregated to the extent required and held by the Corporation under an appropriate designation for distribution to the persons entitled thereto in accordance with applicable law. Any unrestricted margin remaining shall be held for distribution to the persons entitled thereto under applicable law.

(j) *Clearing Fund.* Any unused portion of a Clearing Member's Clearing Fund contribution shall be returned to the Clearing Member or held for distribution to the persons entitled thereto under applicable law, as appropriate, at such time as the Corporation has determined (1) that it has

been fully reimbursed for losses and expenses arising from any of the circumstances detailed in Rule 1006(a)(i) - (vi) and, subject to the restriction set forth therein, Rule 1006(c); and (2) that it is extremely unlikely that the Corporation will incur additional losses and expenses reimbursable from the Clearing Fund.

(k) *Interpretation in Relation to FDICIA.* The Corporation intends that certain provisions of this Section be interpreted in relation to certain terms (identified by quotation marks) that are defined in the Federal Deposit Insurance Corporation Improvement Act of 1991 (“FDICIA”), as amended, as follows:

(1) The Corporation is a “clearing organization.”

(2) An obligation of a Clearing Member to make a payment to the Corporation, or of the Corporation to make a payment to a Clearing Member, subject to a netting agreement, is a “covered clearing obligation” and a “covered contractual payment obligation.”

(3) An entitlement of a Clearing Member to receive a payment from the Corporation, or of the Corporation to receive a payment from a Clearing Member, subject to a netting contract, is a “covered contractual payment entitlement.”

(4) The Corporation is a “member,” and each Clearing Member is a “member.”

(5) The amount by which the covered contractual payment entitlements of a Clearing Member or the Corporation exceed the covered contractual payment obligations of such Clearing Member or the Corporation after netting under a netting contract is its “net entitlement.”

(6) The amount by which the covered contractual payment obligations of a Clearing Member or the Corporation exceed the covered contractual payment entitlements of such Clearing Member or the Corporation after netting under a netting contract is its “net obligation.”

(7) The By-Laws and Rules of the Corporation, including this Section, are a “netting contract.”

(l) *Cross-Margining Agreements.* If an event of insolvency of the type referred to in paragraph (a) of this Section occurs, the Corporation shall immediately seek to exercise its authority under each Participating CCO Agreement to which it is a party to cause the immediate liquidation of all assets and liabilities in all X-M accounts of Clearing Members subject to such agreements and to reduce such account to a single net obligation to or from the Clearing Member or Pair of Affiliated Clearing Members to be settled in accordance with the terms of the applicable Participating CCO Agreement.

(m) *Clearing Member Suspensions; Charges Against the Clearing Fund.* In the event that a Clearing Member is suspended by the Corporation pursuant to Chapter 11 of the Rules after a notice has been provided to the Corporation pursuant to paragraph (b) of this Section or prior to the time when the Corporation has completed the liquidation of a previously suspended Clearing Member’s accounts as provided in Chapter 11, the Corporation shall liquidate, or continue to liquidate, the Clearing Member’s accounts as provided in Chapter 11 to the extent practicable and not inconsistent with this Section; and any amounts owing between the Corporation and the Clearing Member as a result of such actions shall be included in determining the Clearing Member’s Net Settlement Amount under this Section. If the Corporation suffers a loss as the result of such a Clearing Member liquidation pursuant to Chapter 11 or from any other cause that is chargeable against the Clearing Fund in accordance with the By-Laws and Rules, whether such loss occurs before or after the Corporation receives the notice under paragraph (b), such loss shall be chargeable against the Clearing Fund as and to the extent provided in the By-Laws and Rules notwithstanding the giving of such notice, and any obligations of Clearing Members resulting from a pro rata charge to the Clearing Fund, including any obligation to make good any

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deficiency in the Clearing Member's Clearing Fund contribution as the result of a pro rata charge, shall also be included in determining the Clearing Member's Net Settlement Amount.

Adopted July 13, 2007. Amended August 23, 2012; December 14, 2012; September 1, 2018.

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ARTICLE VIIA – Equity Exchanges

Qualifications

SECTION 1. Prior to becoming a participant Exchange, each of the Equity Exchanges was registered as a national securities exchange under the Securities Exchange Act of 1934, as amended, and (i) had effective rules for the trading of option contracts in accordance with the provisions of said Act and the rules and regulations of the Securities and Exchange Commission thereunder, (ii) had purchased the number of shares of the Common Stock of the Corporation set forth in Section 2 of this Article VIIA, (iii) had executed a Stockholders Agreement as described in Section 3 of this Article VIIA, and (iv) had furnished the Corporation with such information as the Corporation requested concerning the operations, the management, the rules and the membership of such exchange and such other information as the Corporation required to amend or make current any registration statement of the Corporation filed with the Securities and Exchange Commission or other regulatory authority.

Amended February 11, 1976; May 28, 1985; September 13, 2002.

Purchase of Stock

SECTION 2. Prior to becoming a participant Exchange, each Equity Exchange acquired 5,000 shares of the Class A Common Stock and 5,000 shares of the Class B Common Stock of the Corporation. The shares of stock held by any Equity Exchange are not transferable to any person other than the Corporation pursuant to the Stockholders Agreement referred to in Section 3 of this Article VIIA or (in the event the Corporation should fail or be unable to perform under the terms of such Agreement) to a person that meets the requirements of clause (i) of Section 1 of this Article VIIA and is not then a stockholder of the Corporation.

Amended September 17, 1999; September 13, 2002; March 6, 2015; February 13, 2019.

Stockholders Agreement

SECTION 3. Prior to becoming a participant Exchange, each Equity Exchange entered into a Stockholders Agreement with the Corporation and each of the other Equity Exchanges, which agreement provides, among other things, that the shares of Common Stock acquired by that Exchange (i) shall be voted in favor of the Member Directors as provided in Section 5 of Article III, one or more Public Directors as provided in Section 6A of Article III, and the Management Director as provided in Section 7 of Article III and that the Exchange shall give its irrevocable proxy to the members of the Governance and Nominating Committee to vote its shares in such manner in the election of Member Directors, Public Directors, and the Management Director; (ii) shall not be pledged, hypothecated or otherwise encumbered in any manner whatsoever; and (iii) shall not, except as otherwise provided therein, be sold, assigned, transferred or otherwise disposed of except after first offering all such shares to the Corporation for an aggregate price determined and payable as therein set forth.

Amended September 17, 1999; April 3, 2000; September 13, 2002; March 6, 2014; May 13, 2014; March 6, 2015; February 13, 2019.

Participant Exchange Agreement

SECTION 4. Prior to becoming a participant Exchange, each Equity Exchange entered into a Participant Exchange Agreement with the Corporation and each of the other Exchanges, which agreement, among other things, (i) governs the business relationships between such Exchange and the Corporation and among the Equity Exchanges in respect of such matters as the listing, registration, clearance, issuance and exercise of option contracts traded on the respective Equity

ARTICLE VIIA – Equity Exchanges

Exchanges and the preparation of options disclosure documents, (ii) provides for indemnification by that Exchange of the Corporation, its officers and directors and the other Equity Exchanges and their respective governors, directors and officers in respect of information concerning such Exchange contained or required to be contained in any registration statement of the Corporation or other document required to be filed by the Corporation with any regulatory authority or in any options disclosure document, (iii) provides for indemnification by the Corporation of that Exchange and the other Equity Exchanges and their respective governors, directors and officers in respect of information contained in any registration statement of the Corporation or other document required to be filed by the Corporation with any regulatory authority or in any options disclosure document, and (iv) specifies certain areas of authority reserved to the Corporation and the Equity Exchanges, respectively.

Amended September 17, 1999; September 13, 2002.

Disqualification

SECTION 5. An Equity Exchange shall cease to be a participant Exchange if it (i) shall no longer be a registered national securities exchange or national securities association having effective rules for the trading of option contracts in accordance with the provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Securities and Exchange Commission thereunder; (ii) shall terminate the trading of all option contracts; (iii) shall be in violation, in any material respect, of any provision of the Stockholders Agreement referred to in Section 3 of this Article VIIA; or (iv) the Participant Exchange Agreement referred to in Section 4 of this Article VIIA shall have been terminated as to such Exchange.

Amended February 11, 1976; May 28, 1985; September 17, 1999; September 13, 2002.

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ARTICLE VIIB – NON-EQUITY EXCHANGES

Qualifications

SECTION 1. Any securities exchange or securities association registered under the Securities Exchange Act of 1934, as amended, which (i) has effective rules for the trading of option contracts in accordance with the provisions of said Act and the rules and regulations of the Securities and Exchange Commission thereunder, (ii) has purchased a Promissory Note of the Corporation as required pursuant to Section 2 of this Article VIIB, (iii) has executed a Noteholders Agreement as described in Section 3 of this Article VIIB, and (iv) has furnished the Corporation with such information as the Corporation may reasonably request concerning the operations, the management, the rules and the membership of such exchange or association and such other information as the Corporation may require to amend or make current any registration statement of the Corporation filed with the Securities Exchange Commission or other regulatory authority, shall be qualified for participation in the Corporation as a “Non-Equity Exchange.”

. . . Interpretations and Policies:

.01 Non-Equity Exchanges will be promptly provided with information that the Executive Chairman considers to be of competitive significance to such Non-Equity Exchanges that was disclosed to Exchange Directors at or in connection with any meeting or action of the Board of Directors or any Committee of the Board of Directors.

.02 A requesting Non-Equity Exchange shall be afforded the opportunity to make presentations to the Board of Directors or an appropriate Committee of the Board of Directors.

Adopted September 13, 2002. Amended December 11, 2002; March 6, 2014.

Purchase of Promissory Note

SECTION 2. Prior to becoming a participant Exchange, each Non-Equity Exchange shall acquire a promissory note from the Corporation (a “Promissory Note”) in the aggregate principal amount of \$1,000,000. The Promissory Note held by a Non-Equity Exchange shall not be transferable to any person other than the Corporation pursuant to the Noteholders Agreement referred to in Section 3 of this Article VIIB or (in the event the Corporation should fail or be unable to perform under the terms of such Agreement) to a person that meets the requirements of clause (i) of Section 1 of this Article VIIB and is not then a holder of a Promissory Note or a stockholder of the Corporation.

Adopted September 6, 2002.

Noteholders Agreement

SECTION 3. Prior to becoming a participant Exchange, each Non-Equity Exchange shall enter into a Noteholders Agreement with the Corporation and each of the other Non-Equity Exchanges (the “Noteholders Agreement”), which shall provide, among other things, that the Promissory Note acquired by that Exchange (i) shall not be pledged, hypothecated or otherwise encumbered in any manner whatsoever; and (ii) shall not, except as otherwise provided therein, be sold, assigned, transferred or otherwise disposed of except after first offering such Promissory Note to the Corporation for an aggregate price determined and payable as therein set forth.

Adopted September 6, 2002.

Participant Exchange Agreement

SECTION 4. Prior to becoming a participant Exchange, each Non-Equity Exchange shall enter into a Participant Exchange Agreement with the Corporation and each of the other Exchanges, which Agreement shall be of substantially the same tenor as the Participant Exchange Agreement entered into by each of the other Exchanges and shall, among other things, (i) govern the business relationships between such Exchange and the Corporation and among the Exchanges in respect of such matters as the listing, registration, clearance, issuance, and exercise of option contracts traded on the respective Exchanges and the preparation of options disclosure documents, (ii) provide for indemnification by that Exchange of the Corporation, its officers and directors and the other Exchanges and their respective governors, directors and officers in respect of information concerning such Exchange contained or required to be contained in any registration statement of the Corporation or other document required to be filed by the Corporation with any regulatory authority or in any options disclosure document, (iii) provide for indemnification by the Corporation of that Exchange and the other Exchanges and their respective governors, directors and officers in respect of information contained in any registration statement of the Corporation or other document required to be filed by the Corporation with any regulatory authority or in any options disclosure document, and (iv) specify certain areas of authority reserved to the Corporation and the Exchanges, respectively.

Adopted September 6, 2002.

Disqualification

SECTION 5. A Non-Equity Exchange shall cease to be a participant Exchange if (i) it shall no longer be a registered national securities exchange or national securities association having effective rules for the trading of option contracts in accordance with the provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Securities and Exchange Commission thereunder; (ii) it shall terminate the trading of all options; (iii) it shall be in violation, in any material respect, of any provision of the Noteholders Agreement referred to in Section 3 of this Article VIIB; or (iv) the Participant Exchange Agreement referred to in Section 4 of this Article VIIB shall have been terminated as to such Exchange.

Adopted September 6, 2002.

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ARTICLE VIII – CLEARING FUND

The Corporation shall maintain a Clearing Fund, as provided in and subject to the terms of Chapter X of the Rules.

Adopted September 1, 2018.

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ARTICLE IX – GENERAL PROVISIONS

Investment of Corporation's Funds

SECTION 1. (a) The funds of the Corporation (other than the Clearing Fund) in excess of the amounts needed as working capital may be invested by the Board of Directors in Government Securities or such other securities or financial instruments as the Board of Directors or a committee thereof may from time to time approve. All securities owned by the Corporation shall be either (a) kept in a safety deposit vault to which there shall be access only by the joint action of at least one officer of the Corporation of the rank of Vice President or above and the Treasurer or an Assistant Treasurer of the Corporation or (b) deposited in safekeeping with a bank or trust company or a registered broker-dealer under an account name and a written agreement showing that such securities are the property of the Corporation and permitting withdrawal only upon the joint instruction of at least one officer of the Corporation of the rank of Vice President or above and the Treasurer or an Assistant Treasurer of the Corporation. Notwithstanding the foregoing, securities owned by the Corporation may be pledged as security for loans to the Corporation, and funds or securities owned by the Corporation may be deposited with the correspondent clearing corporation as clearing fund, mark-to-the-market or margin deposits.

(b) Notwithstanding anything contained in paragraph (a) of this Section 1, funds of the Corporation (other than the Clearing Fund) in excess of the amount needed as working capital may be invested by the Board of Directors, in such amounts as the Board of Directors may determine, in a wholly owned subsidiary of the Corporation organized for the purpose of engaging in the clearance of transactions in contracts for the sale of commodities, commodities for future delivery and commodity options; provided, however, that such subsidiary shall maintain its books, records and funds, including the clearing fund contributions and margin deposits of its clearing members, separate from those of the Corporation.

(c) Reserved.

(d) Notwithstanding anything contained in paragraph (a) of this Section 1, funds of the Corporation (other than the Clearing Fund) in excess of the amounts needed as working capital may be invested by the Board of Directors, in such amounts as the Board of Directors may determine, in a wholly-owned subsidiary of the Corporation organized to provide data processing and other support services to clearing houses or banking entities organized to process, clear and settle transactions in foreign and United States currencies; provided, however, that such subsidiary shall maintain its books, records and funds separate from those of the Corporation.

Amended January 18, 1978; February 4, 1985; April 22, 1988; October 12, 1988; December 10, 1997; October 4, 2000; October 19, 2001.

Contracts

SECTION 2. The Board of Directors may authorize any officer or officers, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Loans

SECTION 3. No loans shall be contracted on behalf of the Corporation and no evidences of indebtedness shall be issued in its name unless authorized by a resolution of the Board of Directors. Such authority may be general or confined to specific instances.

Checks, Drafts and Other Instruments

SECTION 4. All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness, issued in the name of the Corporation shall be signed by such officer or officers, or by such agent or agents of the Corporation and in such manner as from time to time may be determined by resolution of the Board of Directors.

Deposits

SECTION 5. All funds of the Corporation not otherwise employed shall be deposited from time to time to the credit of the Corporation in such banks, trust companies or other depositories as the Board of Directors may select.

Fiscal Year

SECTION 6. The fiscal year of the Corporation shall be the year ending on December 31.

Amended November 3, 1982.

Corporate Seal

SECTION 7. The corporate seal shall have inscribed thereon the name of the Corporation and the words "Corporate Seal, Delaware." The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise applied.

Time

SECTION 8. All references in the By-Laws and Rules to "Central Time" shall be deemed to be the time then in effect in Chicago, Illinois, and to "Eastern Time" shall be deemed to be the time then in effect in New York, New York. In the event the difference in times in effect in New York, New York, and Chicago, Illinois, should be more or less than one hour, the Board of Directors shall have the power to declare that, effective not earlier than the opening of business on the next business day, the applicable time for one or more purposes under the By-Laws or Rules shall be that then in effect in either New York, New York or Chicago, Illinois. In the event of any such declaration, the references in the By-Laws or Rules to a time for such purpose or purposes shall be deemed to be modified accordingly.

Fees

SECTION 9. The fee structure of the Corporation shall be designed (a) to cover the operating expenses of the Corporation (including the reimbursement of the Exchanges for their services in performing regulatory activities which are deemed by the Board of Directors to be of benefit to the Corporation), (b) to maintain such reserves as are deemed reasonably necessary by the Board of Directors to provide facilities for the conduct of the Corporation's business and to conduct development and planning activities in connection with the Corporation's services to the Exchanges, Clearing Members and the general public, (c) to maintain capital and surplus of \$1,000,000 plus such additional amounts as the Corporation may receive upon the sale of its stock to an Exchange subsequent to January 3, 1975, and (d) to accumulate such additional surplus as the Board of Directors may deem advisable to permit the Corporation to meet its obligations to Clearing Members and the general public.

Amended March 6, 2015; February 13, 2019.

Choice of Law and Forum Selection

SECTION 10. (a) The By-Laws and the Rules of the Corporation constitute a contract between the Corporation and each Clearing Member.

(b) The laws of the State of Illinois and the federal law of the United States of America, without regard to conflicts of law principles, shall govern the application and interpretation of the By-Laws and the Rules of the Corporation, as well as all other agreements between the Corporation and Clearing Members, except to the extent that the Corporation has expressly agreed otherwise in writing.

(c) The rights and obligations of the Corporation and Clearing Members with respect to ownership and transfer of, and the creation, attachment, perfection and priority of security interests in, cleared securities shall be governed by Articles 8 and 9 of the Uniform Commercial Code of Illinois, without regard to the conflict of laws rules provided therein. For the purposes of Articles 8 and 9 of the Uniform Commercial Code, all cleared securities are "financial assets" and not "securities;" the rights and property interest of a Clearing Member in a cleared security is a "security entitlement;" the "entitlement holder" is the Clearing Member in whose account with the Corporation the cleared security is carried; and the Corporation is the "securities intermediary." In the case of a cleared security carried in an account with a Clearing Member on behalf of a customer or any person other than the Clearing Member, the rights and property interest of such customer or person in the cleared security is a "security entitlement;" the "entitlement holder" is the customer or person in whose account with the Clearing Member the cleared security is carried; and the Clearing Member is the "securities intermediary."

(d) The rights and obligations of the Corporation and Clearing Members with respect to the creation, attachment, perfection and priority of security interests in commodity futures contracts and futures options and commodity options contracts shall be governed by Article 9 of the Uniform Commercial Code of Illinois, without regard to the conflict of laws rules provided therein. For purposes of Article 9 of the Uniform Commercial Code, all such contracts are "commodity contracts" and the Corporation is the "commodity intermediary."

(e) For purposes of resolving any controversy or claim between a Clearing Member and the Corporation arising out of or relating to the By-Laws or Rules of the Corporation or the transactions contemplated thereby, the Corporation and the Clearing Member shall be deemed to have consented to the personal jurisdiction of any state or federal court located in Chicago, Illinois, and any lawsuit or other legal proceeding brought by a Clearing Member against the Corporation or by the Corporation against a Clearing Member shall be brought in a United States federal court located in the City of Chicago or, if the federal courts lack diversity or subject matter jurisdiction over the matter, in a court of the State of Illinois located in the City of Chicago.

Adopted December 7, 2007. Amended March 20, 2009.

Separability

SECTION 11. In the event any provision of the By-Laws or Rules should be held to be invalid or unenforceable for any reason, such invalidity or unenforceability shall not affect any other provision of the By-Laws or Rules, which shall remain in full force and effect in accordance with the terms thereof and shall be construed as if such invalid or unenforceable provision had not been contained therein.

Certificates for Shares

SECTION 12. Certificates representing shares of the Corporation shall be in such form and shall bear such legends as may be determined by the Board of Directors. Such certificates shall be

signed by the Executive Chairman, Chief Executive Officer, Chief Operating Officer, or a Vice-President and by the Secretary or an Assistant Secretary and shall be sealed with the seal of the Corporation. All certificates for shares shall be consecutively numbered or otherwise identified. The name of the person to whom the shares represented thereby are issued, with the number of shares and the date of issue, shall be entered on the books of the Corporation. All certificates surrendered to the Corporation for transfer shall be canceled and no new certificate shall be issued until the former certificate for a like number of shares shall have been surrendered and canceled, except that in the case of a lost, destroyed or mutilated certificate a new one may be issued therefor upon such terms and indemnity to the Corporation as the Board of Directors may prescribe.

Amended January 18, 1978, December 10, 1998; December 7, 2007; March 6, 2014; September 16, 2016; April 26, 2017; February 15, 2019.

Transfers of Shares

SECTION 13. Transfers of shares of the Corporation shall be made only on the books of the Corporation by the holder of record thereof or by his legal representative, who shall furnish proper evidence of authority to transfer, or by his attorney thereunto authorized by power of attorney duly executed and filed with the secretary of the Corporation, and on surrender for cancellation of the certificate for such shares. The person in whose names shares stand on the books of the Corporation shall be deemed the owner thereof for all purposes as regards the Corporation.

Suspension of Rules in Emergency Circumstances

SECTION 14. (a) The Corporation's By-Laws, Rules, policies and procedures, or any other rules issued by the Corporation may be waived or suspended, or any time fixed thereby for the doing of any act or acts may be extended, by the Board of Directors, the Executive Chairman, Chief Executive Officer, or Chief Operating Officer whenever, in his, her, or their judgment (i) an emergency exists and (ii) such suspension, waiver or extension is necessary or advisable for the protection of the Corporation or otherwise in the public interest in order for the Corporation to continue to facilitate the prompt and accurate clearance and settlement of confirmed trades or other transactions and to provide its services in a safe and sound manner. If such determination is made other than by the Board of Directors, then notice must be given to the Board of Directors as soon as practicable.

(b) The Corporation shall notify the SEC and the CFTC within two hours of its determination to waive or suspend the By-Laws, Rules, policies and procedures, or any other rules issued by the Corporation, or extend any time fixed thereby for the doing of any act or acts. A written report of any such extension, waiver or suspension, stating the pertinent facts, the identity of the person or persons who authorized such extension, waiver or suspension, the nature of the emergency, and the reason such extension, waiver or suspension was deemed necessary or advisable for the protection of the Corporation or otherwise in the public interest in order for the Corporation to continue to facilitate the prompt and accurate clearance and settlement of confirmed trades or other transactions and to provide its services in a safe and sound manner, shall be submitted as soon as practicable to the SEC and CFTC (but no later than three calendar days after the Corporation's determination to effect such extension, waiver or suspension), shall be retained in the Corporation's records, and shall be available for inspection by any Clearing Member during the Corporation's regular business hours on business days.

(c) Any such extension, waiver or suspension may continue in effect for no more than thirty calendar days from the date the determination was made to effect such extension, waiver or suspension, unless the Corporation shall have submitted a proposed rule change with the SEC and/or the CFTC, as applicable, seeking approval of such extension, waiver or suspension, in which case the extension, waiver or suspension may continue in effect until the SEC and/or

Article IX – General Provisions

CFTC, as applicable, approves or disapproves the proposed rule change filed by the Corporation. Notwithstanding the foregoing, in no event shall the extension, waiver or suspension continue in effect if after the Corporation notifies the SEC and CFTC of such action, the SEC and/or CFTC staff, as applicable, notifies the Corporation in writing it objects to such extension, waiver or suspension.

Adopted February 19, 2014. Amended March 6, 2014; September 16, 2016; April 26, 2017; February 15, 2019.

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ARTICLE X – INDEMNIFICATION

Indemnification of Directors and Officers

SECTION 1. The Corporaion shall indemnify its directors and officers to the fullest extent authorized or permitted by the General Corporation Law of the State of Delaware (“DGCL”) as now or hereafter in effect, and such right to indemnification shall continue as to a person who has ceased to be a director or officer of the Corporation and shall inure to the benefit of such person’s heirs, executors and personal and legal representatives. A director’s or officer’s right to indemnification conferred by this Section shall include the right to be paid by the Corporation the expenses incurred in defending or otherwise participating in any proceeding in advance of its final disposition, provided that such person presents to the Corporation a written undertaking to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation under this Article X or otherwise. Notwithstanding the foregoing, except as provided in Section 5 of this Article X, the Corporation shall not be obligated to indemnify or advance expenses of any director or officer (or such director’s or officer’s heirs, executors or personal or legal representatives) in connection with any proceeding (or part thereof) initiated by such person unless such proceeding (or part thereof) was authorized in advance by the Board of Directors.

Amended April 1, 2014.

Contract With the Corporation

SECTION 2. The assumption by a person of a term of office as a director or officer of the Corporation shall be deemed to constitute a contract between the Corporation and such person entitling such person during such term of office to all of the rights of indemnification afforded by this Article X as in effect on the date of his assumption of such term of office.

Amended April 1, 2014.

Insurance

SECTION 3. To the fullest extent authorized or permitted by the DGCL, the Corporation may purchase and maintain insurance on behalf of any current or former director or officer of the Corporation against any liability asserted against such person, whether or not the Corporation would have the power to indemnify such person against such liability under the provisions of this Article X or otherwise.

Adopted April 1, 2014.

Persons Other Than Directors and Officers

SECTION 4. This Article X shall not limit the right of the Corporation by the act of the Board of Directors, to the extent and in the manner permitted by law, to indemnify and to advance expenses to, or to purchase and maintain insurance on behalf of persons other than directors or officers of the Corporation.

Adopted April 1, 2014.

Claims

SECTION 5. If a claim for indemnification or advancement of expenses under this Article X is not paid in full by the Corporation within 60 days after a written claim has been received by the Corporation, the claimant may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and, if successful, in whole or in part, the claimant also shall be

Article X – Indemnification

entitled to be paid the expense of prosecuting such claim. It shall be a defense to any such action that the claimant has not met the standards of conduct which make it permissible under the relevant Section of this Article X for the Corporation to indemnify the claimant for the amount claimed, but the burden of proving such defense shall be on the Corporation.

Adopted April 1, 2014.

Other Indemnification

SECTION 6. The Corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer, manager, trustee, employee or agent of another corporation, limited liability company, partnership, joint venture, trust, business trust or other enterprise or entity, including service with respect to employee benefit plans (each, an "other entity"), shall be reduced by any amount such person may collect as indemnification or advancement of expenses from such other entity.

Adopted April 1, 2014.

Non-Exclusivity of Rights

SECTION 7. The rights to indemnification and advancement of expenses conferred in this Article X shall neither be exclusive of, nor be deemed in limitation of, any rights to which any person may otherwise be or become entitled or permitted under the Corporation's Certificate of Incorporation or By-Laws, any statute, agreement, vote of stockholders or disinterested directors or otherwise.

Adopted April 1, 2014.

Effect of Modifications

SECTION 8. Any amendment, repeal or modification of any provision contained in this Article X shall, unless otherwise required by law, be prospective only (except to the extent such amendment or change in law permits the Corporation to further limit or eliminate the liability of directors or officers) and shall not adversely affect any right or protection of any current or former director or officer of the Corporation existing at the time of such amendment, repeal or modification with respect to any acts or omissions occurring prior to such amendment, repeal or modification.

Adopted April 1, 2014.

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ARTICLE XI – AMENDMENT OF THE BY-LAWS AND THE RULES

Amendment of the By-Laws

SECTION 1. The By-Laws may be amended at any time by the Board of Directors upon the affirmative vote of two-thirds of the directors then in office (but not less than a majority of the number of directors fixed by these By-Laws); provided that Sections 2, 3 and 5 of Article II, Article III, the second sentence of Section 1 of Article IV, the first two sentences of Section 1 of Article V, the first sentence of Section 10 of Article VI, Section 11 and 11A of Article VI, Article VIIA, Article VIIB, Section 9 of Article IX, and this Section 1 of Article XI may not be amended by action of the Board of Directors without the approval of the holders of all of the outstanding Common Stock of the Corporation. For purposes of this Section, the affirmative vote or consent of an Exchange Director then in office shall be deemed to constitute the approval of the stockholder that elected such Exchange Director; provided, however, that if the Exchange Director announces prior to voting in favor of an amendment, or notes on a written consent of directors approving an amendment, that such Exchange Director's vote or consent does not constitute the action of such stockholder, then the amendment shall require the written approval of such stockholder of such Common Stock.

Amendment of the Rules

SECTION 2. The Rules may be amended at any time by the Board of Directors; provided that any amendment of the introduction to Chapter X of the Rules, Rule 1002, Rule 1006, Rule 1009 and Rule 1010 shall require the affirmative vote of two-thirds of the directors then in office (but not less than a majority of the number of directors fixed by these By-Laws).

Amended June 19, 2000; September 6, 2002; December 23, 2005; March 6, 2015; September 1, 2018; February 13, 2019.

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ARTICLE XII – FUTURES, FUTURES OPTIONS AND COMMODITY OPTIONS

Introduction

By-Laws in this Article are applicable only to futures, futures options and commodity options except that Sections 2 through 7 do not apply to commodity options. In addition, the By-Laws in Articles I-XI are also applicable to futures, futures options and commodity options, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of futures, futures options or commodity options by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I-XI, that fact is indicated in this Article.

Section 1 of this Article is applicable to all futures, futures options and commodity options, including both physically-settled and cash-settled commodity options. In addition, the By-Laws in Article XIV are applicable to commodity options that are binary options or range options and the By-Laws in Article XVII are applicable to other commodity options that are cash-settled options.

Adopted August 20, 2001. Amended May 16, 2002; March 20, 2009.

Conditions for the Corporation to Clear Futures, Futures Options or Commodity Options for an Exchange

SECTION 1. The Corporation will clear transactions in futures, futures options or commodity options effected on an Exchange subject to the following conditions.

(1) In the case of a Securities Exchange or an affiliated futures market, the execution of a clearing agreement between the Securities Exchange or affiliated futures market and the Corporation, which agreement shall, among other things: (i) govern the business relationship between such Securities Exchange or affiliated futures market and the Corporation in respect of the listing of, and clearance of transactions in, futures, futures options or commodity options, (ii) provide for appropriate indemnification by the Securities Exchange or affiliated futures market of the Corporation, its officers, and directors, and (iii) provide that the Corporation shall cease clearing futures, futures options or commodity options for the Securities Exchange or affiliated futures market and the clearing agreement shall terminate if: (A) the Securities Exchange or affiliated futures market no longer meets all legal and regulatory requirements necessary to list and trade futures, futures options or commodity options; (B) the Securities Exchange or affiliated futures market terminates the trading of all futures, futures options or commodity options; or (C) the Securities Exchange or affiliated futures market is in violation, in any material respect, of the clearing agreement.

(2) In the case of a security futures market or futures market that is not a Securities Exchange or an affiliated futures market, (i) the execution of a clearing agreement between the security futures market or futures market and the Corporation having the terms specified in paragraph (1) above and such additional terms as the Corporation may deem necessary or appropriate; (ii) the payment by the security futures market or futures market to the Corporation of a fee in the amount of \$250,000, which fee shall be refundable in whole or in part to the security futures market or futures market in the event that the security futures market or futures market ceases to clear futures, futures options or commodity options through the Corporation; and (iii) the Corporation does not determine that clearing transactions in futures, futures options or commodity options for such security futures market or futures market would adversely affect the Corporation's capacity to perform its other contractual and statutory responsibilities. In the event the security futures market or futures market ceases to clear transactions through the Corporation, the Corporation shall refund to the security futures market or futures market the

lesser of (x) the \$250,000 originally paid to the Corporation or (y) 50% of the aggregate clearing fees received by the Corporation as the result of transactions on the security futures market or futures market.

. . . Interpretations and Policies:

.01 The Corporation will clear transactions effected on an Exchange only if such Exchange has received all necessary regulatory authorization to trade the particular types of contracts subject to such transactions.

.02 The Corporation will clear and treat as security futures any futures contracts on the CBOE Gold ETF Volatility Index.

Adopted June 15, 2001. Amended August 20, 2001; May 16, 2002; March 25, 2004; January 24, 2008; March 20, 2009; March 18, 2011.

General Rights and Obligations of Buyers and Sellers of Futures and Futures Options

SECTION 2. (a) Each buyer and seller of a future shall have the rights and obligations provided in the By-Laws and Rules. Such rights and obligations include, but are not limited to, the right to receive variation payments from the Corporation and the obligation to make variation payments to the Corporation as provided in Rule 1301. The seller of a physically-settled stock or commodity future is obligated to deliver to the buyer thereof, and the buyer is obligated to accept delivery of and make payment to the seller for, a number of shares or units of the underlying interest equal to the unit of trading applicable to such future, such delivery and payment to take place on the delivery date in accordance with the By-Laws and Rules.

(b) Subject to the provisions of the By-Laws and Rules, the holder of a single futures option contract has the right, during the period when such option is by its terms exercisable prior to the expiration time therefor on the expiration date:

(i) in the case of a call, to have such call replaced by a long position in the underlying futures contract equal to the unit of trading for such option contract; and

(ii) in the case of a put, to have such put replaced by a short position in the underlying futures contract equal to the unit of trading for such option contract.

(c) Subject to the provisions of the By-Laws, a writer of a single futures options contract has the obligation, upon assignment by the Corporation of an exercise in respect of such contract:

(i) in the case of a call, to have such call replaced by a short position in the underlying futures contract equal to the unit of trading for such option contract; and

(ii) in the case of a put, to have such put replaced by a long position in the underlying futures contract equal to the unit of trading for such option contract.

Underlying futures contracts that are opened in settlement of exercises and assignments of futures option contracts shall be deemed to have been opened on the day of exercise and shall be deemed to be opened at the exercise price for such futures option, which shall be deemed the contract price for such futures contract. After the underlying futures contracts are opened, the buyer and seller shall have the rights and obligations as specified in subparagraph (a) of this Section and as otherwise specified in the By-Laws and Rules for buyers and sellers of futures.

[Section 2 of this Article replaces paragraphs (a) and (b) of Article VI, Section 9 of the By-Laws.]

Article XII – Futures, Futures Options and Commodity Options

Adopted August 20, 2001. Amended May 16, 2002; March 25, 2009; July 1, 2009; November 21, 2011; January 24, 2012; July 25, 2013.

Adjustments to Futures and Futures Options

SECTION 3. (a) Section 11 of Article VI of the By-Laws shall not apply to futures or futures options. Except as provided in paragraph (j) below, determinations as to whether and how to adjust the terms of futures and futures options to reflect events affecting underlying interests shall be made by the Corporation based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to the buyers and sellers of such futures and futures options, the maintenance of a fair and orderly market in futures on the underlying interest and options on such futures, consistency of interpretation and practice (including consistency with the actions of the Corporation in making adjustments to options on the same underlying interest), efficiency of settlement of delivery obligations arising from physically-settled stock futures, and the coordination with other clearing agencies of the clearance and settlement of transactions in the underlying interest. The Corporation may, in addition to determining adjustments to futures and futures options on a case-by-case basis, adopt statements of policy or interpretations having general application to specified types of events. Except as provided in paragraph (j) below, every determination by the Corporation in respect of futures or futures options pursuant to this Section 3, or pursuant to Section 4 or Section 4A of this Article shall be within the sole discretion of the Corporation. Such determinations shall be conclusive and binding on all investors and not subject to review. The following paragraphs of this Section 3 apply to stock futures only. Special rules for adjustment of index futures and futures options and variance futures and futures options are set out in Section 4. Special rules for adjustment of other cash-settled futures are set out in Section 4A.

(b) Whenever there is a dividend, stock dividend, stock distribution, stock split, reverse stock split, rights offering, distribution, reorganization, recapitalization, reclassification or similar event in respect of any underlying security, or a merger, consolidation, dissolution or liquidation of the issuer of any underlying security, the number of stock futures the unit of trading (or settlement price) and the underlying security, or any of them, with respect to all outstanding security futures open for trading in the underlying security may be adjusted in accordance with this Section 3. If the Corporation does not learn, or does not learn in a timely manner, of an event for which the Corporation would have otherwise made an adjustment, the Corporation shall not be liable for any failure to make such adjustment or delay in making such adjustment. In making any adjustment determination, the Corporation shall apply the factors set forth in this Section 4 in light of the circumstances known to it at the time such determination is made.

(c) Except as provided in paragraph (j) below, it shall be the general rule that there will be no adjustments to reflect ordinary cash dividends or distributions or ordinary stock dividends or distributions (collectively, "ordinary distributions") by the issuer of the underlying security.

(d) It shall be the general rule that in the case of:

(i) a stock dividend, stock distribution or stock split whereby a whole number of additional shares of the underlying security is issued with respect to each outstanding share, each stock future covering that underlying security shall be increased by the same number of additional stock futures as the additional number of shares issued with respect to each share of the underlying security, the last settlement price established immediately before such event shall be proportionately reduced, and the unit of trading shall remain the same.

(ii) a stock dividend, stock distribution or stock split whereby other than a whole number of shares of the underlying security is issued in respect of each outstanding share, the last settlement price established immediately before such event shall be proportionately reduced and the unit of trading shall be proportionately increased.

(iii) reverse stock splits, combinations of shares, or similar events, stock futures shall be adjusted solely for purposes of determining the property deliverable in respect of such futures contract, by decreasing the unit of trading to reflect the number of shares eliminated. If an adjustment is made in accordance with the preceding sentence, the unit of trading for all such adjusted futures contracts shall remain unchanged for purposes of determining the aggregate settlement value of the futures contract payable upon delivery and for purposes of determining the settlement value for any such futures contract purchased and sold.

(e) It shall be the general rule that in the case of any distribution made with respect to shares of an underlying security other than ordinary distributions and other than distributions for which adjustments are provided in paragraph (d) of this Section 3, if the Corporation determines that an adjustment to the terms of stock futures on such underlying security is appropriate, (i) the last settlement price established immediately before such event shall be reduced by the value per share of the distributed property, in which event the unit of trading shall not be adjusted, or alternatively, (ii) the unit of trading in effect immediately before such event shall be adjusted so as to include the amount of property distributed with respect to the number of shares of the underlying security represented by the unit of trading in effect prior to such adjustment, in which event the settlement price shall not be adjusted. The Corporation shall, with respect to adjustments under this paragraph or any other paragraph of this Section 3, have the authority to determine the value of distributed property.

(f) In the case of any event for which adjustment is not provided in any of the foregoing paragraphs of this Section 3, the Corporation may make such adjustments, if any, with respect to the stock futures affected by such event as the Corporation determines.

(g) Adjustments pursuant to this Section 3 shall as a general rule become effective in respect of outstanding stock futures on the "ex-date" established by the primary market for the underlying security.

(h) It shall be the general rule that (i) all adjustments of the settlement price of an outstanding stock future shall be rounded to the nearest adjustment increment, (ii) when an adjustment causes a settlement price to be equidistant between two adjustment increments, the settlement price shall be rounded up to the next highest adjustment increment, (iii) all adjustments of the unit of trading shall be rounded down to eliminate any fraction, and (iv) if the adjustment is made pursuant to subparagraph (d)(ii) above and the unit of trading is rounded down to eliminate a fraction, the adjusted settlement price may be further adjusted, to the nearest adjustment increment, to reflect any diminution in the value of the stock future resulting from the elimination of the fraction, or if the adjustment is made pursuant to subparagraph (d)(iii) above and the unit of trading is rounded down to eliminate a fraction, the value of the fractional share so eliminated as determined by the Corporation shall be added to the unit of trading.

(i) Notwithstanding the general rules set forth in paragraphs (c) through (h) and (j) of this Section 3 or which may be set forth as interpretations and policies under this Section 3, the Corporation shall have the power to make exceptions in those cases or groups of cases in which, in applying the standards set forth in paragraph (a) of this Section 3, the Corporation shall determine such exceptions to be appropriate. However, the general rules shall be applied unless the Corporation affirmatively determines to make an exception in a particular case or group of cases.

(j) Notwithstanding the general rule set forth in paragraph (c), such security futures as may be designated by the Exchange on which such contracts are traded as subject to this paragraph (j) shall be adjusted for the aggregate amount of all cash dividends or distributions as reported by such Exchange to the Corporation. The settlement price of each such contract on the ex-date shall be adjusted by such aggregate amount of such dividend or distribution, provided that (i) the Exchange has reported such information to the Corporation prior to the ex-date in accordance with the Corporation's requirements, or (ii) the Exchange failed to provide the information on a timely basis or reported incorrect information to the Corporation, but provides such information or corrected information to the Corporation on the ex-date. The Corporation shall have no liability with respect to a dividend or distribution that has not been timely

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reported by the trading Exchange or for which such Exchange has reported incorrect information without making a timely subsequent correction.

. . . Interpretations and Policies:

.01 (a) Cash dividends or distributions by the issuer of the underlying security that the Corporation believes to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly or other regular basis or which the Corporation believes represents an acceleration or deferral of such payments will, as a general rule, be deemed to be "ordinary distributions" within the meaning of paragraph (c) of Section 3. The Corporation will determine on a case-by-case basis whether other dividends or distributions are "ordinary distributions" or whether they are dividends or distributions for which an adjustment should be made.

In making such determinations, the Corporation may take into account such factors as it deems appropriate, including, without limitation, the issuer's stated dividend payment policy, the issuer's characterization of a particular dividend or distribution as "regular," "special," "accelerated" or "deferred," whether the dividend can be differentiated from other dividends (if any) paid on a quarterly or other regular basis, and the issuer's dividend payment history. Normally, the Corporation shall classify a dividend or distribution as non-ordinary when it believes that similar dividends or distributions will not be paid on a quarterly or other regular basis.

(b) Stock dividends or distributions by the issuer of the underlying security that the Corporation believes to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly basis will, as a general rule, be deemed to be "ordinary distributions" within the meaning of paragraph (c) of Section 3. The Corporation will ordinarily adjust for other stock dividends and distributions.

(c) Where the Corporation determines to adjust for a cash or stock dividend or distribution, the adjustment shall be made in accordance with the applicable provisions of Section 3.

.02 Adjustments will ordinarily be made for rights distributions, except as provided below in the case of certain "poison pill" rights. When an adjustment is made for a rights distribution, the unit of trading in effect immediately prior to the distribution will ordinarily be adjusted to include the number of rights distributed with respect to the number of shares or other units of the underlying security comprising the unit of trading. If, however, the Corporation determines that the rights are due to expire before the time they could be exercised upon delivery under the futures contract, then delivery of the rights will not be required. Instead, the Corporation will ordinarily adjust the last settlement price established before the rights expire to reflect the value, if any, of the rights as determined by the Corporation in its sole discretion. Adjustments will not ordinarily be made to reflect the issuance of so-called "poison pill" rights that are not immediately exercisable, trade as a unit or automatically with the underlying security, and may be redeemed by the issuer. In the event such rights become exercisable, begin to trade separately from the underlying security, or are redeemed, the Corporation will determine whether an adjustment is appropriate.

.03 Adjustments will not be made to reflect a tender offer or exchange offer to the holders of the underlying security, whether such offer is made by the issuer of the underlying security or by a third person or whether the offer is for cash, securities or other property. This policy will apply without regard to whether the price of the underlying security may be favorably or adversely affected by the offer or whether the offer may be deemed to be "coercive." Outstanding stock futures ordinarily will be adjusted to reflect a merger, consolidation or similar event that becomes effective following the completion of a tender offer or exchange offer.

.04 Adjustments will not be made to reflect changes in the capital structure of an 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. For example, adjustments will not be

made merely to reflect the issuance (except as a distribution on an underlying security) of new or additional debt, stock, or options, warrants or other securities convertible into or exercisable for the underlying security, the refinancing of the issuer's outstanding debt, the repurchase by the issuer of less than all of the underlying securities outstanding, or the sale by the issuer of significant capital assets.

.05 When an underlying security is converted into a right to receive a fixed amount of cash, such as in a merger or a call or redemption of an entire class of index-linked securities, outstanding stock futures will be adjusted to replace such underlying security with such fixed amount of cash as the underlying interest, and the unit of trading shall remain unchanged. No adjustment will ordinarily be made in the event of a call of less than an entire class of index-linked securities.

.06 In the case of a corporate reorganization, reincorporation or similar occurrence by the issuer of an underlying security which results in an automatic share-for-share exchange of shares in the issuer for shares in the resulting company, security futures on the underlying security will ordinarily be adjusted by replacing such underlying security with a like number of units of the shares of the resulting company. Because the securities are generally exchanged only on the books of the issuer and the resulting company, and are not generally exchanged physically, deliverable shares will ordinarily include certificates that are denominated on their face as shares in the original issuer, but which, as a result of the corporate transaction, represent shares in the resulting company.

.07 When an underlying security is converted in whole or in part into a debt security and/or a preferred stock, as in a merger, and interest or dividends on such debt security or preferred stock are payable in the form of additional units thereof, outstanding stock futures that have been adjusted by replacing the original underlying security with the security into which the original underlying security has been converted shall be further adjusted, effective as of the ex-date for each payment of interest or dividends thereon, by increasing the unit of trading by the number of units of the new underlying security distributed as interest or dividends thereon.

.08 Notwithstanding Interpretation and Policy .01 above, (i) distributions of short-term and long-term capital gains in respect of fund shares by the issuer thereof shall not, as a general rule, be deemed to be "ordinary distributions" within the meaning of paragraph (c) of this Section 3 and (ii) other distributions in respect of fund shares by the issuer thereof shall not, as a general rule, be deemed to be "ordinary distributions" within the meaning of paragraph (c) of Section 3 if (x) the fund tracks the performance of an index that underlies a class of index options or index futures, and the distribution on the fund shares includes or reflects a dividend or other distribution on a portfolio security that resulted in an adjustment of the index divisor; or (y) the distribution on the fund shares includes or reflects a dividend or other distribution on a portfolio security (I) that results in an adjustment of stock futures on other fund shares pursuant to clause (ii)(x) or (II) that is not deemed an ordinary distribution under Interpretation .01 above. Adjustments of the terms of stock futures on such fund shares for distributions described in clause (i) or (ii) above shall be made in accordance with paragraph (e) of this Section 3 unless the Corporation determines, on a case-by-case basis, not to adjust for such a distribution.

.09 Other than as provided for in the By-Laws and Rules, including in paragraph (j) of this Section 3, the Corporation will not adjust officially reported settlement prices, even if the information provided by the Exchange regarding dividends or distributions is subsequently found to have been erroneous, except in extraordinary circumstances. Such circumstances might be found to exist where, for example, the information initially provided by the Exchange is clearly erroneous or the Corporation otherwise learns of the error, and corrected information is promptly provided by the Exchange. In no event will a completed settlement be adjusted due to errors discovered after settlement.

.10 Interest payments on index-linked securities will, as a general rule, be deemed to be "ordinary cash dividends or distributions" within the meaning of paragraph (c) of this Section 3.

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[Section 3 of this Article replaces Article VI, Section 11A of the By-Laws.]

Adopted August 20, 2001. Amended May 16, 2002; August 1, 2002; October 3, 2002; May 10, 2004; September 24, 2004; December 23, 2005; October 3, 2006; February 26, 2007; January 24, 2008; August 31, 2010; October 8, 2010; July 18, 2012; September 23, 2012; November 12, 2018.

Adjustments to Index Futures and Variance Futures and Options on Such Futures

SECTION 4. (a) No adjustments will ordinarily be made in the terms of index futures or in the terms of variance futures that have an index as their reference variable in the event that securities, commodities, or other constituents are added to or deleted from the index or when the relative weight of one or more such constituents in the index is changed. However, if the Corporation shall determine in its sole discretion that any such addition, deletion or change causes significant discontinuity in the level of the index, the Corporation may adjust the terms of the affected index futures by adjusting the index multiplier with respect to such contracts or by taking such other action as the Corporation in its sole discretion deems fair to both the buyers and sellers of such contracts. Similarly, the Corporation may use its discretion to adjust variance futures if necessary to correct for any impact such an event could have on an underlying variance.

(b) If (i) an Exchange shall increase or decrease the multiplier for any index futures contract or variance futures contract, (ii) the reporting authority shall change the method of calculation of an index that is an underlying interest or reference variable 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 constituents in the index, or (iii) the Corporation shall substitute one index for another pursuant to paragraph (c) of this Section, the Corporation shall make such adjustments in the number of outstanding affected futures or the contract prices of such futures or such other adjustments, if any, as the Corporation in its sole discretion deems fair to both the buyers and the sellers of such contracts.

(c) In the event the Corporation determines that: (i) publication of an index that is an underlying interest or reference variable has been discontinued; (ii) such an index has been replaced by another index; or (iii) the composition or method of calculation of such an index is so materially changed since its selection as an underlying interest or reference variable that it is deemed to be a different index, the Corporation may substitute another index (a “successor index”) as the underlying interest or reference variable. A successor index shall be reasonably comparable, as determined by the Corporation in its discretion, to the original index for which it is substituted. An index may be created specifically for the purpose of becoming a successor index. If the Corporation determines in its discretion not to substitute a successor index, the Corporation may terminate the futures contract and fix a final settlement price in accordance with Section 5 of this Article. Any outstanding options on a futures contract terminated in accordance with the preceding sentence will be automatically exercised if in-the-money based upon the final settlement price for the underlying future or will terminate if out-of-the-money based upon such final settlement price.

(d) If a futures market or its reporting authority shall change the method of calculation of an underlying variance so as to create a discontinuity or change in the underlying variance that does not reflect a change in the variability of the reference variable, the Corporation shall make such adjustments in the number of outstanding affected variance futures or the contract prices of such futures or such other adjustments, if any, as the Corporation in its sole discretion deems fair to both the buyers and the sellers of such contracts.

(e)(i) In the event the Corporation, acting pursuant to paragraph (a) of this Section, adjusts an index futures contract or variance futures contract underlying a futures option, such futures option will ordinarily be adjusted to provide, upon exercise, for delivery of the futures contract as

adjusted by the Corporation. (ii) In the event the Corporation, acting pursuant to paragraph (b) or (d) of this Section, adjusts (A) the number of outstanding index futures or variance futures in a series of futures underlying a futures option, (B) the contract price of index futures or variance futures underlying a futures option, or (C) the index futures or variance futures underlying a futures option in any other manner, the futures option ordinarily will be adjusted in a manner corresponding to the adjustment in the underlying futures contract (e.g., if the number of outstanding index futures or variance futures in a series of futures underlying a futures option is adjusted, the number of futures options on the adjusted underlying index future or variance future will be similarly adjusted; if the contract price of the underlying index future or variance future is adjusted, the exercise price of the futures options will be similarly adjusted; etc.).

[Section 4 of this Article replaces Article VI, Section 11 of the By-Laws.]

Adopted August 20, 2001. Amended May 16, 2002, May 10, 2004; October 26, 2005; January 24, 2008; March 20, 2009.

Adjustments to Other Cash-Settled Futures

SECTION 4A. (a) *Cash-settled foreign currency futures.* In the event that (i) the currency underlying a cash-settled foreign currency future is officially replaced by a new currency, or (ii) such currency's exchange rate or exchange characteristics with respect to other currencies are officially altered, the Corporation may adjust the underlying interest, unit of trading, settlement price or any other terms of futures affected by such event. The Corporation shall determine whether to make adjustments to reflect particular events, and the nature and extent of any such adjustment, based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to the buyers and sellers, the maintenance of a fair and orderly market in futures on the underlying interest, and consistency of interpretation and practice (including consistency with the actions of the Corporation in making adjustments to option contracts on the same underlying interest).

(b) *Other cash-settled futures.* In the case of any futures contract that does not require physical delivery of the underlying interest and that is not covered under Section 4 or 4A(a), the Corporation may adjust the underlying interest, unit of trading, settlement price or any other terms of such futures if the Corporation determines that an adjustment is appropriate to reflect the occurrence of an event affecting such underlying interest. The Corporation shall determine whether to make adjustments to reflect particular events, and the nature and extent of any such adjustment, based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to the buyers and sellers, the maintenance of a fair and orderly market in futures on the underlying interest, and consistency of interpretation and practice (including consistency with the actions of the Corporation in making adjustments to option contracts on the same underlying interest).

[Section 4A of this Article replaces Section 11(a)-(j), and the Interpretations and Policies promulgated thereunder, of Article VI of the By-Laws.]

. . . Interpretations and Policies:

.01 The Corporation will not ordinarily adjust the terms of cash-settled foreign currency futures in response to devaluations or revaluations of currencies underlying such futures.

Adopted August 1, 2003. Amended October 3, 2006; January 24, 2008; November 12, 2018.

Unavailability or Inaccuracy of Final Settlement Price

SECTION 5. (a) This paragraph (a) applies to futures contracts that have an underlying interest (i) traded on one or more organized markets or (ii) that is an index derived from constituents traded

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on one or more organized markets. If the Corporation shall determine (i) that the primary market(s) (as determined by the Corporation) (A) for the underlying interest in respect of a maturing stock future or cash-settled foreign currency future, or (B) for one or more constituents of (I) the underlying index in respect of a maturing index future or (II) the index that is the reference variable in respect of a maturing variance future, did not open or remain open for trading (or that any such security, foreign currency or constituents did not open or remain open for trading on such market(s)) at or before the time when the final settlement price for such futures would ordinarily be determined, or (ii) that a price, variance or other value to be used as, or to determine, the final settlement price (a “required value”) is otherwise unreported, inaccurate, unreliable, unavailable or inappropriate for such use, then, in addition to any other action that the Corporation may be entitled to take under the By-Laws and Rules, the Corporation shall be empowered to take any or all of the actions described in paragraph (c) of this Section with respect to such maturing futures (“affected futures”).

(b) This paragraph (b) applies to futures contracts that are not described in the first sentence of paragraph (a) of this Section. If the Corporation shall determine that a required value (as defined in paragraph (a)) for an underlying interest or a constituent of an underlying index for a futures contract is unreported, inaccurate, unreliable, unavailable or inappropriate for such use, then, in addition to any other action that the Corporation may be entitled to take under the By-Laws and Rules, the Corporation shall be empowered to take any or all of the actions described in paragraph (c) of this Section with respect to the affected futures.

(c)(1) The Corporation may suspend the time for making the final variation payment with respect to affected futures and, in the case of physically-settled stock futures, may postpone the delivery date. At such time as the Corporation determines that the required value is available or the Corporation has fixed the final settlement price pursuant to subparagraph (2) of this Section, the Corporation shall fix a new date for making the final variation payment and may fix a new delivery date for physically-settled stock futures.

(2) The Corporation may fix the final settlement price for affected futures, based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to buyers and sellers of affected futures, the maintenance of a fair and orderly market in such futures, consistency of interpretation and practice, and consistency with actions taken in related futures or other markets. Without limiting the generality of the foregoing, (A) with respect to affected futures governed by paragraph (a) of this Section, the Corporation may fix the final settlement price using: (i) the reported price or value for the relevant underlying interest or one or more constituents comprising the underlying interest at the close of regular trading hours (as determined by the Corporation) on the last preceding trading day for which such a price or value was reported by the reporting authority; (ii) the reported price or value for the relevant underlying interest or one or more constituents comprising the underlying interest at the opening of regular trading hours (as determined by the Corporation) on the next trading day for which such an opening price or value is reported by the reporting authority; or (iii) a price or value for the relevant underlying interest or one or more constituents comprising the underlying interest at such other time, or representing a combination or average of prices or values at such time or times, as the Corporation deems appropriate; and (B) with respect to affected futures governed by paragraph (b) of this Section, the Corporation may (i) fix the final settlement price using a price or value, or a combination or average of prices or values, for the relevant underlying interest or one or more constituents comprising the underlying interest as the Corporation deems appropriate or (ii) fix the final settlement price at the most recently determined interim settlement price for the affected future, such that no final variation payment is due.

(d) Every determination of the Corporation pursuant to this Section shall be within the sole discretion of the Corporation and shall be conclusive and binding on all investors and not subject to review. Unless the Corporation directs otherwise, the price of an underlying interest, the

current index value of an underlying index, and the variance of a reference variable as initially reported by the relevant exchange or other reporting authority shall be conclusively presumed to be accurate and shall be deemed final for the purpose of determining settlement prices and the final settlement price, even if such price or value is subsequently revised or determined to have been inaccurate.

. . . Interpretations and Policies:

.01 The Corporation will not adjust officially reported prices or values of underlying interests for final settlement purposes, even if those prices or values are subsequently found to have been erroneous, except in extraordinary circumstances. Such circumstances might be found to exist where, for example, the closing price or current index value as initially reported is clearly erroneous and inconsistent with prices or values reported earlier in the same trading day, or, in the case of an underlying variance, clearly erroneous and inconsistent with variances reported on prior trading days and a corrected closing price, value, variance or current index value is promptly announced by the reporting authority. In no event will a completed settlement be adjusted due to errors in officially reported prices or values for underlying interests.

[Section 5 of this Article replaces Article VI, Section 19 of the By-Laws]

Adopted August 20, 2001. Amended May 16, 2002; September 26, 2002; August 1, 2003; May 10, 2004; October 26, 2005; January 24, 2008.

Determination of Settlement Prices

SECTION 6. (a) Subject to the last sentence of this Section 6(a), the Corporation shall adopt as the interim settlement price in respect of a series of futures the interim settlement price reported to the Corporation by the Exchange, futures market or security futures market on which such series is traded. If contracts of the same series are traded on more than one Exchange, futures market or security futures market, the interim settlement price will be determined by a method mutually agreed upon among the Corporation and all such Exchanges, futures markets and security futures markets, and in the absence of such agreement, by the Corporation. In either case the Corporation shall promptly notify such Exchanges, futures markets and security futures markets of its action. For the purpose of making such determination the Corporation, in its sole discretion, may (i) designate one of the Exchanges, futures markets or security futures markets as the principal market for the relevant series of futures and obtain interim settlement prices for such series solely from such principal market, or (ii) calculate interim settlement prices from prices obtained from some or all of the Exchanges, futures markets or security futures markets in accordance with procedures specified by the Corporation from time to time. The Corporation may adjust interim settlement prices obtained as set forth above in respect of a series of futures if the Corporation determines, in its sole discretion, that (i) adoption of the interim price reported to the Corporation would be inconsistent with the By-Laws or Rules, or (ii) an adjustment is otherwise necessary or appropriate, including, without limitation, to compensate for apparent inaccuracies in price reporting or to reflect changes in the market price or current level of the underlying interest or changes in market conditions generally.

(b) The method for determining the final settlement price for a series of futures shall be as specified in the Exchange Rules of the Exchange, futures market or security futures market on which the series is traded; provided, however, that in the event of any conflict between such Exchange Rules and the By-Laws and Rules of the Corporation, the By-Laws and Rules of the Corporation shall control. Subject to the last sentence of this Section 6(b), the Corporation shall adopt as the final settlement price in respect of a series of futures the final settlement price determined by the Exchange, futures market or security futures market on which the series is traded in accordance with that specified method at maturity of each series of futures. The final settlement price may be based upon the price or level of the underlying interest or a contract of

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such series, as applicable, at the close of trading on the maturity date of a future or at the opening of trading on the following business day. It may also be based upon an average of prices or levels during an appropriate period of time. Such price or prices may be taken from the cash or spot markets for the underlying interest or a contract of such series, if applicable, or from prices determined in the futures markets. Final settlement prices are subject to adjustment by the Corporation in accordance with the By-Laws and Rules. Notwithstanding the foregoing, the Corporation retains the authority in its By-Laws and Rules to fix final settlement prices for futures contracts in a variety of circumstances, including but not limited to the failure of such Exchange, futures market or security futures market to provide a final settlement price in a timely fashion.

. . . Interpretations and Policies:

.01 Notwithstanding the provisions of this Section 6 of Article XII of the By-Laws, no method for determining a final settlement price may be used if it is inconsistent with applicable regulations of the Securities and Exchange Commission or the Commodity Futures Trading Commission such as, for example, regulations requiring that the final settlement prices for certain security futures contracts be based on opening prices.

Adopted August 20, 2001. Amended May 16, 2002; August 1, 2003; January 24, 2008.

Acceptance of Non-Competitively Executed Trades

SECTION 7. The acceptance by the Corporation of any futures transaction that is identified as an “exchange-for-physical” or “EFP,” a “block trade,” or any other non-competitively executed trade in confirmed trade information reported by an Exchange or in any instruction submitted directly to the Corporation by a Clearing Member, as applicable, shall be subject to the condition that the Corporation shall have received any variation payments due in the accounts of the purchasing and selling Clearing Members in which the transaction was effected at the first variation settlement after the transaction was reported to the Corporation. Unless such a transaction is rejected as hereinafter provided, such transaction shall be deemed accepted at the time of such variation settlement. In the event that the Corporation fails to receive any such variation payment when due, the Corporation may (either by a general rule or resolution adopted by the Board of Directors or by action of the officers of the Corporation with respect to specific transactions) reject the transaction. In the event that the transaction is rejected as herein provided, the Corporation shall promptly notify, either orally or in writing, the Clearing Members party to the transaction, and such Clearing Members shall have the remedies (if any) provided in the rules of the Exchange on which the transaction was effected.

. . . Interpretations and Policies:

.01 The Exchange Rules of the relevant Exchange shall govern the execution and, unless otherwise specified in the procedures of the Corporation, submission of all non-competitively executed trades. Instructions in respect of non-competitively executed trades subject to the Exchange Rules of certain Exchanges, which shall be designated by the Corporation in its procedures, may be directly submitted to the Corporation, pursuant to such procedures, by Clearing Members who are also members of such Exchanges, subject to the condition that the counterparty to such trade is, or is represented by, a Clearing Member. The Corporation shall not be responsible for failure to give effect to any such instruction.

.02 The Corporation will not treat an EFP or block trade as a non-competitively executed trade subject to this Section 7 if the Exchange on which such trade is executed has made representations satisfactory to the Corporation that the Exchange has rules, policies or procedures that require each EFP and block trade that is submitted to the Corporation to be executed at a reasonable price and that such price is validated by the Exchange.

Adopted August 20, 2001. Amended May 16, 2002; October 28, 2002; March 20, 2009; July 1, 2009; December 12, 2011; December 14, 2012; February 19, 2015; May 24, 2018.

Inability to Deliver

SECTION 8. (a) If the Corporation shall in its discretion determine that (i) an event affecting the supply of an interest underlying a physically-settled commodity future threatens to reduce the available supply of the underlying interest to a level insufficient to permit performance of the delivery obligations in respect of a series of physically-settled commodity futures contracts, or (ii) such delivery obligations cannot be performed as the result of an emergency, the Corporation may take such action as it deems necessary under the circumstances, and its decision shall be binding upon all buyers and sellers of such futures. Such action by the Corporation may include, without limitation, fixing cash final settlement prices to be paid in settlement of such futures contracts, in which case buyers and sellers of such futures will be deemed to have discharged their obligations, and received full performance, in respect thereof when settlement of the final variation payment has been completed.

(b) Without limiting the generality of paragraph (a) above, if the Corporation makes the determination described in paragraph (a) in respect of a series of Treasury futures, the Corporation may permit the delivery, in settlement of delivery under the affected series, of non-deliverable grade Treasury securities, in which case the Corporation shall adjust the delivery payment amount to reflect the value of such alternative delivery, determined in such manner as the Corporation may, in its discretion, select.

(c) The Corporation may prohibit the submission of delivery intents by Clearing Members who will be unable to meet the settlement obligations resulting from such submission. If a Clearing Member submits a delivery intent in respect of a physically-settled commodity futures contract at a time when any such prohibition is in effect and then fails to meet its delivery obligations by the applicable deadline on the delivery date, such delivery shall be null and void, and the Clearing Member submitting the delivery intent and the assigned Clearing Member shall be restored, as nearly as may be, to the respective positions that they would have occupied had such delivery intent not been filed. In addition, the Clearing Member submitting the delivery intent may be subject to disciplinary action by the Corporation and shall be obligated to compensate the assigned Clearing Member for any loss, damage, or expense sustained by the latter as a result of the purported assignment.

Adopted March 25, 2009. Amended July 1, 2009.

Expiration Date and Time for Futures Options and Commodity Options

SECTION 9. (a) The expiration date for futures options and commodity options shall be the date fixed by the Exchange on which such options are traded.

(b) The expiration time for futures options and commodity options shall be 10:59 P.M. Central Time (11:59 P.M. Eastern Time), except that the expiration time for futures options and commodity options traded on NYSE Liffe, LLC shall be 7:00 P.M. Central Time (8:00 P.M. Eastern Time).

Adopted March 25, 2009.

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ARTICLE XIII – TREASURY SECURITIES OPTIONS

Introduction

By-Laws in this Article are applicable only to Treasury securities options (as defined below). In addition, the By-Laws in Articles I-XI are also applicable to such options, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of Treasury securities options by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I-XI, that fact is indicated in brackets following the By-Law in this Article.

Adopted October 14, 1982. Amended June 16, 1989.

Definitions

SECTION 1.

Aggregate Exercise Price

(a) The term “aggregate exercise price” in respect of a Treasury securities option means the exercise price multiplied by the unit of trading.

Call

(b) The term “Call” in respect of Treasury securities options means an option under which the holder has the right, in accordance with the terms of the By-Laws and Rules, to purchase from the Corporation the principal amount of the underlying Treasury note or Treasury bond covered by the option at a price equal to the aggregate exercise price upon the exercise of such option.

Class of Options

(c) The term “class of options” in respect of Treasury securities options means all option contracts of the same type, style and unit of trading covering the same issue of Treasury securities.

Exercise Price

(d) The term “exercise price” in respect of Treasury securities options means the specified percentage of the unit of trading at which the underlying Treasury securities may be purchased or sold upon the exercise of an option contract.

Premium

(e) The “premium” in the case of a confirmed trade in Treasury securities options means the premium per unit of trading (expressed as a percentage) multiplied by the unit of trading and by the number of contracts subject to the transaction.

Put

(f) The term “Put” in respect of Treasury securities options means an option under which the holder has the right, in accordance with the terms and provisions of the By-Laws and Rules, to sell to the Corporation the principal amount of the underlying Treasury note or Treasury bond covered by the option at a price equal to the aggregate exercise price upon the exercise of such option.

Unit of Trading for Treasury Securities Options

(g) The term “unit of trading” in respect of a Treasury securities option means the principal amount of the underlying Treasury security covered by the option contract. Unless otherwise specified by the Corporation pursuant to the By-Laws and Rules, the unit of trading in respect of Treasury security options shall be the principal amount specified by the Exchange on which the option is traded.

[Section 1 of this Article adds certain new definitions relevant to Treasury securities options, replaces paragraphs E.(8), (11), P.(9), C.(1), and A.(3) of Section 1 of Article I of the By-Laws and supplements paragraphs P.(3), C.(4) and U.(2) of that Section.]

Adopted October 14, 1982. Amended March 12, 1986; January 23, 2013; June 17, 2013.

Issuance of Option Contracts

SECTION 2. Reserved.

Adopted September 20, 1982. Amended October 14, 1982.

General Rights and Obligations of Holders and Writers of Treasury Securities Options

SECTION 3. (a) Subject to the provisions of the By-Laws and Rules, the holder of a single European-style Treasury securities option contract has the right on (and only on) the expiration date, expiring at the expiration time therefor on such date.

(1) In the case of a call, to deliver a principal amount of the underlying Treasury security equal to the unit of trading for such option contract against payment of the aggregate exercise price in accordance with Exchange Rules and the By-Laws and Rules; or

(2) In the case of a put, to pay the aggregate exercise price against delivery of a principal amount of the underlying Treasury security equal to the unit of trading for such option contract, in accordance with Exchange Rules and the By-Laws and Rules.

(b) The writer of a single Treasury securities option contract is obligated, upon the assignment to him of an exercise notice in respect of such option contract:

(1) In the case of a call, to deliver a principal amount of the underlying Treasury security equal to the unit of trading for such option contract against payment of the aggregate exercise price in accordance with Exchange Rules and the By-Laws and Rules; or

(2) In the case of a put, to pay the aggregate exercise price against delivery of a principal amount of the underlying Treasury security equal to the unit of trading for such option contract, in accordance with Exchange Rules and the By-Laws and Rules.

(c) The aggregate exercise price to be paid and received upon any exercise of a Treasury securities option shall be increased by an amount equal to the interest accrued from the date identified by the Department of the Treasury as the "dated date" for the securities underlying such option or on which the last preceding interest payment became due (whichever is later) up to but not including the exercise settlement date (regardless of the date on which settlement is made).

(d) In the case of a Treasury bond option or a Treasury note option, the term "underlying Treasury security" shall mean the specific issue of Treasury securities designated by the Corporation as the underlying security for options of that class. In the case of a Treasury bill option, the term "underlying Treasury security" shall mean, in the case of options designated as 13-week Treasury bill options, a Treasury bill which will mature not more than 92 days from the exercise settlement date, and shall mean, in the case of options designated as 26-week Treasury bill options, a Treasury bill which will mature not more than 183 days from the exercise settlement date.

[Section 3 of this Article supplements Section 1U.(1) of Article I of the By-Laws and replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Article XIII – Treasury Securities Options

. . . Interpretations and Policies:

.01 Accrued interest with respect to Treasury securities shall be calculated according to the method prescribed by the most recent revision of Department of the Treasury Circular No. 1-93 or such other applicable regulation as the Department of the Treasury may from time to time promulgate.

Adopted October 14, 1982. Amended March 12, 1986; November 18, 1987; January 23, 2013.

SECTION 4. Reserved.

[Section 4 of this Article supplements Section 10 of Article VI of the By-Laws.]

Adopted October 14, 1982.

Shortage of Underlying Securities

SECTION 5. (a) Article VI, Section 19 of the By-Laws and the Interpretations and Policies thereunder shall be inapplicable to Treasury securities options.

(b) If the Corporation shall in its discretion determine that there is a shortage in the available supply of underlying securities for a particular class of Treasury securities options, then, in addition to any other actions that the Corporation may be entitled to take under the By-Laws and the Rules, the Corporation shall be empowered to do any or all of the following:

(1) The Corporation may, with the mutual consent of the Delivering Clearing Member and the Receiving Clearing Member, permit the delivery, in settlement of any exercise of options of the affected class, of Treasury securities which differ from the underlying securities as to coupon rate and/or maturity date. The Corporation shall adjust the settlement amount to reflect the value of such alternative delivery, determined in such manner as the Corporation may, in its discretion, select. Except with respect to the delivery of Treasury Securities which differ from the underlying securities, such settlement shall be effected in accordance with the procedures set forth in Chapter XIV of the Rules.

(2) In the event the requisite consent for substituted delivery pursuant to Section 5(b)(1) of this Article XIII is not obtained, the Corporation may fix cash settlement prices payable by Delivering Clearing Members who would otherwise be unable to meet their settlement obligations, which Receiving Clearing Members shall be obligated to accept, in lieu of delivery of the underlying securities.

[Section 5 of this Article replaces Section 19 of Article VI of the By-Laws.]

Adopted October 14, 1982. Amended January 23, 2013.

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ARTICLE XIV – BINARY OPTIONS; RANGE OPTIONS

Introduction

By-Laws in this Article are applicable only to binary options and/or range options, including binary options or range options that are commodity options. In addition, Section 1 of Article XII is applicable to commodity options. The By-Laws in Articles I-XI are also applicable to binary options and/or range options, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of binary options and/or range options by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I-XI, that fact is indicated in brackets following the By-Law in this Article.

Adopted June 6, 2007. Amended August 20, 2007; November 30, 2007; June 23, 2008; March 20, 2009.

Definitions

SECTION 1.

A.

Adjustment Event

(1) The term “adjustment event” when used in respect of an event option means an event as defined in the applicable Exchange Rules of the listing Exchange (such as, in the case of a credit default option or a credit default basket option, either a redemption event or a succession event), the occurrence of which may cause the listing Exchange to make adjustments to the event option.

Adopted June 6, 2007. Amended August 20, 2007; March 20, 2009.

B.

Binary Option

(1) The term “binary option” means a type of option having only two possible payoff outcomes: either a fixed amount or nothing at all. Binary options that are cleared by the Corporation are cash-settled options that are subject to automatic exercise. Binary options are also sometimes called digital options, fixed return options or all-or-nothing options.

Amended November 30, 2007.

C.

Class

(1) The term “class” when applied to credit default options means all credit default options having the same reference entity, reference obligation(s), credit event(s), and reporting authority. When applied to credit default basket options, the term means all credit default basket options having the same basket of reference entities, reference obligations, credit event(s) and reporting authority. When applied to range options and binary options other than credit default options or credit default basket options, the term means all range options or binary options, as applicable, covering the same underlying interest and having otherwise identical terms, except for exercise price (if any) and expiration date.

Adopted June 6, 2007. Amended August 20, 2007; November 30, 2007; June 23, 2008.

Credit Default Option

(2) The term “credit default option” means an event option that is automatically exercised upon receipt by the Corporation of an event confirmation with respect to the reference obligation(s) of a reference entity.

Adopted June 6, 2007. Amended August 20, 2007; November 30, 2007; March 20, 2009.

Credit Default Basket Option

(3) The term “credit default basket option” means an event option that is based on a basket comprised of at least two reference entities and that is either a “multiple payout credit default basket option” or a “single payout credit default basket option.” A “multiple payout credit default basket option” means a credit default basket option that automatically pays an exercise settlement amount each time a credit event is confirmed with respect to any one of the reference entities prior to expiration of the option. A “single payout credit default basket option” is automatically exercised and pays a single exercise settlement amount only when the first credit event is confirmed with respect to a reference entity prior to expiration of the option.

Adopted August 20, 2007. Amended November 30, 2007; March 20, 2009.

Credit Event

(4) The term “credit event” when used in respect of a credit default option or a credit default basket option means a credit event, as defined in the rules of the Exchange on which the options are listed, with respect to a reference obligation of a reference entity for such option.

Adopted June 6, 2007. Amended August 20, 2007.

D.

Reserved.

E.

Event Option

(1) The term “event option” means a binary option having an exercise settlement amount that is payable upon the occurrence of a specified event.

Adopted March 20, 2009.

Event Confirmation

(2) The term “event confirmation” when used in respect of an event option means a notice received by the Corporation from the reporting authority that the reporting authority has confirmed that the specified event underlying such event option has occurred and, in the case of a credit default option or a credit default basket option, occurred within the “credit event confirmation period” specified in the Exchange Rules of the listing Exchange.

Adopted March 20, 2009.

Event Confirmation Deadline

(3) The term “event confirmation deadline” when used in respect of an event option means the deadline specified by the Corporation by which an event confirmation must be received by the Corporation on any business day in order to be treated as having been received on the business day on which it was submitted. Event confirmations received by the Corporation after the event confirmation deadline on any business day other than the expiration date shall be treated as having been received on the following business day. Event confirmations received by the Corporation after the event confirmation deadline on the expiration date shall be treated as provided in the By-Laws and Rules.

Adopted March 20, 2009.

Exercise Price

(4) The term “exercise price” when used in respect of a binary option (other than an event option, such as a credit default option or credit default basket option) means the specified value or range of values that is compared to the underlying interest value to determine whether such option will be automatically exercised. When used in respect of a range option, the term means the specified range of index values (i.e., range length) that is compared to the underlying interest value to determine whether such option is in the money at expiration, and, if so, the amount by which such

option is in the money. An event option has no exercise price.
Adopted November 30, 2007; June 23, 2008; March 20, 2009.

Exercise Settlement Amount

(5) The term “exercise settlement amount” when used in respect of a binary option other than a credit default basket option means the fixed amount of cash to be paid upon exercise to a holder of a binary option that is automatically exercised. When used in respect of a credit default basket option, such term shall mean the fixed amount of cash to be paid to a holder of a credit default basket option that is automatically exercised with respect to any reference entity in the basket because of a credit event occurring with respect to such reference entity prior to expiration of the option. Different exercise settlement amounts may be specified by the listing options exchange with respect to different reference entities. The exercise settlement amount(s) shall be specified by the listing Exchange at or before the time when a series of binary options is first opened for trading. When used in respect of a range option, exercise settlement amount means the variable amount of cash to be paid upon exercise to a holder of an in-the-money range option. For a series of range options, the exercise settlement amount shall be the function of a “maximum range exercise value” and a “contract multiplier” (as such terms are used in the Exchange Rules of the listing Exchange) and shall, in accordance with the manner described in the Exchange Rules, (i) increase from zero to a maximum amount as the underlying interest value increases within the “low range,” (ii) stay fixed at such maximum amount as the underlying interest value increases within the “middle range” and (iii) decrease from such maximum amount to zero as the underlying interest value increases within the “high range.” The terms “low range,” “middle range” and “high range” shall have the meanings given to them in this Section 1. The listing Exchange shall specify the “maximum range exercise value” and “contract multiplier” at or before the time a series of range options is first opened for trading. Exercise settlement amount is sometimes called cash settlement amount in Exchange Rules.

Adopted June 6, 2007. Amended August 20, 2007; November 30, 2007; June 23, 2008.

Expiration Date

(6) The term “expiration date” when used in respect of a series of binary options other than event options means the last day on which the options may be automatically exercised. In the case of a series of event options (other than credit default options or credit default basket options) that are to be automatically exercised prior to their expiration date upon receipt by the Corporation of an event confirmation, the expiration date is the date specified by the listing Exchange; provided, however, that when an event confirmation is deemed to have been received by the Corporation with respect to such series of options, the expiration date will be accelerated to the date on which such event confirmation is deemed to have been received by the Corporation or such later date as the Corporation may specify. In the case of a series of credit default options or credit default basket options, the expiration date is the fourth business day after the last trading day for such series as such trading day is specified by the Exchange on which the series of options is listed; provided, however, that when an event confirmation is deemed to have been received by the Corporation with respect to a series of credit default options or single payout credit default basket options prior to the last trading day for such series, the expiration date for options of that series will be accelerated to the second business day following the day on which such event confirmation is deemed to have been received by the Corporation. “Expiration date” means, in respect of a series of range options expiring prior to February 1, 2015, the Saturday immediately following the third Friday of the expiration month of such series, and, in respect of a series of range options expiring on or after February 1, 2015 means the third Friday of the expiration month of such series, or if such Friday is a day on which the Exchange on which such series is listed is not open for business, the preceding day on which such Exchange is open for business.

Adopted June 6, 2007. Amended August 20, 2007; November 30, 2007; June 23, 2008; March 20, 2009; June 17, 2013.

F. – K.

Reserved.

L.

Low Range; Middle Range; High Range

(1) When used in respect of a range option, the term “low range” means a segment of values equaling one range interval along the range length that begins at the low end of the range length, the term “high range” means a segment of values equaling one range interval along the range length that ends at the high end of the range length, and the “middle range” is the segment of values between the low range and the high range. The terms “range interval” and “range length” shall have the meanings given to them in this Section 1.

Adopted June 23, 2008.

M.

Multiplier

(1) The term “multiplier” when used in respect of a confirmed trade in binary options means the fixed number by which the price agreed upon by the purchaser and seller is multiplied in order to calculate the total purchase price per contract.

Adopted June 6, 2007. Amended August 20, 2007; November 30, 2007; December 14, 2012.

N. – O.

Reserved.

P.

Premium

(1) The term “premium” when used in respect of a confirmed trade in binary options or range options means the price, in dollars and cents, agreed upon by the purchaser and seller in the transaction times the multiplier (if applicable) and the number of contracts subject to the transaction.

Adopted June 6, 2007. Amended August 20, 2007; November 30, 2007; June 23, 2008; December 14, 2012.

Q.

Reserved.

R.

Range Interval; Range Length

(1) The term “range length” when used in respect of a range option means the entire length of a specified range of values of the underlying index for which the option pays an exercise settlement amount if the underlying interest value falls within such range at expiration. Range length is analogous to the concept of “exercise price” or “strike price” for other types of options. The term “range interval” when used in respect of a range option means an interval of values that is used to divide the range length into three segments, the low range, the middle range and the high range. The listing Exchange shall specify the range length and range interval at or before the time a series of range options is first opened for trading.

Adopted June 23, 2008.

Range Option

(2) The term “range option” means a European-style, cash-settled option, overlying any index that

is eligible for options trading on the listing Exchange, that pays an exercise settlement amount if the underlying interest value falls within the range length of such option at expiration and nothing otherwise. The exercise settlement amount of an in-the-money range option varies depending on where the underlying interest value falls within the range length.

Adopted June 23, 2008.

Reference Entity; Reference Obligation(s)

(3) The term “reference entity” means the issuer or guarantor of the reference obligation(s) that underlie a credit default option or any one of the issuers or guarantors of reference obligations that underlie a credit default basket option. The term “reference obligation” means any debt security the terms of which are used to define the occurrence of a credit event with respect to the reference entity that is its issuer or guarantor.

Adopted June 6, 2007. Amended August 20, 2007.

Reporting Authority

(4) The term “reporting authority” when used in respect of a class of binary options or range options means the person or entity responsible for confirming the underlying interest value or, in the case of an event option, the occurrence of the specified event. Unless another reporting authority is identified by the listing Exchange for a class of binary options or range options, the listing Exchange will be the reporting authority.

Adopted June 6, 2007. Amended August 20, 2007; November 30, 2007; June 23, 2008; March 20, 2009.

S.– T.

Reserved.

U.

Underlying Interest

The term “underlying interest” when used in respect of a binary option other than an event option means the underlying security, commodity, index, basket or measure whose value or level is compared to the option’s exercise price to determine whether the option will be automatically exercised. When used in respect of an event option other than a credit default option or credit default basket option, such term means the underlying event on whose occurrence or non-occurrence the option is based (any such event being sometimes referred to as an “underlying event”). When used in respect of a credit default option or a credit default basket option, such term means the reference obligation(s). When used in respect of a range option, underlying interest means the underlying index whose underlying interest value is compared to the range length to determine whether such option is in the money at expiration, and, if so, the amount by which such option is in the money.

Adopted June 6, 2007. Amended August 20, 2007; November 30, 2007; June 23, 2008; March 20, 2009.

Underlying Interest Value

(2) The term “underlying interest value” when used in respect of a binary option or a range option means the value or level of the unit of trading of the underlying interest at any point in time as reported by the reporting authority. The term is not applicable to event options, such as credit default options or credit default basket options.

Adopted November 30, 2007. Amended June 23, 2008; March 20, 2009.

Unit of Trading

(3) The term “unit of trading” when used in respect of a binary option or a range option means the quantity of the underlying interest on which the underlying interest value is based. The unit of

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trading for a binary option on an equity security will ordinarily be a single share unless otherwise specified. The unit of trading for a binary option or a range option on an index will ordinarily be one (1) unless otherwise specified. The term is not applicable to event options, such as credit default options and credit default basket options.

Adopted November 30, 2007. Amended June 23, 2008; March 20, 2009.

V.

Variable Terms

(1) The term “variable terms” when used in respect of a series of credit default options or credit default basket options means the event(s) the occurrence of which will trigger automatic exercise, reference entity or basket of reference entities, the reference obligation(s), the expiration date and the exercise settlement amount(s) of such option contract. When used in respect of a series of binary options other than credit default options or credit default basket options, the term means the underlying interest or event, the multiplier (if applicable), the exercise price, the expiration date and the exercise settlement amount of such option contract. When used in respect of a series of range options, the term means the underlying interest, the range length, the range interval, the expiration date, the maximum range exercise value and the contract multiplier of such option contract.

Adopted June 6, 2007. Amended August 20, 2007; November 30, 2007; June 23, 2008; March 20, 2009.

W. – Z.

Reserved.

[Section 1 of this Article adds certain new definitions relevant to binary options and/or range options and replaces, for purposes of binary options and/or range options, the definitions of the same terms in Article I, Section 1 of the By-Laws.]

Amended November 30, 2007; June 23, 2008.

General Rights and Obligations of Holders and Writers of Event Options other than Credit Default Basket Options

SECTION 2. (a) Subject to the provisions of the By-Laws and Rules, the holder of an event option, other than a credit default basket option, has the right to receive from the Corporation the exercise settlement amount for such option if the relevant event is determined to have occurred within the time specified therefor in the Exchange Rules of the listing Exchange, in each case in accordance with Exchange Rules and the By-Laws and Rules.

(b) The writer of an event option, other than a credit default basket option, is obligated, upon assignment to such writer of an exercise in respect of such option, to pay to the Corporation the exercise settlement amount for such option, in accordance with Exchange Rules and the By-Laws and Rules.

[Section 2 of this Article replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Amended March 20, 2009.

General Rights and Obligations of Holders and Writers of Credit Default Basket Options

SECTION 2A. (a) *Multiple Payout Credit Default Basket Option.* (i) The holder of a multiple payout credit default basket option has the right to receive from the Corporation the exercise settlement amount specified for a particular reference entity in the basket of reference entities

underlying such option, if a credit event is determined to have occurred with respect to such reference entity within the time specified therefor in the Exchange Rules of the listing Exchange, in each case in accordance with Exchange Rules and the By-Laws and Rules. A multiple payout credit default basket option may be exercised once and only once with respect to each reference entity.

(ii) The writer of a multiple payout credit default basket option is obligated, upon assignment to such writer of an exercise in respect of a reference entity for such option, to pay to the Corporation the exercise settlement amount specified for such reference entity, in accordance with Exchange Rules and the By-Laws and Rules. A writer of a multiple payout credit default basket option may be assigned an exercise notice once, and only once, with respect to each reference entity.

(b) *Single Payout Credit Default Basket Option.* (i) The holder of a single payout credit default basket option has the right to receive from the Corporation the exercise settlement amount specified for the first reference entity in the basket of reference entities underlying such option in respect of which a credit event is determined to have occurred within the time specified therefor in the Exchange Rules of the listing Exchange, in each case in accordance with Exchange Rules and the By-Laws and Rules. A single payout credit default basket option may be automatically exercised once and only once.

(ii) The writer of a single payout credit default basket option is obligated, upon assignment to such writer of an exercise in respect of a reference entity for such option, to pay to the Corporation the exercise settlement amount specified for such reference entity, in accordance with Exchange Rules and the By-Laws and Rules. A writer of a single payout credit default basket option may be assigned an exercise notice once, and only once, with respect to such option.

[Section 2A of this Article replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Adopted August 20, 2007.

General Rights and Obligations of Holders and Writers of Other Binary Options

SECTION 2B. (a) The holder of a binary option, other than an event option, has the right to receive from the Corporation the exercise settlement amount for such option if the underlying interest value as of the time specified in Exchange Rules of the listing Exchange is determined to meet the criteria for automatic exercise of the option, in accordance with Exchange Rules and the By-Laws and Rules.

(b) The writer of a binary option, other than an event option, is obligated, upon assignment to such writer of an exercise in respect of such option, to pay to the Corporation the exercise settlement amount for the option, in accordance with Exchange Rules and the By-Laws and Rules.

. . . Interpretations and Policies:

.01 Certain binary options are called “fixed return options.” Fixed return options may be structured either as “finish high fixed return options” or “finish low fixed return options.” The holder of a fixed return option has the right to receive from the Corporation the exercise settlement amount for such option if the underlying interest value as of the time specified in Exchange Rules of the listing Exchange is above the exercise price of such option (in the case of a finish high fixed return option) or below the exercise price of such option (in the case of a finish low fixed return option).

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.02 Certain other binary options give the holder the right to receive from the Corporation the exercise settlement amount for such option if the underlying interest value as of the time specified in Exchange Rules of the listing Exchange is either at or above the exercise price (in the case of a call) or below the exercise price (in the case of a put).

.03 The listing Exchange may define the exercise settlement amount for binary options as being equal to a multiplier times another fixed value that is established by the listing Exchange at or prior to the opening of trading in a series of such options, or may define the exercise settlement amount without reference to a multiplier.

[Section 2B of this Article replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Adopted November 30, 2007. Amended July 23, 2008; March 20, 2009.

General Rights and Obligations of Holders and Writers of Range Options

SECTION 2C. (a) The holder of a range option has the right on (and only on) the expiration date, expiring at the expiration time therefor on such date, to receive the exercise settlement amount for such option from the Corporation, in accordance with Exchange Rules and the By-Laws and Rules.

(b) The writer of a range option is obligated, upon assignment to such writer of an exercise in respect of such option contract, to pay to the Corporation the exercise settlement amount for the option, in accordance with Exchange Rules and the By-Laws and Rules.

[Section 2C of this Article replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Adopted June 23, 2008.

Adjustments of Event Options

SECTION 3. The listing Exchange is vested with complete discretionary authority to confirm adjustment events and make adjustments to event options in accordance with Exchange Rules, as they are interpreted by the Exchange. Adjustment determinations shall be reported to the Corporation by the Exchange. Every adjustment determination by the Exchange will be within its sole discretion and shall be conclusive and binding on all holders and writers and not subject to review. The Corporation shall not be responsible for any adjustment determination by the Exchange.

[Section 3 of this Article replaces Section 11 and 11A of Article VI of the By-Laws.]

Adopted June 6, 2007. Amended August 20, 2007; March 20, 2009.

Adjustments of Binary Options (other than Event Options) and Range Options for which the Underlying Interest is a Security or an Index of Securities

SECTION 3A. (a) *Binary Options for which the Underlying Interest is an Equity Security.* (1) Whenever there is a dividend, stock dividend, stock distribution, stock split, reverse stock split, rights offering, distribution, reorganization, recapitalization, reclassification or similar event in respect of any underlying equity security, or a merger, consolidation, dissolution or liquidation of the issuer of any underlying equity security, the number of option contracts, the exercise price, the exercise settlement amount, the underlying interest, the unit of trading, or any of them, with

respect to all outstanding binary option contracts open for trading in that underlying equity security may be adjusted in accordance with this Section 3A(a).

(2) All adjustments under Section 3A(a) and 3A(b) shall be made by the Corporation in accordance with the policies and procedures set forth in Section 11 of Article VI of the By-Laws.

(3) It shall be the general rule that there will be no adjustment to reflect (x) ordinary cash dividends or distributions or ordinary stock dividends or distributions (collectively, “ordinary distributions”) by the issuer of the underlying equity security or (y) any cash dividend or distribution by the issuer of the underlying equity security if such dividend or distribution is less than \$.125 per unit of trading.

(4) Subject to Section 3A(a)(3), it shall be the general rule that in the case of a stock dividend, stock distribution or stock split whereby one or more shares (whether in whole numbers or not) of the underlying equity security are issued with respect to each outstanding share, the exercise price in effect immediately prior to such event shall be proportionately reduced, and conversely, in the case of a reverse stock split or combination of shares, the exercise price in effect immediately prior to such event shall be proportionately increased. In either event, the number of option contracts shall remain the same.

(5) It shall be the general rule that in the case of any distribution made with respect to shares of an underlying equity security, other than ordinary distributions and other than distributions for which adjustments are provided in Section 3A(a)(4), if an adjustment is determined by the Corporation to be appropriate, (i) the exercise price in effect immediately prior to such event shall be reduced by the value per unit of trading of the distributed property, or (ii) the unit of trading in effect immediately prior to such event shall be adjusted so as to include the amount of property distributed. The Corporation shall, with respect to adjustments under this paragraph or any other paragraph of this Section 3A(a), have the authority to determine the value of distributed property.

(6) Adjustments pursuant to this Section 3A(a) shall as a general rule become effective in respect of outstanding binary equity security options on the “ex-date” established by the primary market for the underlying equity security.

(7) It shall be the general rule that all adjustments to the exercise price of an outstanding binary option contract shall be rounded to the nearest adjustment increment and when an adjustment causes an exercise price to be equidistant between two adjustment increments, the exercise price shall be rounded up to the next highest adjustment increment.

(b) Binary Options and Range Options for which the Underlying Interest is an Index of Securities.

(1) No adjustments will ordinarily be made in the terms of binary options or range options in the event that one or more underlying securities are added to or deleted from the underlying index or when the relative weight of one or more securities in the underlying index is changed. However, if the Corporation shall determine in its sole discretion that any such addition, deletion, or change causes significant discontinuity in the level of the underlying index, the Corporation may adjust the terms of the affected binary options or range options by adjusting the exercise price (or in the case of range options, the range length) with respect to such contracts or by taking such other action as the Corporation in its sole discretion deems fair to both the holders and writers of such contracts.

(2) If a reporting authority shall change the method of calculation of an underlying 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 constituent securities in the underlying index, or the Corporation shall substitute one underlying index for another pursuant to Section 3A(b)(3) of this Article, the Corporation shall make such adjustments to the exercise prices of such options or such other adjustments, if any, as the Corporation in its sole discretion deems fair to both the holders and the writers of such options.

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(3) In the event the Corporation determines that: (A) publication of an underlying index has been discontinued; (B) an underlying index has been replaced by another index; or (C) the composition or method of calculation of an underlying index is so materially changed since its selection as an underlying index that it is deemed to be a different index, the Corporation may substitute another index (a “successor index”) as the underlying index. A successor index shall be reasonably comparable, as determined by the Corporation in its sole discretion, to the original underlying index for which it substitutes. An index may be created specifically for the purpose of becoming a successor index.

(c) In the case of any event for which adjustment is not provided in any of the foregoing paragraphs of this Section 3A, the Corporation may make such adjustments, if any, with respect to the option contracts affected by such event as the Corporation determines.

(d) Notwithstanding the general rules set forth in paragraphs (a) through (c) of this Section 3A or which may be set forth as interpretations and policies under this Section 3A, the Corporation shall have the power to make exceptions in those cases or groups of cases (which may include making exceptions for one or more series of flexibly structured options) in which, in applying the standards set forth in Article VI, Section 11(a) of the By-Laws, the Corporation shall determine such exceptions to be appropriate. However, the general rules shall be applied unless the Corporation affirmatively determines to make an exception in a particular case or group of cases.

. . . Interpretations and Policies:

.01 Cash dividends or distributions (regardless of size) by the issuer of the underlying equity security which the Corporation believes to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly or other regular basis or which the Corporation believes represent an acceleration or deferral of such payments will, as a general rule, be deemed to be “ordinary cash dividends or distributions” within the meaning of Section 3A(a)(3). Stock dividends or distributions by the issuer of the underlying equity security (i) in an aggregate amount per dividend or distribution which does not exceed 10% of the number of shares or other units of the underlying equity security outstanding as of the close of trading on the declaration date, and (ii) which the Corporation believes to have been declared pursuant to a policy or practice of paying such dividends or distributions on a quarterly or other regular basis or which the Corporation believes represent an acceleration or deferral of such payments will, as a general rule, be deemed to be “ordinary dividends or distributions” within the meaning of Section 3A(a)(3). The Corporation will determine on a case-by-case basis whether other dividends or distributions are “ordinary distributions” or whether they are dividends or distributions for which an adjustment should be made. Where the Corporation determines to adjust for a dividend or distribution, the adjustment shall be made in accordance with Sections 3A(a)(4) and 3A(a)(5). Any issue as to whether a particular dividend or distribution was declared pursuant to a policy or practice of paying such dividend or distribution on a quarterly or (where applicable) other regular basis shall be referred to the Corporation for a determination.

.02 Notwithstanding Interpretation and Policy .01, (i) distributions of short-term and long-term capital gains in respect of fund shares by the issuer thereof shall not, as a general rule, be deemed to be “ordinary distributions” within the meaning of Section 3A(a)(3) and (ii) other distributions in respect of fund shares by the issuer thereof shall not, as a general rule, be deemed to be “ordinary distributions” within the meaning of Section 3A(a)(3) if (x) the fund tracks the performance of an index that underlies a class of index options or index futures, and the distribution on the fund shares includes or reflects a dividend or other distribution on a portfolio security that resulted in an adjustment of the index divisor; or (y) the distribution on the fund shares includes or reflects a dividend or other distribution on a portfolio security (I) that results in an adjustment of options on other fund shares pursuant to clause (ii)(x) of this Interpretation or pursuant to clause (ii)(x) of Interpretation .08 under Article VI, Section 11A of the By-Laws or (II) that is not deemed an ordinary distribution under Interpretation .01 above. Adjustments for distributions described in clause (i) or (ii) above to the terms of binary options that have such fund shares as their underlying security shall be made in accordance with Section 3A(a)(5), unless the Corporation determines, on a case-by-case basis, not to adjust for such a distribution; provided, however, that no

adjustment shall be made for any such distribution where the amount of the adjustment would be less than \$.125 per fund share.

.03 Adjustments will not ordinarily be made to reflect the issuance of so-called “poison pill” rights that are not immediately exercisable, trade as a unit or automatically with the underlying equity security, and may be redeemed by the issuer. In the event such rights become exercisable, begin to trade separately from the underlying equity security, or are redeemed, the Corporation will determine whether an adjustment is appropriate.

.04 Adjustments will not be made to reflect a tender offer or exchange offer to the holders of an underlying equity security, whether such offer is made by the issuer of the underlying equity security or by a third person or whether the offer is for cash, securities or other property. This policy will apply without regard to whether the price of the underlying equity security may be favorably or adversely affected by the offer or whether the offer may be deemed to be “coercive.” Outstanding options ordinarily will be adjusted to reflect a merger, consolidation or similar event that becomes effective following the completion of a tender offer or exchange offer.

.05 Adjustments will not be made to reflect changes in the capital structure of an issuer where all of the underlying equity securities outstanding in the hands of the public (other than dissenters’ shares) are not changed into another security, cash or other property. For example, adjustments will not be made merely to reflect the issuance (except as a distribution on an underlying security) of new or additional debt, stock, or options, warrants or other securities convertible into or exercisable for the underlying equity security, the refinancing of the issuer’s outstanding debt, the repurchase by the issuer of less than all of the underlying equity securities outstanding, or the sale by the issuer of significant capital assets.

.06 In the case of a corporate reorganization, reincorporation or similar occurrence by the issuer of an underlying security which results in an automatic share-for-share exchange of shares in the issuer for shares in the resulting company, the unit of trading for a binary option will ordinarily be adjusted to consist of a like number of shares of the resulting company.

.07 When an underlying equity security is converted into a right to receive a fixed amount of cash, such as in a merger, the underlying interest value will become fixed and the expiration date will be accelerated as provided in Rule 1507. All out-of-the-money options will become worthless and all in-the-money options will be automatically exercised on the accelerated expiration date. The exercise settlement amount will not be adjusted to reflect the accelerated expiration date.

.08 When an underlying equity security is converted in whole or in part into a debt security and/or a preferred stock, as in a merger, and interest or dividends on such debt security or preferred stock are payable in the form of additional units thereof, outstanding options whose underlying interest has been adjusted to consist of or to include such debt security or preferred stock shall be further adjusted, effective as of the ex-date for each payment of interest or dividends thereon, to also include the securities distributed as interest or dividends thereon.

Adopted November 30, 2007. Amended June 23, 2008; November 12, 2018.

Adjustments of Binary Options (other than Event Options) and Range Options for which the Underlying Interest is a Commodity or an Index of Commodities

SECTION 3B. (a) *Binary Options for which the Underlying Interest is a Commodity.* In the case of binary options that have a single commodity as their underlying interest, determinations as to whether and how to adjust the terms of such options to reflect events affecting the underlying interest shall be made by the Corporation based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to the

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buyers and sellers of such options, the maintenance of a fair and orderly market in such binary commodity options, consistency of interpretation and practice and efficiency of exercise settlement procedures.

(b) *Binary Options and Range Options for which the Underlying Interest is an Index of Commodities.* (1) No adjustments will ordinarily be made in the terms of binary options and range options in the event that one or more commodities are added to or deleted from the underlying index or when the relative weight of one or more such constituents in the index is changed. However, if the Corporation shall determine in its sole discretion that any such addition, deletion or change causes significant discontinuity in the level of the underlying index, the Corporation may adjust the terms of the affected binary options or range options by adjusting the exercise price with respect to such options or by taking such other action as the Corporation in its sole discretion deems fair to both the holders and writers of such options.

(2) If a reporting authority shall change the method of calculation of an underlying 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 constituents in the index, or the Corporation shall substitute one index for another pursuant to Section 3B(b)(3) of this Article, the Corporation shall make such adjustments to the exercise price of the affected binary options or range options or make such other adjustments, if any, as the Corporation in its sole discretion deems fair to both the holders and writers of such options.

(3) In the event the Corporation determines that: (A) publication of an underlying index has been discontinued; (B) an underlying index has been replaced by another index; or (C) the composition or method of calculation of an underlying index is so materially changed since its selection as the underlying index that it is deemed to be a different index, the Corporation may substitute another index (a “successor index”) as the underlying index. A successor index shall be reasonably comparable, as determined by the Corporation in its discretion, to the original underlying index for which it is substituted. An index may be created specifically for the purpose of becoming a successor index.

(c) In the case of any event for which adjustment is not provided in any of the foregoing paragraphs of this Section 3B, the Corporation may make such adjustments, if any, with respect to the option contracts affected by such event as the Corporation determines.

(d) Notwithstanding the general rules set forth in paragraphs (a) through (c) of this Section 3B, the Corporation shall have the power to make exceptions to such rules in determining the appropriate adjustments to binary options or range options upon the occurrence of the events specified therein. Section 11 of Article VI of the By-Laws shall not apply to binary options or range options that are not traded on a Securities Exchange.

Adopted March 30, 2009.

Determination of Occurrence of an Underlying Event

SECTION 4. The reporting authority will confirm the occurrence of the specified event upon which an event option is based in accordance with Exchange Rules, as they are interpreted by the reporting authority and reported to the Corporation by the reporting authority. Every event confirmation will be within the sole discretion of the reporting authority and shall be conclusive and binding on all holders and writers and not subject to review. The Corporation will not be responsible for any event determination made by the reporting authority.

Adopted June 6, 2007. Amended August 20, 2007; March 20, 2009.

Unavailability or Inaccuracy of Final Underlying Interest Value

SECTION 5. (a) If an underlying security or commodity, or one or more component securities or commodities of an index that is the underlying interest for a range option or a binary option (other than an event option), did not open or remain open for trading on the primary market(s) (as determined by the Corporation) for such security(ies) or commodity(ies) on the last trading day before expiration at or before the time when the final underlying interest value would ordinarily be determined, or a value or price to be used as, or to determine, the final underlying interest value is otherwise unreported, inaccurate, unavailable or inappropriate for such use, then, in addition to any other action that the Corporation may be entitled to take under the By-Laws and Rules, the Corporation shall be empowered to fix a final underlying interest value for any expiring series of range options or binary options on such security, commodity or index of securities or commodities (“affected series”).

(b) In the case of a binary option or range option that is traded on a Securities Exchange, determinations by the Corporation under this Section 5 shall be made by a panel consisting of two designated representatives of each Exchange on which the affected series is open for trading and the Executive Chairman. In the case of a binary option or range option that is not traded on a Securities Exchange, determinations under this Section 5 shall be made by the Corporation alone. The panel (or the Corporation, if there is no panel) shall fix the underlying interest value based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to holders and writers of the affected series, the maintenance of a fair and orderly market in the affected series, consistency of interpretation and practice, and consistency with actions taken in related futures or other markets. Without limiting the generality of the foregoing, the panel or the Corporation may fix the underlying interest value using: (i) the reported price or value for the relevant underlying interest or index component at the close of regular trading hours (as determined by the Corporation) on the last preceding trading day for which such a price or value was reported by the reporting authority; (ii) the reported price or value for the relevant underlying interest or index component at the opening of regular trading hours (as determined by the Corporation) on the next trading day for which such an opening price or value is reported by the reporting authority; or (iii) a price or value for the relevant underlying interest or index component at such other time, or representing a combination or average of prices or values at such time or times, as the panel or the Corporation deems appropriate. The provisions of Article VI, Section 11(c) of the By-Laws with respect to the vote required to constitute the determination of a panel, the voting rights of members of panels, the ability of such panels to conduct their business by telephone or other designated means, and the ability of the Executive Chairman and Exchange representatives to designate others to serve in their place on such panels shall apply equally to panels convened pursuant to this Section. Every determination of a panel or the Corporation pursuant to this Section 5 shall be within the sole discretion of such panel or the Corporation, as the case may be, and shall be conclusive and binding on all investors and not subject to review.

(c) If a panel acting pursuant to subsection (a) above delays fixing the underlying interest value for an affected series of options past the last trading day before expiration of that series, the expiration exercise procedures of (i) in the case of range options, Rules 805 and 1501A, or (ii) in the case of binary options, Rule 1501, shall not apply to expiring options of the affected series. The exercise settlement date for such options shall be postponed until the business day following the day on which the Corporation announces the underlying interest value. Each Clearing Member shall be deemed to have properly and irrevocably tendered to the Corporation prior to the expiration time an exercise notice with respect to each expiring range option contract of an affected series carried in a long position in each account of the Clearing Member if, and only if, the underlying interest value announced by the Corporation results in an exercise settlement amount of \$1.00 or more for such contract or such other amount as the Corporation may establish on not less than 30 days prior notice to all Clearing Members. Range option contracts of

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an affected series for which the underlying interest value announced by the Corporation results in an exercise settlement amount of less than \$1.00 per contract (or such other amount, if applicable) shall be deemed to have expired unexercised. Expiring series of binary options for which the underlying interest value announced by the Corporation meets the criteria for automatic exercise shall be deemed to have been exercised automatically immediately prior to the expiration time on the expiration date. All other expiring series of binary options on the underlying interest shall be deemed to have expired unexercised.

. . . Interpretations and Policies:

.01 A panel will ordinarily exercise its authority under this Section 5 as necessary to fix underlying interest values consistent with settlement prices fixed in related markets.

[Section 5 of this Article replaces Article VI, Section 19 of the By-Laws and supplements Rule 801.]

Adopted November 30, 2007. Amended June 23, 2008; March 20, 2009; July 2, 2012; June 17, 2013; March 6, 2014, November 12, 2018; February 15, 2019.

Determination of Final Underlying Interest Value

SECTION 6. The method for determining the underlying interest value at expiration of a series of range options or binary options, (other than event options), shall be as specified in the Exchange Rules of the Exchange on which the series of options is traded; provided, however, that in the event of any conflict between such Exchange rules and the By-Laws and Rules of the Corporation, the By-Laws and Rules of the Corporation shall control. The underlying interest value may be based upon the price or level of the underlying interest at the open or close of trading on the expiration date for the series or, if the expiration date is not a trading day, on the last trading day prior to the expiration date, or it may be based upon an average, including a volume weighted average, of prices or levels during a specified period of time on such expiration date or last trading day. Subject to the authority of the Corporation to adjust or fix such values as provided under the By-Laws and Rules, the underlying interest value for a series of range options or binary options shall be the value reported to the Corporation by the reporting authority. If a series of range options or binary options is listed on more than one Exchange, the Corporation, in its sole discretion, may (i) designate one of them as the principal market for the series and obtain the underlying interest value for the series solely from such principal market or (ii) calculate the underlying interest value from values obtained from some or all of such Exchanges in accordance with procedures specified by the Corporation from time to time. Unless the Corporation directs otherwise, the underlying interest value as initially reported by the listing Exchange(s) shall be conclusively presumed to be accurate and shall be deemed final for the purpose of determining whether a binary option will be automatically exercised and in calculating the exercise settlement amount for a range option or binary option, even if such value is subsequently revised or determined to have been inaccurate.

. . . Interpretations and Policies:

.01 The Corporation will not adjust officially reported underlying interest values reported by the listing Exchange(s), even if those values are subsequently found to have been erroneous, except in extraordinary circumstances. Such circumstances might be found to exist where, for example, the underlying interest value as initially reported is clearly erroneous and inconsistent with values reported earlier in the same trading day, and a corrected underlying interest value is promptly announced by the reporting authority. In no event will a completed settlement be adjusted due to errors in officially reported underlying interest values.

Adopted November 30, 2007. Amended June 23, 2008; March 20, 2009.

ARTICLE XV – FOREIGN CURRENCY OPTIONS

Introduction

THE BY-LAWS IN THIS ARTICLE ARE INOPERATIVE UNTIL FURTHER NOTICE BY THE CORPORATION

By-Laws in this Article are applicable only to options where either the trading currency (*i.e.*, the premium currency or the exercise currency) or the underlying interest is a foreign currency. The By-Laws in Articles I-XI are also applicable to such options, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of foreign currency options by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I-XI, that fact is indicated in brackets following the By-Law in this Article.

Adopted November 24, 1982. Amended November 1, 1994; March 18, 2004.

Definitions

SECTION 1.

A.

Aggregate Exercise Price

(1) The term "aggregate exercise price" in respect of foreign currency options means the exercise price of an option contract multiplied by the number of units of underlying currency covered by the option contract.

Adopted November 24, 1982. Amended November 7, 1991; November 1, 1994.

B.

Business Day

(1) Notwithstanding Article I, Section 1B.(2) of the By-Laws, the term "business day" when used with respect to expiring foreign currency options may include the Sunday following the expiration date and may exclude the last day of trading preceding such expiration date for the purposes of certain Rules in Chapter XVI as specified in Interpretations and Policies following those Rules.

Amended November 7, 1991.

C.

Call

(1) The term "call" in respect of foreign currency options means an option in which the holder has the right, in accordance with the terms and provisions of the By-Laws and Rules, to purchase from the Corporation the number of units of underlying currency covered by the option at a price equal to the aggregate exercise price upon exercise of such option.

Adopted November 24, 1982. Amended November 7, 1991; November 1, 1994.

Class of Options

(2) The term "class of options" in respect of foreign currency options means all option contracts of the same type and style covering the same foreign currency and having the same unit of trading and the same trading currency (*i.e.*, all options in the class must have the same premium currency and the same exercise currency).

Adopted November 24, 1982. Amended November 7, 1991; November 1, 1994; March 18, 2004.

D.

Reserved.

E.

Exercise Price

(1) The term "exercise price" in respect of foreign currency options means the specified price (in the designated currency) per unit of underlying currency at which the underlying currency may be purchased or sold upon exercise of an option contract.

Adopted November 24, 1982. Amended November 7, 1991; November 1, 1994.

Expiration Date

(2) The term "expiration date" means:

(i) in respect of a foreign currency option contract identified by an exchange as being a "mid-month" option contract, the Friday immediately preceding the third Wednesday of the expiration month of such option contract;

(ii) in respect of a foreign currency option contract identified by an Exchange as being an "end-of-month" option contract, the last Friday of the expiration month of such option contract; and

(iii) in respect of a foreign currency option contract identified by an Exchange as being a flexibly structured foreign currency option contract, the date reported to the Corporation by such Exchange.

Notwithstanding the above:

(iv) if the last Friday of the expiration month of such "end-of-month" option contract is either December 25th or December 31st, then the term "expiration date" shall mean the Friday immediately preceding December 24th; and

(v) if any foreign currency option contract would expire on a day that the Exchange is not open for business, then the term "expiration date" with respect to such option contracts shall mean the preceding day that the Exchange is open for business.

Adopted July 14, 1993. Amended November 2, 1995; January 14, 1997. March 10, 1999.

Expiration Time

(3) The term "expiration time" means:

(i) in respect of a foreign currency option contract, 10:59 P.M. Central Time (11:59 P.M. Eastern Time); and

(ii) in respect of a flexibly structured foreign currency option contract, 9:15 A.M. Central Time (10:15 A.M. Eastern Time).

Notwithstanding the above:

(iii) in respect of a flexibly structured foreign currency option contract expiring on a standard "mid-month" or "end-of-month" date, as defined in Section 1.E.(2)(i) and (ii) of Article XV, 10:59 P.M. Central Time (11:59 P.M. Eastern Time), except, however, all flexibly structured foreign currency options listed for trading after January 14, 1997 with an expiration date on or after April 1, 1997 shall expire at 9:15 A.M. Central Time (10:15 A.M. Eastern Time).

Adopted January 14, 1997.

Extraordinary Events

(4) The term "extraordinary events" shall mean any law, rule, regulation, executive, legislative or judicial decree or other restriction imposed by a foreign government or governmental authority, including the European Union (including, without limitation, restrictions on the ownership of nonresident bank accounts in the country of origin of a foreign currency) or any other event beyond the control of the Corporation which would prevent, impede, or tax delivery or receipt of foreign currency by the Corporation or by Foreign Currency Clearing Members in the country of origin.

Adopted November 24, 1982. Amended November 7, 1991; December 10, 1998.

F.

Foreign Business Day

(1) The term "foreign business day" in respect of a particular foreign currency means any business day on which banks in the country of origin are open for business; provided that if the Corporation also utilizes the services of a correspondent bank in a foreign country other than the country of origin to facilitate settlement of exercises of foreign currency options, the Corporation may, at its election, treat as a "foreign business day" only those days on which both correspondent banks are open for business.

Adopted November 24, 1982. Amended November 7, 1991.

G. – H.

Reserved.

I.

International Bank Wire

(1) The term "international bank wire" means the interbank telecommunications system operated by the Society for Worldwide Interbank Financial Telecommunication ("S.W.I.F.T."), and such other interbank telecommunications systems as the Corporation may from time to time approve for the purposes of Chapter XVI of the Rules.

Adopted November 24, 1982. Amended November 7, 1991.

J. – O.

Reserved.

P.

Premium

(1) The term "premium" in respect of a confirmed trade in foreign currency options is equal to the price per unit of underlying currency of each such option, multiplied by the unit of trading and by the number of contracts subject to the transaction. Premium may be expressed either in units (including fractions, decimals, or multiples of such units) of the trading currency designated by the Exchange on which such options are traded or as a percentage of the amount of underlying currency covered by the transaction. Premium shall be payable in the currency in which it is expressed.

Adopted November 24, 1982. Amended November 7, 1991; November 1, 1994; March 18, 2004; December 14, 2012.

Put

(2) The term "put" in respect of foreign currency options means an option in which the holder has the right, in accordance with the terms and provisions of the By-Laws and Rules, to sell to the Corporation the number of units of underlying currency covered by the option at a price equal to

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the aggregate exercise price upon the exercise of such option.

Adopted November 24, 1982. Amended November 7, 1991; November 1, 1994.

Q. – R.

Reserved.

S.

Settlement Time

(1) The term "settlement time" in respect of a confirmed trade in foreign currency options settling in the United States means 9:00 A.M. Central time (10:00 A.M. Eastern time) on the first business day immediately following the day on which the Corporation receives confirmed trade information in respect of such transaction from the Exchange on which such transaction was effected. The term "settlement time" in respect of a confirmed trade in foreign currency options settling outside the United States means 11:00 A.M. local time in the country of origin of the trading currency (*i.e.*, the premium currency), or such other time as the Corporation may specify, on the first foreign business day in that country immediately following the business day on which the Corporation receives confirmed trade information in respect of such transaction from the Exchange on which such transaction was effected.

Adopted November 1, 1994. Amended October 28, 2002; March 18, 2004; December 14, 2012.

T.

Reserved.

U.

Unit of Trading for Foreign Currency Options

(1) The term "unit of trading" in respect of foreign currency options means, unless otherwise specified by the Corporation pursuant to the By-Laws and Rules, the amount of the underlying currency deliverable upon exercise of an option as specified by the Exchange on which such options are traded.

Adopted November 24, 1982. Amended September 26, 1989; November 7, 1991; November 1, 1994.

V. – Z.

Reserved.

[Section 1 of this Article adds certain new definitions relevant to foreign currency options and replaces paragraphs A.(3), C.(1), (4), E.(8), (11), (14) and P.(9) of Section 1 of Article I of the By-Laws and supplements paragraphs B.(2) and U.(2) of that Section. The terms "Paying Clearing Member," "Collecting Clearing Member" and "agent bank" are defined in respect of foreign currency options in Chapter XVI of the Rules.]

Amended November 21, 1983; January 26, 1984; March 5, 1984; August 29, 1984; August 28, 1985; January 30, 1986; February 20, 1986; October 3, 1986; January 16, 1987; August 6, 1987. November 7, 1991; July 14, 1993; January 14, 1997.

General Rights and Obligations of Holders and Writers of Foreign Currency Options

SECTION 2. (a) Subject to the provisions of the By-Laws and Rules, the holder of a single American foreign currency option contract has the right, beginning at the time such option

contract is issued pursuant to Article VI of the By-Laws and expiring at the expiration time therefor on the expiration date:

(i) In the case of a call, to purchase from the Corporation at the aggregate exercise price the number of units of underlying currency covered by such option contract, all in accordance with Exchange Rules and the By-Laws and Rules; or

(ii) In the case of a put, to sell to the Corporation at the aggregate exercise price the number of units of underlying currency covered by such option contract, all in accordance with Exchange Rules and the By-Laws and Rules.

(b) Subject to the provisions of the By-Laws and Rules, the holder of a single European foreign currency option contract has the right on (and only on) the expiration date, expiring at the expiration time therefor on such date:

(i) In the case of a call, to purchase from the Corporation at the aggregate exercise price the number of units of underlying currency covered by such option contract, all in accordance with Exchange Rules and the By-Laws and Rules; or

(ii) In the case of a put, to sell to the Corporation at the aggregate exercise price the number of units of underlying currency covered by such option contract, all in accordance with Exchange Rules and the By-Laws and Rules.

(c) The writer of a single foreign currency option contract is obligated, upon the assignment to him of an exercise notice in respect of such option contract:

(i) In the case of a call, to deliver the number of units of underlying currency covered by such option contract against payment of the aggregate exercise price, all in accordance with Exchange Rules and the By-Laws and Rules; or

(ii) In the case of a put, to pay the aggregate exercise price against delivery of the number of units of underlying currency covered by such option contract, all in accordance with Exchange Rules and the By-Laws and Rules.

[Section 2 of this Article replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Adopted November 24, 1982. Amended August 28, 1985; November 18, 1987; November 1, 1994; November 2, 1995.

Extraordinary Events

SECTION 3.

Effective for Series of Options Opened for Trading After September 16, 2000

(a) Article VI, Section 19 of the By-Laws and the Interpretations and Policies thereunder shall be inapplicable to foreign currency options.

(b) If the Corporation shall in its discretion determine that extraordinary events would prevent the orderly settlement of exercises of foreign currency option contracts in the manner contemplated by the Rules, or impose undue burdens on the Corporation or on Foreign Currency Clearing Members in connection therewith, then, in addition to any other actions that the Corporation may be entitled to take under the By-Laws and the Rules, the Corporation shall be empowered to make such adjustments in settlement procedures for affected exercises (including, without limitation, the fixing of United States dollar cash settlement prices deliverable by assigned writers of call options contracts and/or exercising holders of put option contracts in lieu of the trading

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currency or the underlying currency) as the Corporation in its sole discretion determines to be fair to the parties to such exercises.

[Section 3 of this Article replaces Section 19 of Article VI of the By-Laws.]

Adopted November 24, 1982. Amended November 7, 1991; September 15, 2000; January 24, 2008.

Adjustments

SECTION 4. In the event that (i) a trading or an underlying currency is replaced by a new currency, or (ii) the exchange rate or exchange characteristics of a trading or underlying currency with respect to other currencies are officially altered, the Corporation may adjust the exercise price, unit of trading, number of contracts of underlying currency, or other terms of option contracts affected by such event. The provisions of Article VI, Section 11 of the By-Laws shall apply equally to adjustments made by the Corporation pursuant to this Article XV, Section 4.

[Section 4 of this Article replaces Section 11A, and the Interpretations and Policies promulgated thereunder, of Article VI of the By-Laws.]

. . . Interpretations and Policies:

.01 The Corporation will not ordinarily adjust the terms of foreign currency options in response to devaluations or revaluations of trading or underlying currencies.

Adopted November 24, 1982. Amended January 30, 1986; November 7, 1991; November 1, 1994; December 10, 1998; December 23, 2005; November 12, 2018.

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ARTICLE XVI – YIELD-BASED TREASURY OPTIONS

Introduction

By-Laws in this Article are applicable only to yield-based Treasury options (as defined in Article I of the By-Laws). Certain yield-based Treasury options may be referred to in Exchange rules as "interest rate option contracts." In addition, the By-Laws in Articles I-XI are also applicable to such options, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of such options by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I-XI, that fact is indicated in brackets following the By-Law in this Article.

Adopted June 16, 1989.

Definitions

SECTION 1.

Underlying Security

(a) The term "underlying security" or "underlying securities" as used in respect of yield-based Treasury options means the one or two most recently issued Treasury securities of one or more maturity periods that have been selected by the Exchange as the Treasury securities on which underlying yields for a particular class of yield-based Treasury options will be based. Examples: An Exchange might determine that the underlying securities for a class of options will be the two most recently issued seven-, ten- and thirty-year Treasury securities. The underlying security for another class of options might be the most recently issued 13-week Treasury bill.

Underlying Yield

(b) The term "underlying yield" means the annualized yield to maturity (or annualized discount, in the case of Treasury bills) of the underlying security or securities, based upon current quotations or prices for such securities determined in accordance with the method specified by the Exchange on which the option is traded. If there is more than one underlying security for a particular class of options, the underlying yield will represent an average of the yields of those securities. If an Exchange so elects, underlying yields for some or all classes of yield-based Treasury options traded on that Exchange may be stated in terms of a "yield indicator" representing a percentage yield multiplied by ten. An Exchange may also elect to express underlying yields as yield complements, i.e. 100 minus the yield.

Put

(c) The term "put" in respect of a yield-based Treasury option means an option contract under which the holder has the right, in accordance with the terms of the By-Laws and Rules, to sell to the Corporation the aggregate settlement value of the underlying yield.

Call

(d) The term "call" in respect of a yield-based Treasury option means an option contract under which the holder has the right, in accordance with the terms of the By-Laws and Rules, to purchase from the Corporation the aggregate settlement value of the underlying yield.

Reporting Authority

(e) The term "reporting authority" means the institution or reporting service designated by the Exchange as the official source for the current value or settlement value of the underlying yield for a particular class of yield-based Treasury options.

Multiplier

(f) The term "multiplier" as used in reference to a yield-based Treasury option contract means the

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dollar amount (as specified by the Exchange) by which the settlement value of the underlying yield is to be multiplied to obtain the aggregate settlement value. Such term replaces the term "unit of trading," used in reference to other kinds of options.

Settlement Value

(g) Subject to the provisions of Section 5 of this Article, the term "settlement value" means the current underlying yield on the last trading day prior to expiration of the option as such value is reported by the reporting authority and designated by the Exchange as the value to be used for purposes of calculating the exercise settlement amount pursuant to Chapter XVII of the Rules.

Aggregate Settlement Value

(h) The term "aggregate settlement value" means the value required to be delivered to the holder of a call or by the holder of a put (against payment of the aggregate exercise price) upon the valid exercise of a yield-based Treasury option. Such value is equal to the multiplier times the settlement value.

Exercise Price

(i) The term "exercise price" in respect of a yield-based Treasury option means the specified value of the underlying yield which, when multiplied by the multiplier, will yield the aggregate exercise price at which the aggregate settlement value may be purchased (in the case of a call) or sold (in the case of a put) upon the exercise of such option.

Aggregate Exercise Price

(j) The term "aggregate exercise price" in respect of a yield-based Treasury option means the exercise price of such option times the multiplier.

Exercise Settlement Amount

(k) The term "exercise settlement amount" in respect of a yield-based Treasury option means the amount to be paid in settlement of the exercise of such option in accordance with the Rules and is equal to the difference between the aggregate exercise price and the aggregate settlement value of the underlying yield.

Premium

(l) The term "premium" in respect of a confirmed trade in yield-based Treasury options means the "per unit" price of each such option, as agreed upon by the purchaser and seller in such transaction, times the multiplier and the number of options subject to the transaction.
Amended December 14, 2012.

Class of Options

(m) The term "class of options" in respect of yield-based Treasury options means all option contracts of the same type and style covering the same underlying yield.

[Section 1 of this Article adds certain new definitions relevant to yield-based Treasury options and replaces paragraphs A.(3), C.(1),(4), E.(8),(11), P.(3),(9) and U.(1),(2) of Section 1 of Article I of the By-Laws.]

Adopted June 16, 1989.

General Rights and Obligations of Holders and Writers of Yield-Based Treasury Options

SECTION 2. (a) Subject to the provisions of the By-Laws and Rules, the holder of a single yield-based Treasury option contract has the right on (and only on) the expiration date, expiring at the expiration time therefor on such date:

(1) In the case of a call, to purchase from the Corporation at the aggregate exercise price the aggregate settlement value of the underlying yield in accordance with Exchange Rules and the By-Laws and Rules; or

(2) In the case of a put, to sell to the Corporation at the aggregate exercise price the aggregate settlement value of the underlying yield in accordance with Exchange Rules and the By-Laws and Rules.

(b) The writer of a single yield-based Treasury option contract is obligated, upon the assignment to him of an exercise notice in respect of such option contract:

(1) In the case of a call, to sell to the Corporation at the aggregate exercise price the aggregate settlement value of the underlying yield in accordance with Exchange Rules and the By-Laws and Rules; or

(2) In the case of a put, to purchase from the Corporation at the aggregate exercise price the aggregate settlement value of the underlying yield in accordance with Exchange Rules and the By-Laws and Rules.

. . . Interpretations and Policies:

.01 When the underlying yield for a yield-based option is expressed as a yield indicator, a call option becomes more valuable as yields increase and a put becomes more valuable as yields decrease. These relationships are reversed when the underlying yield is expressed as a yield complement. In that case, a call becomes more valuable as the yield complement increases (i.e., as the yield decreases) and a put becomes more valuable as the yield complement decreases (i.e., as the yield increases).

[Section 2 of this Article replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Adopted June 16, 1989. Amended November 2, 1995.

Adjustments

SECTION 3. (a) Except as provided in this Section 3, Section 11 of Article VI of the By-Laws shall not apply to yield-based Treasury option contracts.

(b) In the event that the United States Treasury changes the terms or the schedule of issuance of, or ceases to issue, securities of a particular maturity period that have been identified by an Exchange as underlying securities for a class of yield-based Treasury options, the Corporation may make such adjustments in the terms of the affected option contracts as the Corporation in its sole discretion determines to be fair to both holders and writers of such contracts including, but not limited to, substituting other Treasury securities as the underlying securities.

(c) If an Exchange shall increase or decrease the multiplier for any class of yield-based Treasury option contracts, the Corporation shall proportionately consolidate or subdivide each such option contract outstanding prior to the increase or decrease or shall make such other adjustment as the Corporation in its sole discretion deems fair to both the holders and the writers of such contracts.

(d) Determinations with respect to adjustments pursuant to this Section shall be made by the Corporation as provided [for] in Article VI, Section 11 of the By-Laws.

[Section 3 of this Article supplements Section 11 of Article VI of the By-Laws.]

Adopted June 16, 1989. Amended December 12, 2004; May 24, 2007; November 12, 2018.

Unavailability or Inaccuracy of Settlement Value of Underlying Yield

SECTION 4. (a) If the Corporation shall determine that the settlement value of the underlying yield for any series of yield-based Treasury options (the “affected series”) is unreported, inaccurate, unreliable, unavailable or inappropriate for purposes of calculating the exercise settlement amount for exercised contracts of the affected series, then, in addition to any other actions that the Corporation may be entitled to take under the By-Laws and Rules, the Corporation shall be empowered to do any or all of the following:

(1) The Corporation may suspend the settlement obligations of exercising and assigned Clearing Members with respect to yield-based Treasury option contracts of the affected series. At such time as the Corporation determines that the settlement value of the underlying yield is available or the Corporation has fixed the exercise settlement amount pursuant to subparagraph (2) of this Section, the Corporation shall fix a new date for settlement of the exercised option contracts.

(2) The Corporation may fix the exercise settlement amount for exercised contracts of an affected series. The exercise settlement amount shall be fixed by a panel consisting of two designated representatives of each Exchange on which the affected series is open for trading and the Executive Chairman. The panel shall fix the exercise settlement amount based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to holders and writers of options of the affected series, the maintenance of a fair and orderly market in such affected series of options, consistency of interpretation and practice, and consistency with actions taken in related futures or other markets. Without limiting the generality of the foregoing, the panel may fix the exercise settlement amount using: (i) the reported value of the underlying yield at the close of regular trading hours (as determined by the Corporation) on the last preceding trading day for which such a value was reported by the reporting authority; (ii) the reported value of the underlying yield at the opening of regular trading hours (as determined by the Corporation) on the next trading day for which such an opening value is reported by the reporting authority; or (iii) a value for the underlying yield at such other time, or representing a combination or average of values at such time or times, as the Corporation deems appropriate. The provisions of Article VI, Section 11(c) of the By-Laws with respect to the vote required to constitute the determination of a panel, the voting rights of members of such panels, the ability of such panels to conduct their business by telephone or other designated means, and the ability of the Executive Chairman and Exchange representatives to designate others to serve in their place on such panels shall apply equally to panels convened pursuant to this Section. Every determination of a panel convened pursuant to this Section shall be within the sole discretion of such panel and shall be conclusive and binding on all investors and not subject to review.

(3) If a panel acting pursuant to subsection (2) above delays fixing an exercise settlement amount for a series of options past the last trading day before expiration of that series, the expiration date exercise procedures of Rules 805 and 1704 shall not apply to expiring options of the affected series, and each Clearing Member shall be deemed to have properly and irrevocably tendered to the Corporation prior to the Expiration Time an exercise notice with respect to each expiring contract of the affected series carried in a long position in each account of the Clearing Member if, and only if, the exercise settlement amount fixed by the panel for options of that series is \$1.00 or more. The exercise settlement date for such options shall be postponed until the business day next following the day on which the exercise settlement amount is fixed. Options for which the exercise settlement amount fixed by the panel is less than \$1.00 shall be deemed to have expired unexercised.

(b) Unless the Corporation directs otherwise, the settlement value of the underlying yield as initially reported by the reporting authority shall be conclusively presumed to be accurate and

shall be deemed final for the purpose of calculating exercise settlement amounts, even if such value is subsequently revised or determined to have been inaccurate.

. . . Interpretations and Policies:

.01 The Corporation will not adjust officially reported settlement values for exercise settlement purposes, even if those values are subsequently found to have been erroneous, except in extraordinary circumstances. Such circumstances might be found to exist where, for example, the settlement value of the underlying yield as initially reported is clearly erroneous and inconsistent with values reported earlier in the same trading day, and a corrected settlement value is promptly announced by the reporting authority. In no event will a completed settlement be adjusted due to errors in officially reported settlement values.

[Section 4 of this Article replaces Section 19 of Article VI of the By-Laws and supplements Rule 801.]

Adopted June 16, 1989. Amended December 12, 2004; December 20, 2004; May 24, 2007; July 2, 2012; June 17, 2013; March 6, 2014; November 12, 2018; February 15, 2019.

Time for Determination of Settlement Value

SECTION 5. The time of day as of which and the method by which the settlement value for any series of yield-based Treasury options is determined shall be as specified by the Exchange on which such series is traded. Any change in the time or method for determining such settlement value may be made applicable to contracts outstanding at the time of the change if the Exchange so specifies.

Adopted June 16, 1989.

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ARTICLE XVII – INDEX OPTIONS AND CERTAIN OTHER CASH-SETTLED OPTIONS

Introduction

By-Laws in this Article are applicable only to cash-settled options that are not specifically addressed elsewhere in these By-Laws, including Exchange-listed index options, OTC index options and cash-settled commodity options other than binary options or range options (which are governed by the provisions of Article XIV). Section 1 of Article XII is also applicable to cash-settled commodity options. By-Laws in Articles I-XI are also applicable to cash-settled options, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of such options by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I-XI, that fact is indicated in brackets following the By-Law in this Article.

. . . Interpretations and Policies:

For the elimination of doubt, OCC will clear and treat as options on securities any option on the CBOE Gold ETF Volatility Index.

Adopted February 4, 1983. Amended August 13, 2008; March 20, 2009; June 14, 2010; December 14, 2012.

Definitions

SECTION 1.

A.

Aggregate Current Index Value

(1) The term “aggregate current underlying interest value” in respect of a cash-settled option on any day means the result of multiplying the current underlying interest value for that day by the multiplier or unit of trading, as applicable.

Amended October 28, 1991; February 22, 1993; April 16, 2001; March 20, 2009.

Aggregate Exercise Price

(2) The term “aggregate exercise price” in respect of a cash-settled option means the result of multiplying the exercise price of such option by the multiplier or unit of trading, as applicable.

Amended February 22, 1993; April 16, 2001; March 20, 2009.

B.

Reserved.

C.

Call

(1) The term “call” in respect of an index option means an option contract under which the holder has the right, in accordance with the terms of the By-Laws and Rules, to purchase from the Corporation the aggregate current index value of the underlying index. In respect of a cash-settled option other than an index option, the term means an option contract under which the holder has the right, in accordance with the terms of the By-Laws and Rules, to purchase from the Corporation the aggregate value of the underlying interest covered by the option.

Amended August 28, 1985; February 22, 1993; April 16, 2001; March 20, 2009.

Cap Interval

(2) The term "cap interval" used in respect of a series of capped cash-settled options means a value specified to the Corporation by the Exchange on which such series is to be traded which, when added to the exercise price for such series (in the case of a series of calls) or subtracted from the exercise price for such series (in the case of a series of puts), results in the cap price for such series.

Adopted October 28, 1991. Amended February 22, 1993; February 23, 1993; March 20, 2009.

Cap Price

(3) The term "cap price" in respect of a series of capped cash-settled options means the exercise price plus the cap interval (in the case of a series of calls) or the exercise price minus the cap interval (in the case of a series of puts).

Adopted October 28, 1991. Amended February 22, 1993; March 20, 2009.

Class of Options

(4) The term "class of options" used in respect of cash-settled options means all such options of the same type and style (and, in addition, in the case of flexibly structured index options and OTC index options, having the same index value determinant) and having the same underlying interest, provided that OTC index options shall constitute a separate class of options from other cash-settled options of the same type and style and having the same underlying interest.

Amended August 28, 1985; March 27, 1987; February 22, 1993; February 23, 1993; November 1, 1994; April 16, 2001; March 20, 2009; December 14, 2012.

Current Underlying Interest Value; Current Index Value

(5) The term "current underlying interest value" when used in respect of cash-settled options means the current value or level of the underlying interest at a point in time as reported by the reporting authority. The current underlying interest value in respect of an index option is sometimes also referred to as the "current index value." Subject to the provisions of Section 5 of this Article, the term "current index value," in respect of any underlying index on a given day, means the level of such index at the close of trading on such day, or if such day is not a trading day, on the immediately preceding trading day, or, in the case of an index option other than an OTC index option, any multiple or fraction thereof specified by the Exchange, as such value is reported by the reporting authority. Notwithstanding the foregoing, but subject to the provisions of Section 4 of this Article, the current index value for an index underlying a flexibly structured index option or an OTC index option on the expiration date shall be determined in accordance with the index value determinant.

Amended February 22, 1993; June 17, 1996; April 16, 2001; March 20, 2009; December 14, 2012.

D.

Reserved.

E.

Exercise Price

(1) The term "exercise price" in respect of an index option means the specified index value which, when multiplied by the index multiplier, will yield the aggregate exercise price. In respect of cash-settled options other than index options, the term means the specified value per unit of underlying interest that is used in determining the exercise settlement amount.

Amended October 28, 1991; February 22, 1993; March 20, 2009.

Exercise Settlement Amount

(2) The term "exercise settlement amount," other than in respect of a capped cash-settled option that is automatically exercised, means: (i) in the case of any exercised index option, the

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difference between the aggregate exercise price and the aggregate current index value on the day of the exercise, and (ii) in respect of other cash-settled options, the difference between the exercise price and the current interest value, multiplied by the number of units of underlying interest covered by the option contract or by the multiplier, as applicable. In the case of a capped cash-settled option that is automatically exercised, the term “exercise settlement amount” means the cap interval for such option times the multiplier.

Adopted October 28, 1991. Amended February 22, 1993; March 20, 2009.

Expiration Date

(3) The term “expiration date” in respect of cash-settled options expiring prior to February 1, 2015, other than flexibly structured options or OTC index options, means the Saturday following the third Friday of the expiration month, and in respect of cash-settled options expiring on or after February 1, 2015, other than flexibly structured options or OTC index options, means the third Friday of the expiration month, or if such Friday is a day on which the Exchange on which such option is listed is not open for business, the preceding day on which such Exchange is open for business, except that in respect of a class or series of option contracts that is identified by an Exchange as having an expiration date that is a business day other than the third Friday of the expiration month, the term “expiration date” shall mean such date as identified by the Exchange at or prior to the time of inception of trading of the class or series provided that such date is not a date specified by the Corporation as ineligible to be an expiration date. The expiration date of an OTC index option shall be determined as set forth in Section 6 of this Article.

Amended February 22, 1993; April 16, 2001; March 20, 2009; December 14, 2012; June 17, 2013.

Expiration Time

(4) The term “expiration time” in respect of an OTC index option contract means 7:00 P.M. Central Time (8:00 P.M. Eastern Time).

Adopted December 14, 2012.

F. – H.

Reserved.

I.

Index Component

(1) The term “index component” means, in respect of an index option, any security or commodity (including a foreign currency) included in the underlying index.

Adopted April 16, 2001. Amended August 13, 2008; March 20, 2009; July 1, 2009.

J. – O.

Reserved.

P.

Premium

(1) The term “premium” in respect of a confirmed trade in cash-settled options means the price of each such option (expressed in points), as agreed upon by the purchaser and seller in such transaction, times the multiplier or unit of trading, as applicable, and the number of options subject to the transaction.

Amended February 22, 1993; March 20, 2009; December 14, 2012.

Put

(2) The term “put” in respect of a cash-settled option means an option contract under which the

holder has the right, in accordance with the terms and provisions of the By-Laws and Rules, to sell to the Corporation the aggregate current underlying interest value of the underlying index.
Amended August 28, 1985; February 22, 1993; April 16, 2001; March 20, 2009.

Q.

Reserved.

R.

Reference Index

(1) The term “reference index” means a “reference variable” (as defined in Article I of the By-Laws) that is an index.

Adopted August 13, 2008.

Relative Performance Index

(2) The term “relative performance index” means an index designed to measure the relative performance of a reference security or reference index in relation to another reference security or reference index.

Adopted January 30, 2012.

Reporting Authority

(3) The term “reporting authority” in respect of cash-settled options other than OTC index options means the institution or reporting service designated by an Exchange as the official source for the current value of a particular underlying interest or reference variable. Unless another reporting authority is identified by the listing Exchange for a class of cash-settled options, the listing Exchange will be the reporting authority. In respect of OTC index options, the reporting authority shall be the institution or reporting service designated by the Corporation as the official source for the current value of a particular underlying interest or reference variable.

Amended February 22, 1993; April 16, 2001; August 13, 2008; March 20, 2009; December 14, 2012.

S.

Series of Options

(1) The term “series of options” used in respect of cash-settled options other than OTC index options means all such options of the same class with the same exercise price (or, in the case of delayed start options that do not yet have a set exercise price, the same exercise price setting formula and exercise price setting date), cap price (if any), unit of trading (if any), expiration date, and multiplier; provided that if an Exchange shall adopt a rule superseding Section 1 C.(5) of this Article, index options (other than OTC index options) to which such Exchange rule applies shall be deemed to be of a different series than otherwise identical index options to which such rule does not apply. In respect of OTC index options, the term “series of options” means all such options of the same class and having identical variable terms.

Amended March 27, 1987; February 22, 1993; June 17, 1996; November 28, 2007; March 20, 2009; December 14, 2012.

T.

Reserved.

U.

Underlying Index

(1) The term “underlying index” means the index that is the subject of an index option.

Adopted April 16, 2001.

V. – Z.

Reserved.

[Section 1 of this Article adds certain new definitions relevant to index options, and replaces paragraphs A.(3), C.(1), (4), E.(8), (11), P.(3), (9), S.(2), U.(1) and (2) of Section 1 of Article I of the By-Laws.]

Adopted February 4, 1983.

General Rights and Obligations of Holders and Writers of Cash-Settled Options

SECTION 2. (a) Subject to the provisions of the By-Laws and Rules, the holder of a single American-style cash-settled option contract other than a delayed start option contract has the right, beginning at the time such option is issued pursuant Chapter IV of the Rules and expiring at the expiration time therefor on the expiration date, to receive the exercise settlement amount from the Corporation in accordance with Exchange Rules and the By-Laws and Rules. Subject to the provisions of the By-Laws and Rules, the holder of a single American delayed start option contract has the right, beginning after the option's exercise price is set and expiring at the expiration time for such option on the expiration date, to receive the exercise settlement amount from the Corporation in accordance with Exchange Rules and the By-Laws and Rules.

(b) Subject to the provisions of the By-Laws and Rules, the holder of a single European-style cash-settled option contract has the right on (and only on) the expiration date, expiring at the expiration time therefor on such date, to receive the exercise settlement amount from the Corporation in accordance with Exchange Rules and the By-Laws and Rules.

(c) Subject to the provisions of the By-Laws and Rules, the holder of a single capped cash-settled option contract has the right:

(1) Beginning at the time such option is issued pursuant to Chapter IV of the Rules and ending on the expiration date, to receive the exercise settlement amount from the Corporation in accordance with Exchange Rules and the By-Laws and Rules if the current index value on any trading day equals or exceeds the cap price (in the case of a call) or equals or is less than the cap price (in the case of a put); and

(2) On the expiration date, expiring at the expiration time therefore on such date, to receive the exercise settlement amount from the Corporation in accordance with Exchange Rules and the By-Laws and Rules.

(d) The writer of a single cash-settled option contract is obligated, upon the assignment to such writer of an exercise in respect of such option contract, to pay to the Corporation the exercise settlement amount in accordance with Exchange Rules and the By-Laws and Rules.

. . . Interpretations and Policies:

.01 For the elimination of doubt, OCC will clear and treat as options on securities any options on relative performance indexes for which a reference security is an exchange-traded fund designed to measure the return of gold or silver, but not options on relative performance indexes for which a reference security is an exchange-traded fund designed to measure the return of a commodity other than gold or silver.

[Section 2 of this Article replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Adopted February 4, 1983. Amended August 28, 1985; November 18, 1987. October 28, 1991; November 2, 1995; November 28, 2007; March 20, 2009; January 30, 2012; May 24, 2018.

Adjustments

SECTION 3. (a) Section 11A of Article VI of the By-Laws shall not apply to cash-settled option contracts.

(b) In the case of cash-settled options that have a single commodity as their underlying interest, except as expressly provided otherwise in the By-Laws or Rules relating to a particular cleared contract, determinations as to whether and how to adjust the terms of such options to reflect events affecting the underlying interest shall be made by the Corporation based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to the buyers and sellers of such options, the maintenance of a fair and orderly market in such options and consistency of interpretation and practice.

(c) 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 the Corporation shall determine in its sole discretion that any such addition, deletion, or change causes significant discontinuity in the level of the underlying index, the Corporation 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 Corporation in its sole discretion deems fair to both the holders and writers of such contracts.

(d) If an Exchange shall increase or decrease the index multiplier for any index option contract, or the reporting authority shall 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 securities, or the Corporation shall substitute one underlying index or reference index for another pursuant to paragraph (e) of this Section 3, the Corporation shall 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 Corporation in its sole discretion deems fair to both the holders and the writers of such options.

(e) In the event the Corporation determines that: (i) publication of an underlying index or reference index has been discontinued; (ii) an 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, the Corporation may substitute another index (a "successor index") as the underlying index or reference index. A successor index shall be reasonably comparable, as determined by the Corporation in its discretion, 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.

(f) In the event that the value of an underlying relative performance index falls below zero, any such negative value of the index will be deemed by the Corporation to be zero; provided, however, that if it is deemed impractical for systems reasons to have an index value of zero, then any index value of zero or below will be deemed to be an economically nominal positive number. Such an adjustment will have the effect of limiting the maximum exercise settlement amount for in-the-money put options on such indexes to the difference between the exercise price and the nominal positive number substituted for the actual index value (times the applicable multiplier).

(g) In the event that any individual reference security 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 index. In that case, the exercise settlement value of the options would become

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fixed based upon the last published value for the index, and the Exchange on which such options are traded may determine to accelerate the expiration date for such options (and, in the case of European-style options, their exercisability). The expiration date for such options will ordinarily be accelerated to fall on the next regularly scheduled expiration date for the same class of options or such other date as the Corporation may establish in consultation with the Exchange on which such options are traded.

(h) Except in the case of OTC index options or any of the events described in paragraphs (f) and (g) of this Section 3, determinations with respect to adjustments pursuant to this Section shall be made by the Corporation. The provisions of Article VI, Section 11 of the By-Laws shall apply equally to adjustments made by the Corporation pursuant to this Article XVII, Section 3.

. . . Interpretations and Policies:

.01 For the elimination of doubt, all adjustments to the terms of outstanding cleared contracts in OTC index options shall be made by the Corporation in its sole discretion, based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to holders and writers (or purchasers and sellers) of the affected contracts, the maintenance of a fair and orderly market in the affected contracts, consistency of interpretation and practice (including consistency with adjustments to Exchange-listed index options on the same underlying interest), and efficiency of exercise settlement procedures.

[Section 3 of this Article replaces Section 11A of Article VI of the By-Laws.]

Adopted February 4, 1983. Amended August 4, 1983; October 10, 1991; June 17, 1996; April 16, 2001; December 23, 2005; August 13, 2008; March 20, 2009; March 24, 2011; January 30, 2012; December 14, 2012; November 12, 2018.

Unavailability or Inaccuracy of Current Underlying Interest Value

Effective for Series of Options Opened for Trading After September 16, 2000

SECTION 4. (a) If the Corporation shall determine that the primary market(s) (as determined by the Corporation) for one or more index components did not open or remain open for trading (or that any such components did not open or remain open for trading on such market(s)) on a trading day at or before the time when the current index value for that trading day would ordinarily be determined, or that a current index value or other value or price to be used as, or to determine, the exercise settlement amount (a “required value”) for a trading day is otherwise unreported, inaccurate, unreliable, unavailable or inappropriate for purposes of calculating the exercise settlement amount, then, in addition to any other actions that the Corporation may be entitled to take under the By-Laws and Rules, the Corporation shall be empowered to do any or all of the following with respect to any series of options on such index (“affected series”):

(1) The Corporation may suspend the settlement obligations of exercising and assigned Clearing Members with respect to cash-settled option contracts of the affected series. At such time as the Corporation determines that the required value is available or the Corporation has fixed the exercise settlement amount pursuant to subparagraph (2) of this Section, the Corporation shall fix a new date for settlement of exercised option contracts.

(2) The Corporation may fix the exercise settlement amount for exercised contracts of an affected series. In the case of cash-settled securities options other than OTC index options, the exercise settlement amount shall be fixed by a panel consisting of two designated representatives of each Exchange on which the affected series is open for trading and the Executive Chairman. In the case of OTC index options or cash-settled commodity options, unless the By-Laws or Rules specifically provide otherwise in respect of a particular class of such options, the exercise

settlement amount shall be fixed by the Corporation. The Corporation will consult with the Membership/Risk Committee when appropriate to obtain any additional or supplemental market information or data from the members of such committee that the Corporation believes will be useful in setting such exercise settlement value. The panel (or the Corporation, as the case may be) shall fix the exercise settlement amount based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to holders and writers of options of the affected series, the maintenance of a fair and orderly market in such affected series of options, consistency of interpretation and practice, and consistency with actions taken in related futures or other markets. Without limiting the generality of the foregoing, the panel (or the Corporation) may fix the exercise settlement amount using: (i) the reported price or value for the relevant security(ies), commodity(ies) or underlying interest at the close of regular trading hours (as determined by the Corporation) on the last preceding trading day for which such a price or value was reported by the reporting authority; (ii) the reported price or value for the relevant security(ies), commodity(ies) or underlying interest at the opening of regular trading hours (as determined by the Corporation) on the next trading day for which such an opening price or value is reported by the reporting authority; or (iii) a price or value for the relevant security(ies), commodity(ies) or underlying interest at such other time, or representing a combination or average of prices or values at such time or times, as the Corporation deems appropriate. The provisions of Article VI, Section 11(c) of the By-Laws with respect to the vote required to constitute the determination of a panel, the voting rights of members of such panels, the ability of such panels to conduct their business by telephone or other designated means, and the ability of the Executive Chairman and Exchange representatives to designate others to serve in their place on such panels shall apply equally to panels convened pursuant to this Section. Every determination pursuant to this Section shall be within the sole discretion of the Corporation or the panel making such determination, as the case may be, and shall be conclusive and binding on all investors and not subject to review.

(3) If the Corporation or a panel acting pursuant to subsection (2) above delays fixing an exercise settlement amount for a series of options past the last trading day before expiration of that series, the expiration date exercise procedures of Rules 805 and 1804 shall not apply to expiring cash-settled options of the affected series, and each Clearing Member shall be deemed to have properly and irrevocably tendered to the Corporation prior to the Expiration Time an exercise notice with respect to each expiring cash-settled option contract of the affected series carried in a long position in each account of the Clearing Member if, and only if, the exercise settlement amount fixed for options of that series is \$1.00 or more. The exercise settlement date for such options shall be postponed until the business day next following the day on which the exercise settlement amount is fixed. Options for which the exercise settlement amount is fixed at less than \$1.00 shall be deemed to have expired unexercised.

(b) Unless the Corporation directs otherwise, the current underlying interest value for each trading day as initially reported by the reporting authority shall be conclusively presumed to be accurate and shall be deemed final for the purpose of calculating exercise settlement amounts, even if such value is subsequently revised or determined to have been inaccurate.

. . . Interpretations and Policies:

.01 The Corporation will not adjust officially reported current underlying interest values for exercise settlement purposes, even if those values are subsequently found to have been erroneous, except in extraordinary circumstances. Such circumstances might be found to exist where, for example, the closing current underlying interest value as initially reported is clearly erroneous and inconsistent with values reported earlier in the same trading day, and a corrected closing current underlying interest value is promptly announced by the reporting authority. In no event will a completed settlement be adjusted due to errors in officially reported current underlying interest values.

ARTICLE XVII – Index Options and Certain Other Cash-Settled Options

[Section 4 of this Article replaces Section 19 of Article VI of the By-Laws and supplements Rule 801.]

.02 In the event that the Corporation determines to fix an exercise settlement amount in accordance with paragraph (a)(2) of this Section for options exercised other than at expiration, the Corporation will ordinarily fix the exercise settlement amount based on the reported value of the underlying interest at the close of regular trading hours on the last preceding trading day for which a closing current underlying interest value was reported by the reporting authority. In the case of an index option, the Corporation ordinarily will not adjust such a closing value for the purpose of fixing an exercise settlement amount merely because securities or commodities representing less than a substantial portion of the index did not trade on a given trading day.

.03 In the case of expiring options, the Corporation will ordinarily exercise its authority under this Section as necessary to fix exercise settlement amounts consistent with settlement prices fixed in related futures or other markets.

Adopted February 4, 1983. Amended June 17, 1996; September 15, 2000; September 26, 2002; August 13, 2008; March 20, 2009; July 2, 2012; December 14, 2012; June 17, 2013; November 12, 2018; February 15, 2019.

Time for Determination of Current Index Value

SECTION 5. (a) An Exchange may provide by rule that the current index value for the index underlying any class of index options traded on such Exchange, either generally or on particular trading days, shall be determined by reference to the reported level of such index at a time or times other than the close of trading. Similarly, the parties to a transaction in OTC index options may elect to base the current index value of the underlying index on a given day on the reported level of the underlying index at either the open or close of trading on such day. Any such Exchange rule or election by the parties to a transaction in OTC index options shall supersede any contrary provision in Section 1 C.(5) of this Article.

(b) For purposes of settling each flexibly structured index option contract exercised on the expiration date, an Exchange shall provide the Corporation with a current index value for the expiration date as calculated pursuant to the index value determinant reported to the Corporation by the Exchange.

Adopted March 27, 1987. Amended February 23, 1993; October 28, 1991; February 22, 1993; November 1, 1994, June 17, 1996; August 13, 2008; December 14, 2012.

OTC Index Options

SECTION 6. (a) *Variable Terms.* The variable terms that are negotiated bilaterally between the parties to a transaction in OTC index options shall include (i) the type of option; (ii) the style of option; (iii) the underlying index, selected only from among those underlying indices approved by the Corporation and which the By-laws and Rules specifically allow to be selected as an underlying index for an OTC index option; (iv) the expiration date; (v) the exercise price (stated in U.S. dollars and cents); (vi) the index multiplier; and (vii) the index value determinant; subject in each case to the limitations generally applicable to such variable terms as set forth in paragraph (b) below and any additional specific requirements applicable to OTC index options on a particular underlying index as set forth in the interpretations and policies following this Section 6 or as otherwise published by the Corporation on its website.

(b) *General Limitations on Variable Terms.* In respect of an OTC index option contract: (i) the type of option may be either a put or a call; (ii) the style of option may be either American-style or European-style; (iii) the underlying index may be any index identified by the Corporation as a

permissible underlying index; (iv) the expiration date shall be a business day that is, at the maximum, no more than fifteen years from the trade date of the contract series provided that such date is not a date specified by the Corporation as ineligible to be an expiration date; (v) the exercise price shall be stated in U.S. dollars and cents; and (vi) the current index value at expiration may be determined based on either the opening index value or closing index value.

(c) *Acceptance of Confirmed Trades in OTC Index Options for Clearing.* If the confirmed trade information in respect of a transaction in OTC index options reported by an OTC Trade Source to the Corporation passes the Corporation's validation process, the Corporation shall accept such confirmed trade for clearing. The Corporation shall reject the transaction if the Corporation determines that: (i) any variable term of the contract does not comply with any applicable limitations established by the Corporation; (ii) the transaction would violate any applicable restrictions imposed on any of the Clearing Members for whose accounts the transaction is submitted to the Corporation for clearing (including, but not limited to, one or both of such Clearing Members are not approved to clear OTC index options); (iii) the information in the confirmed trade report submitted by the OTC Trade Source to the Corporation contains unresolved errors or omissions; or (iv) the information in the confirmed trade does not meet any other applicable criteria set forth in the By-Laws and Rules or procedures of the Corporation. Any transactions in OTC index options submitted to the Corporation for clearing that are rejected by the Corporation shall have no further effect as regards the Corporation and shall be deemed null and void and given no effect for purposes of the By-Laws and Rules.

(d) *The Role of the Corporation.* Commencing at the time at which the Corporation accepts a confirmed trade in OTC index options for clearing, the Corporation shall be substituted through novation as the seller to the Purchasing Clearing Member and the buyer to the Selling Clearing Member, and shall be the obligor to the extent set forth in the By-Laws and Rules with respect to obligations owing to persons having positions in such cleared contract. Each Clearing Member agrees with the Corporation that (i) it shall be bound, in accordance with the By-Laws and Rules, by all transactions in OTC index options submitted for its account through an OTC Trade Source and accepted by the Corporation for clearing; and (ii) it shall be bound by the terms of each transaction as reported by the OTC Trade Source to the Corporation and the Corporation shall not be responsible or liable to the Clearing Member for any error or omission in the variable terms or other information reported by the OTC Trade Source in connection with such transaction or for any acts or omission taken or made by the Corporation in reliance on such information.

(e) *Fungibility.* OTC index options of the same series shall be fungible. Positions in OTC index options created in a transaction between two counterparties may be closed out through a closing transaction between one of the parties to the original transaction and a different counterparty.

(f) *Clearing Members' Representations and Warranties.* Upon the submission of a confirmed trade in OTC index options to the Corporation for clearing, each Clearing Member for whose account the transaction is submitted shall be deemed to represent and warrant to the Corporation that: (i) the offer and sale of the OTC index options that are the subject of such transaction are exempt from the registration requirements of the Securities Act of 1933; (ii) such transaction has been effected by the Clearing Member in accordance with, the Clearing Member's participation in such transaction is in compliance with, and the Clearing Member will continue with respect to such transaction to comply with, all applicable laws and regulations including, without limitation, all applicable rules and regulations of the Securities and Exchange Commission, and the rules of the Financial Industry Regulatory Authority, Inc. and any other regulatory or self-regulatory organization to which the Clearing Member is subject; (iii) in respect of OTC index options on any S&P Index, the Clearing Member has read and understands the disclaimer language set forth below in item .03 of the Interpretations and Policies following this Section 6; (iv) in the case where the transaction is effected for the account of a customer, the customer is an "Eligible Contract Participant" as defined in Section 3a(65) of the Securities Exchange Act of 1934, as amended; (v)

ARTICLE XVII – Index Options and Certain Other Cash-Settled Options

unless the Corporation notifies Clearing Members that the OTC Options will no longer be offered and sold pursuant to Rule 506 of Regulation D under the Securities Act of 1933, as amended, the Clearing Member has not offered or sold the OTC Options to any person that is not an “accredited investor,” as defined in Rule 501(a) under Regulation D and has otherwise complied with applicable conditions to the exemption set forth in Rule 506; and (vi) unless the Corporation notifies Clearing Members that such restriction no longer applies, the Clearing Member has not offered or sold the OTC Options by any form of general solicitation or general advertising that, at the time of such activities, is or may be deemed to constitute general solicitation or general advertising, as described in Rule 502(c) of Regulation D. The Clearing Member shall indemnify and hold the Corporation harmless from any claim, liability or expense, including reasonable attorneys’ fees, which may arise or be asserted as a result of any such representation and warranty being false or of any action brought against OCC alleging that any such representation and warranty is false, other than any claim, liability or expense that (a) results primarily from the gross negligence or willful misconduct of the Corporation or (b) results from conduct of the Corporation that causes the offer or sale of the OTC Options to become subject to the registration provisions of Section 5 of the Securities Act of 1933, as amended.

(g) Except as expressly provided in this paragraph or elsewhere in the By-Laws and Rules, and except to the extent inconsistent with the provisions of this Section 6, OTC index options shall be subject to all provisions of the By-Laws and Rules to the extent such provisions are applicable by their terms.

. . . Interpretations and Policies:

.01 Only the S&P 500 Index has been approved by the Corporation as an underlying index for OTC index options, as described in Section 6(a)(iii) of this Article XVII. In respect of an OTC index option contract on the S&P 500 Index: (i) the index multiplier shall be fixed at 1, (ii) the expiration date must be within 5 years of the date on which a transaction in such OTC index option is accepted by the Corporation for clearance, and (iii) unless one or the other of the parties to the transaction is entering into the transaction as a closing purchase transaction or a closing sale transaction (provided, in either case, that such closing transaction does not constitute an opening purchase transaction or opening sale transaction for a non-proprietary account of one Clearing Member and a closing sale transaction or closing purchase transaction, respectively, for any proprietary account of the other Clearing Member), the expiration date must be at least 125 days, and no more than 15 years, from the origination date. In addition, unless one or more of the parties to the transaction is entering into the transaction as a closing purchase transaction or a closing sale transaction (provided, in either case, that such closing transaction does not constitute an opening purchase transaction or opening sale transaction for a non-proprietary account of one Clearing Member and a closing sale transaction or closing purchase transaction, respectively, for any proprietary account of the other Clearing Member), the minimum “notional value” of a transaction in OTC index options on the S&P 500 Index submitted to the Corporation for clearing shall be: (x) for options with an expiration date that is 275 or fewer days from its origination date, \$500,000 times the value of the S&P 500 Index at the opening of business in New York on the first business day of the calendar year in which the Corporation accepted the transaction for clearing; or (y) for options with an expiration date that is more than 275 but less than 1,101 days from its origination date, at least \$100,000 times the value of the S&P 500 Index at the opening of business in New York, New York on the first business day of the calendar year in which the Corporation accepted the transaction for clearing. The “notional value” of a transaction in an OTC index option on the S&P 500 Index shall equal the quantity of contracts multiplied by the closing value of the S&P 500 index on the business day prior to the date the transaction is accepted by the Corporation for clearing.

.02 For purposes of paragraph (c) of this Section 6, any transaction in OTC index options submitted to the Corporation for clearing that is rejected by the Corporation shall remain subject to any

applicable agreement between the original parties to the transaction which, for the avoidance of doubt, may provide, among other things, that such rejected transaction shall remain a bilateral transaction between the parties subject to such agreement or other documentation as the parties have entered into for that purpose or may be terminated. The offer and sale of any such option or other security entered into bilaterally would not be covered by any exemption from the registration or other requirements of the Securities Act of 1933 that is specifically applicable, and limited, to OTC index options issued by the Corporation, and parties that may be deemed offerors or sellers of any such bilateral option contract or other security should satisfy themselves that the offer and sale would not be in violation of any applicable provision of the Securities Act of 1933.

.03 For purposes of clause (iii) of paragraph (f) of this Section 6, the S&P disclaimer reads as follows:

“S&P SHALL OBTAIN INFORMATION FOR INCLUSION IN OR FOR USE IN THE CALCULATION OF THE S&P INDEXES FROM SOURCES WHICH S&P CONSIDERS RELIABLE, BUT S&P DOES NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF THE S&P INDEXES OR ANY DATA INCLUDED THEREIN AND S&P SHALL HAVE NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS THEREIN. S&P MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY ANY PERSON OR ANY ENTITY FROM THE USE OF THE S&P INDEXES OR ANY DATA INCLUDED THEREIN IN CONNECTION WITH THE TRADING OF THE CONTRACTS, OR FOR ANY OTHER USE. S&P MAKES NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIMS ALL WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE S&P INDEXES OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL S&P HAVE ANY LIABILITY FOR ANY SPECIAL, PUNITIVE, INDIRECT, OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS), EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.”

Adopted December 14, 2012. Amended June 17, 2013.

ARTICLE XVIII – RESERVED

Reserved.

ARTICLE XIX – RESERVED

Reserved.

ARTICLE XX – RESERVED

Reserved.

* * * *

ARTICLE XXI – STOCK LOAN/HEDGE PROGRAM

Introduction

By-Laws in this Article are applicable only to the Stock Loan/Hedge Program. In addition, the By-Laws in Articles I-XI are also applicable to the Stock Loan/Hedge Program, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of the Stock Loan/Hedge Program by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I-XI, that fact is indicated in brackets following the By-Law in this Article.

Definitions

SECTION 1.

A. – B.

Reserved.

C.

Collateral

(1) The term "Collateral" means the amount in U.S. dollars deposited by a Borrowing Clearing Member with a Lending Clearing Member upon initiation of a Stock Loan as security for the obligations of the Borrowing Clearing Member in respect of the Stock Loan, as such amount may be adjusted from time to time through mark-to-market payments made by the Borrowing Clearing Member and the Lending Clearing Member pursuant to Rule 2204.

Amended June 11, 1998.

D.

Depository

(1) The term "Depository" means The Depository Trust Company.

Adopted June 11, 1998.

E. – K.

Reserved.

L.

Loaned Stock

(1) The term "Loaned Stock" means Eligible Stock transferred by a Lending Clearing Member to a Borrowing Clearing Member upon initiation of a Stock Loan, and any securities issued in exchange for such securities by reason of a reorganization, recapitalization, merger, consolidation or other corporate action of the issuer, and non-cash distributions described in Rule 2206 in respect of all such securities.

Amended June 11, 1998.

M.

Marking Price

(1) The term "marking price", as used in respect of any Loaned Stock shall have the meaning given to it in Article I of the By-Laws

Amended June 11, 1998; March 25, 2010.

Mark-To-Market Payment

(2) The term "mark-to-market payment," as used in respect of any Stock Loan, means a payment made by a Lending Clearing Member or Borrowing Clearing Member to the Corporation or by the Corporation to a Lending Clearing Member or Borrowing Clearing Member pursuant to Rule 2204.

Amended June 11, 1998.

N. – R.

Reserved.

S.

Settlement Date

(1) The term "settlement date" in respect of the termination of Stock Loans has the meaning set forth in Rule 2208.

Amended June 11, 1998.

Settlement Price

(2) The term "settlement price" in respect of a Stock Loan means the amount of Collateral specified by the Lending Clearing Member in its instructions to initiate the Stock Loan as described in Rule 2202. The term "settlement price," in respect of the termination by either a Lending Clearing Member or a Borrowing Clearing Member of a Stock Loan or portion thereof, means the amount of Collateral required to be returned by the Lending Clearing Member on the settlement date .

Amended June 11, 1998.

Stock Loan

(3) The term "Stock Loan" as used in this Article XXI of the By-Laws and in Chapter XXII of the Rules refers only to "Hedge Loans" and not to "Market Loans" (as those terms are defined in Article I of the By-Laws).

Adopted January 23, 2009.

Stock Loan Business Day

(4) The term "stock loan business day" means any day on which the Corporation and the Depository are open for business.

Adopted June 11, 1998.

T. – Z.

Reserved.

[Section 1 of this Article adds certain definitions relevant to the Stock Loan/Hedge Program.]

Adopted July 15, 1993.

Role of the Corporation

SECTION 2. (a) Commencing at the time at which the Corporation accepts a Stock Loan as described in Rule 2202, the role of the Corporation in respect of the Stock Loan shall be that of a principal, and the Corporation shall have the position of borrower to the Lending Clearing Member and lender to the Borrowing Clearing Member. Without limiting the generality of the foregoing: (i) the rights of the two Clearing Members that are parties to a Stock Loan to receive mark-to-market payments, and their obligations to make mark-to-market payments, shall be as against the Corporation, and not as against each other; and (ii) in the event of a termination of a Stock Loan in accordance with the Rules (with the exception of a termination by offset as provided in Rule

Article XXI – Stock Loan/Hedge Program

2208(e) or Rule 2212), the right of the Lending Clearing Member to receive the Loaned Stock and the obligation of the Lending Clearing Member to pay the settlement price shall be as against the Corporation, and the obligation of the Borrowing Clearing Member to deliver the Loaned Stock and the right of the Borrowing Clearing Member to receive the settlement price shall be as against the Corporation. In addition to the foregoing:

(1) stock loan positions of a Clearing Member established as a result of Stock Loans relating to the same Eligible Stock in which the Clearing Member is the Lending Clearing Member shall be aggregated for position reporting purposes, but shall not be netted against any stock borrow position which the Clearing Member may be carrying relating to the same Eligible Stock for any purpose other than (i) as described in Rule 601 with respect to determining the Clearing Member's margin obligations to the Corporation and (ii) as may be permitted pursuant to the Rules with respect to suspended Clearing Members or the voluntary termination by offset and re-matching of Matched-Book Positions in accordance with Rule 2208(e); and

(2) stock borrow positions of a Clearing Member established as the result of Stock Loans relating to the same Eligible Stock in which the Clearing Member is the Borrowing Clearing Member shall be aggregated for position reporting purposes, but shall not be netted against any stock loan position which the Clearing Member may be carrying relating to the same Eligible Stock for any purpose other than (i) as described in Rule 601 with respect to determining the Clearing Member's margin obligations to the Corporation and (ii) as may be permitted pursuant to the Rules with respect to suspended Clearing Members or the voluntary termination by offset and re-matching of Matched-Book Positions in Accordance with Rule 2208(e).

(b) Upon acceptance of a Stock Loan, the Corporation shall create a stock loan position in the account designated by the Lending Clearing Member, identifying the Eligible Stock that is the subject of the Stock Loan, the number of shares loaned, the amount of Collateral received from the Borrowing Clearing Member and the identity of the Borrowing Clearing Member, and shall create a stock borrow position in the account designated by the Borrowing Clearing Member, identifying the Eligible Stock that is the subject of the Stock Loan, the number of shares borrowed, the amount of Collateral delivered to the Lending Clearing Member and the identity of the Lending Clearing Member. The Corporation shall identify stock loan and stock borrow positions resulting from Hedge Loans separately from positions resulting from Market Loans.

(c) The Corporation may at any time terminate the outstanding Stock Loans relating to one or more particular Eligible Stocks upon a determination by the Corporation, in its sole discretion, that such action is warranted by reason of the lack of substantial volume in such Stock Loans, the impending termination of business on the part of the Corporation, the inability of the Corporation from time to time to maintain in effect satisfactory arrangements with the Depository, or other circumstances in which the Corporation in its sole discretion determines that such action is necessary or appropriate for the protection of the Corporation, its Clearing Members or the public. The Corporation may effect a termination pursuant to this paragraph (c) by giving written notice thereof to all affected Hedge Clearing Members specifying the date on which such termination is to become effective, which date shall be a stock loan business day at least two stock loan business days after the date of such notice.

. . . Interpretations and Policies:

.01 If a Lending Clearing Member and a Borrowing Clearing Member complete the termination of a Stock Loan at a price other than the correct settlement price for the termination, the Corporation will treat the termination as having been completed at the correct settlement price. If the records of the Corporation show that a Lending Clearing Member and a Borrowing Clearing Member are party on a particular day to two or more Stock Loans between them in respect of a particular Eligible Stock but having different termination settlement prices (this might occur because one or more of the Stock Loans was initiated on that day) and the Lending Clearing Member and the

Borrowing Clearing Member complete the termination of a Stock Loan at a price other than the correct settlement price for the termination of any of the Stock Loans, the Corporation will determine which of the Stock Loans will be deemed to have been terminated in accordance with its procedures as in effect from time to time, and will treat the termination as having been completed at the correct settlement price for that Stock Loan. In any of these events, the records of the Corporation shall be dispositive as between the Corporation and each of the two Hedge Clearing Members, the Lending Clearing Member and the Borrowing Clearing Member will be responsible for reconciling the discrepancy between the actual price and the settlement price utilized by the Corporation among themselves and, notwithstanding paragraph (a) of this Section, the Corporation shall have no responsibility to either the Borrowing Clearing Member or the Lending Clearing Member to reconcile the discrepancy.

Adopted July 15, 1993. Amended June 11, 1998; January 23, 2009; March 29, 2016; April 28, 2017; September 5, 2017.

Agreements of Borrowing Clearing Member

SECTION 3. The Clearing Member that is the Borrowing Clearing Member in respect of a Stock Loan agrees with the Corporation that: (a) upon the acceptance of the Stock Loan by the Corporation, the resulting stock borrow position of the Borrowing Clearing Member shall be created and subsequently maintained in accordance with Section 2 of this Article XXI, (b) so long as such stock borrow position is thereafter maintained, the Borrowing Clearing Member shall make all required margin deposits with the Corporation in accordance with Rule 2203 and all required mark-to-market payments to the Corporation in accordance with Rule 2204, and (c) with the exception of a termination by offset as provided in Rule 2208(e) or Rule 2212, in the event that the Lending Clearing Member, the Borrowing Clearing Member or the Corporation terminates the Stock Loan, the Borrowing Clearing Member shall deliver the Loaned Stock, against payment of the settlement price, in accordance with the By-Laws and the Rules. In the event of a conflict between the records of the Corporation and any records generated by the Borrowing Clearing Member regarding a Stock Loan and resulting stock borrow positions, the records generated by the Corporation will prevail and the Borrowing Clearing Member shall remain liable for all obligations associated with such stock borrow positions maintained on the records of the Corporation.

Adopted July 15, 1993. Amended June 11, 1998; March 29, 2016; April 28, 2017.

Agreements of Lending Clearing Member

SECTION 4. The Clearing Member that is the Lending Clearing Member in respect of a Stock Loan agrees with the Corporation that: (a) upon the acceptance of the Stock Loan by the Corporation, the resulting stock loan position of the Lending Clearing Member shall be created and subsequently maintained in accordance with Section 2 of this Article XXI, (b) so long as such stock loan position is thereafter maintained, the Lending Clearing Member shall make all required margin deposits with the Corporation in accordance with Rule 2203 and all required mark-to-market payments to the Corporation in accordance with Rule 2204, and (c) with the exception of a termination by offset as provided in Rule 2208(e) or Rule 2212, in the event that the Borrowing Clearing Member, the Lending Clearing Member or the Corporation terminates the Stock Loan, the Lending Clearing Member shall pay the settlement price, against delivery of the Loaned Stock, in accordance with the By-Laws and the Rules. In the event of a conflict between the records of the Corporation and any records generated by the Lending Clearing Member regarding a Stock Loan and resulting stock loan positions, the records generated by the Corporation will prevail and the Lending Clearing Member shall remain liable for all obligations associated with such stock loan positions maintained on the records of the Corporation.

Adopted July 15, 1993. Amended June 11, 1998; March 29, 2016; April 28, 2017.

Maintaining Stock Loan and Stock Borrow Positions in Accounts

SECTION 5. Notwithstanding the provisions of Section 3 of Article VI of the By-Laws, stock loan positions and stock borrow positions resulting from Stock Loans may be maintained in any of a Hedge Clearing Member's accounts with the Corporation. For the purposes of Section 3 of Article VI of the By-Laws, stock loan positions resulting from Stock Loans shall be deemed to be "securities" and stock borrow positions resulting from Stock Loans shall be deemed to be "funds," and the authority of the Corporation to close out "positions" in any account shall include the authority to close out such stock loan positions and stock borrow positions.

[Section 5 of this Article supplements Section 3 of Article VI of the By-Laws.]

. . . Interpretations and Policies:

.01 Until such time as the Corporation determines that appropriate regulatory approvals have been obtained, a Hedge Loan Clearing Member is not permitted to allocate stock loan or stock borrow positions resulting from Stock Loans to any proprietary X-M account, non-proprietary X-M account, internal non-proprietary cross-margining account or segregated futures account.

Adopted July 15, 1993. Amended July 7, 2005; January 23, 2009.

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ARTICLE XXIA – MARKET LOAN PROGRAM

Introduction

By-Laws in this Article are applicable only to the Market Loan Program. In addition, the By-Laws in Articles I-XI are also applicable to the Market Loan Program, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of the Market Loan Program by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I-XI and Section 1 of Article XXI, that fact is indicated in brackets following the By-Law in this Article.

Adopted January 23, 2009.

Definitions

SECTION 1.

A. – B.

Reserved.

C.

Collateral

(1) The term "Collateral" means, in respect of a Market Loan, the amount in U.S. dollars a Borrowing Clearing Member is required to transfer to the Corporation's account at the Depository, which the Corporation in turn instructs the Depository to transfer to the Lending Clearing Member, as security for the obligations of the Borrowing Clearing Member in respect of the Market Loan, as such amount may be adjusted from time to time through mark-to-market payments made by the Borrowing Clearing Member and the Lending Clearing Member pursuant to Rule 2204A. The Collateral requirement applicable to a Market Loan shall be the mark-to-market value of the Loaned Stock multiplied by a percentage (no less than 100%) specified by the relevant Loan Market.

D.

Depository

(1) The term "Depository" shall have the meaning given to it in Article XXI of the By-Laws.

Dividend Equivalent Payment

(2) The term "dividend equivalent payment" means, in respect of a Market Loan, a payment to be made by the Borrowing Clearing Member to the Lending Clearing Member to reflect any cash dividend or distribution made with respect to the Loaned Stock during the term of a Market Loan.

E. – K.

Reserved.

L.

Loaned Stock

(1) The term "Loaned Stock" means, in respect of a Market Loan, Eligible Stock that is the subject of the Market Loan and any securities issued in exchange for such Eligible Stock by reason of a reorganization, recapitalization, merger, consolidation or other corporate action of the issuer, and any non-cash distributions described in Rule 2206A in respect of the Loaned Stock.

M.

Mark-to-Market Payment

(1) The term "mark-to-market payment," as used in respect of any Market Loan, means a payment made by a Lending Clearing Member or Borrowing Clearing Member to the Corporation or by the Corporation to a Lending Clearing Member or Borrowing Clearing Member pursuant to Rule 2204A.

Marking Price

(2) The term "marking price" shall have the meaning given to it in Article XXI of the By-Laws.

N. – Q.

Reserved.

R.

Rebate

(1) The term "rebate," as used in respect of any Market Loan, means a fee payable from the Lending Clearing Member to the Borrowing Clearing Member (or, if the rebate rate is negative, from the Borrowing Clearing Member to the Lending Clearing Member), expressed as a rate based on the amount of cash Collateral held by the Lending Clearing Member.

Recall

(2) The term "recall," as used in respect of any Market Loan, means the process by which the Lending Clearing Member may initiate the termination of the Market Loan, or any portion thereof, by submitting a notice to the applicable Loan Market calling for the return of all or any portion of the Loaned Stock.

Return

(3) The term "return," as used in respect of any Market Loan, means the process by which the Borrowing Clearing Member may initiate the termination of the Market Loan, or any portion thereof, by submitting a notice to the Loan Market indicating its intention to return all or any portion of the Loaned Stock.

S.

Settlement Price

(1) The term "settlement price," as used in respect of a Market Loan, means the amount of Collateral specified in the instructions submitted by the Corporation to the Depository to effect such Market Loan. The term "settlement price," in respect of the termination of a Market Loan or portion thereof, means the amount of Collateral required to be returned by the Lending Clearing Member on the settlement date.

Stock Loan Business Day

(1) The term "stock loan business day" shall have the meaning given to it in Article XXI of the By-Laws.

T. – Z.

Reserved.

[Section 1 of this Article adds certain new definitions relevant to the Market Loan Program and replaces, for purposes of Market Loans, the definitions of the same terms in Article I, Section 1 and Article XXI, Section I of the By-Laws.]

Adopted January 23, 2009.

Role of the Corporation

SECTION 2. Commencing at the time at which the Corporation accepts a Market Loan as described in Rule 2202A, the role of the Corporation in respect of such Market Loan shall be that of a principal, and the Corporation shall have the position of borrower to the Lending Clearing Member and lender to the Borrowing Clearing Member. Without limiting the generality of the foregoing: (i) the rights and/or obligations of a Clearing Member that is party to such Market Loan to receive and/or pay mark-to-market payments, dividend equivalent payments and rebate payments shall be as against the Corporation; and (ii) in the event of termination of such Market Loan in accordance with the Rules, the right of the Lending Clearing Member to receive the Loaned Stock and the obligation of the Lending Clearing Member to pay the settlement price shall be as against the Corporation, and the obligation of the Borrowing Clearing Member to deliver the Loaned Stock and the right of the Borrowing Clearing Member to receive the settlement price shall be as against the Corporation.

Adopted January 23, 2009.

Agreement of Borrowing Clearing Member

SECTION 3. The Clearing Member that is the Borrowing Clearing Member in respect of a Market Loan agrees with the Corporation that: (i) upon the acceptance of the Market Loan by the Corporation, the resulting stock borrow position of the Borrowing Clearing Member shall be created and subsequently maintained in accordance with Section 5 of this Article XXIA, (ii) so long as such stock borrow position is thereafter maintained, the Borrowing Clearing Member shall make all required payments to the Corporation including margin deposits, mark-to-market payments, dividend equivalent payments and rebate payments (in the case of a negative rebate), all in accordance with the By-Laws and Rules, and (iii) in the event that the Market Loan is terminated, the Borrowing Clearing Member shall deliver the Loaned Stock, against payment of the settlement price, in accordance with the By-Laws and Rules. In the event of a conflict between the records of the Corporation and any records generated by the Borrowing Clearing Member regarding a Stock Loan and resulting stock borrow positions, the records generated by the Corporation will prevail and the Borrowing Clearing Member shall remain liable for all obligations associated with such stock borrow positions maintained on the records of the Corporation.

Adopted January 23, 2009. Amended April 28, 2017.

Agreement of Lending Clearing Member

SECTION 4. The Clearing Member that is the Lending Clearing Member in respect of a Market Loan agrees with the Corporation that: (i) upon the acceptance of the Market Loan by the Corporation, the resulting stock loan position of the Lending Clearing Member shall be created and subsequently maintained in accordance with Section 5 of this Article XXIA, (ii) so long as such stock loan position is thereafter maintained, the Lending Clearing Member shall make all required payments to the Corporation including margin deposits, mark-to-market payments and rebate payments (in the case of a positive rebate), all in accordance with the By-Laws and Rules, and (iii) in the event that the Market Loan is terminated, the Lending Clearing Member shall pay the settlement price, against delivery of the Loaned Stock, in accordance with the By-Laws and Rules. In the event of a conflict between the records of the Corporation and any records generated by the Lending Clearing Member regarding a Stock Loan and resulting stock loan positions, the records generated by the Corporation will prevail and the Lending Clearing Member shall remain liable for all obligations associated with such stock loan positions maintained on the records of the Corporation.

Adopted January 23, 2009. Amended April 28, 2017.

Maintaining Stock Loan and Stock Borrow Positions in Accounts

SECTION 5. (a) Upon acceptance of a Market Loan as described in the Rules, the Corporation shall create a stock loan position in the account designated by the Lending Clearing Member, identifying the Eligible Stock that is the subject of the Market Loan, the number of shares loaned and the amount of Collateral received, and shall create a stock borrow position in the account designated by the Borrowing Clearing Member, identifying the Eligible Security that is the subject of the Market Loan, the number of shares borrowed and the amount of Collateral delivered. The Corporation shall identify stock loan and stock borrow positions resulting from Market Loans separately from stock loan and stock borrow positions resulting from Hedge Loans. In addition to the foregoing:

(1) stock loan positions of a Clearing Member established as a result of Market Loans relating to the same Eligible Stock in which the Clearing Member is the Lending Clearing Member shall be aggregated (separately for Market Loans effected through each Loan Market) for position reporting purposes, but shall not be netted against any stock borrow position which the Clearing Member may be carrying relating to the same Eligible Stock for any purposes other than (i) as described in Rule 601 with respect to determining the Clearing Member's margin obligations to the Corporation and (ii) as may be permitted pursuant to the Rules with respect to suspended Clearing Members; and

(2) stock borrow positions of a Clearing Member established as the result of Market Loans relating to the same Eligible Stock in which the Clearing Member is the Borrowing Clearing Member shall be aggregated (separately for Market Loans effected through each Loan Market) for position reporting purposes, but shall not be netted against any stock loan position which the Clearing Member may be carrying relating to the same Eligible Stock for any purpose other than (i) as described in Rule 601 with respect to determining the Clearing Member's margin obligations to the Corporation and (ii) as may be permitted pursuant to the Rules with respect to suspended Clearing Members.

(b) Notwithstanding the provisions of Section 3 of Article VI of the By-Laws, stock loan and stock borrow positions resulting from Market Loans may be maintained in any of a Market Loan Clearing Member's accounts with the Corporation. For the purposes of Section 3 of Article VI of the By-Laws, stock loan positions resulting from Market Loans shall be deemed to be "securities" and stock borrow positions resulting from Market Loans shall be deemed to be "funds," and the authority of the Corporation to close out "positions" in any account shall include the authority to close out such stock loan and stock borrow positions.

[Section 5 of this Article supplements Section 3 of Article VI of the By-Laws.]

. . . Interpretations and Policies:

.01 Until such time as the Corporation determines that appropriate regulatory approvals have been obtained, a Market Loan Clearing Member is not permitted to allocate stock loan or stock borrow positions resulting from Market Loans to any proprietary X-M account, non-proprietary X-M account, internal non-proprietary cross-margining account or segregated futures account.

Adopted January 23, 2009.

* * * *

ARTICLE XXII – CASH-SETTLED FOREIGN CURRENCY OPTIONS

Introduction

By-Laws in this Article are applicable only to cash-settled options where either the trading currency or the underlying interest is a foreign currency. In addition, the By-Laws in Articles I-XI are also applicable to such options, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of such options by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I-XI, that fact is indicated in brackets following the By-Laws in this Article. Cash-settled foreign currency futures are governed by the applicable provisions of Article XII of the By-Laws and Chapter XIII of the Rules.

Adopted January 19, 1994. Amended November 1, 1994; August 1, 2003.

Definitions

SECTION 1.

A. – B.

Reserved.

C.

Call

(1) The term "call" in respect of a cash-settled foreign currency option other than a rate-modified foreign currency option means an option contract under which the holder has the right, in accordance with the terms and provisions of the By-Laws and Rules, to receive upon the exercise of such option an exercise settlement amount based on the excess, if any, of the spot price of the underlying currency over the exercise price of the option. The term "call" in respect of a rate-modified foreign currency option means an option contract under which the holder has the right, in accordance with the terms and provisions of the By-Laws and Rules, to receive upon the exercise of such option an exercise settlement amount based on (i) the excess, if any, of the underlying modified rate over the exercise price of the option, times (ii) the multiplier.

Amended November 1, 1994; April 4, 2007.

Class of Options

(2) The term "class of options" used in respect of cash-settled foreign currency options means all such options of the same type and style covering the same underlying currency and having the same unit of trading and the same trading currency.

Amended November 1, 1994.

D.

Reserved.

E.

Exercise Price

(1) The term "exercise price" in respect of a cash-settled foreign currency option other than a rate-modified foreign currency option means the specified price (in the designated currency) per unit of underlying currency that is used in determining the exercise settlement amount. The term "exercise price" in respect of a rate-modified foreign currency option means the specified value of

Article XXII – Cash-Settled Foreign Currency Options

the underlying modified rate that is used in determining the exercise settlement amount.

Amended November 1, 1994; April 4, 2007.

Exercise Settlement Amount

(2) The term "exercise settlement amount," in the case of any exercised cash-settled foreign currency option other than a rate-modified foreign currency option means (i) in the case of a call, the excess of the spot price over the exercise price, multiplied by the number of units of underlying currency covered by the option contract, and (ii) in the case of a put, means the excess of the exercise price over the spot price, multiplied by the number of units of underlying currency covered by the option contract. The term "exercise settlement amount," in the case of a rate-modified foreign currency option means (i) in the case of a call, (A) the excess of the underlying modified rate over the exercise price, times (B) the multiplier, and (ii) in the case of a put, means (A) the excess of the exercise price over the underlying modified rate, times (B) the multiplier.

Amended November 1, 1994; April 4, 2007.

Expiration Date

(3) The term "expiration date" in respect of any series of cash-settled foreign currency options expiring prior to February 1, 2015, means the Saturday following the third Friday of the expiration month, and in respect of cash-settled foreign currency options expiring on or after February 1, 2015, means the third Friday of the expiration month, or if such Friday is a day on which the Exchange on which such option is listed is not open for business, the preceding day on which such Exchange is open for business, or such other date as may be identified by the Exchange at or prior to the time trading is initiated in the series, provided that if such other date is not a business day or is a day on which the Exchange on which such option is listed is not open for business, the expiration day shall be the following business day, provided further, that such date is not a date specified by the Corporation as ineligible to be an expiration date.

Amended December 30, 1994; December 13, 2006; June 17, 2013.

F. – L.

Reserved.

M.

Multiplier

(2) The term "multiplier" as used in reference to a rate-modified foreign currency option, means the U.S. dollar amount (as specified by the Exchange on which such option is traded) by which the underlying modified rate for such rate-modified foreign currency option is to be multiplied to obtain the exercise settlement amount. Such term replaces the term "unit of trading" used in reference to other kinds of options.

Adopted April 4, 2007.

N. – O.

Reserved.

P.

Premium

(l) The term "premium" in respect of a confirmed trade in cash-settled foreign currency options other than rate-modified foreign currency options means the price (in the designated currency) of each such option, as agreed upon by the purchaser and seller in such transaction, multiplied by the number of units of underlying currency covered by the option and by the number of options subject to the transaction. The term "premium" in respect of a confirmed trade in rate-modified

foreign currency options means the price (in the designated currency) of each such option, as agreed upon by the purchaser and seller in such transaction, multiplied by the multiplier and by the number of options subject to the transaction.

Amended November 1, 1994; April 4, 2007; December 14, 2012.

Put

(2) The term "put" in respect of a cash-settled foreign currency option other than a rate-modified foreign currency option means an option contract under which the holder has the right, in accordance with the terms and provisions of the By-Laws and Rules, to receive upon the exercise of such option an exercise settlement amount based on the excess, if any, of the exercise price of the option over the spot price of the underlying currency. The term "put" in respect of a rate-modified foreign currency option means an option contract under which the holder has the right, in accordance with the terms and provisions of the By-Laws and Rules, to receive upon the exercise of such option an exercise settlement amount based on (i) the excess, if any, of the exercise price of the option over the underlying modified rate, times (ii) the multiplier.

Amended November 1, 1994; April 4, 2007.

Q.

Reserved.

R.

Rate-Modified Foreign Currency Option

(1) The term "rate-modified foreign currency option" means a cash-settled foreign currency option for which the underlying interest is the exchange rate between an underlying currency pair multiplied by a numerical modifier (which may be one) specified by the Exchange on which such option is traded in order to obtain an underlying modified rate.

Adopted April 4, 2007.

Reporting Authority

(2) The term "reporting authority" in respect of cash-settled foreign currency options means the Exchange or an institution or reporting service designated by the Exchange at which such options are traded as the official source for the spot price of a particular underlying currency.

Amended November 1, 1994; April 4, 2007.

S.

Series of Options

(1) The term "series of options" in respect of cash-settled foreign currency options means all such options of the same class with the same exercise price, expiration date, and covering the same number of units of the same underlying currency or, in the case of a rate-modified foreign currency option, the same underlying modified rate.

Amended November 1, 1994; April 4, 2007.

Spot Price

(2) The term "spot price" in respect of a cash-settled foreign currency option means the specified price per unit of underlying currency, stated in terms of the exercise currency, in the spot market for the underlying currency or, in the case of a rate-modified foreign currency option, the exchange rate in the spot market for the underlying currency pair that is used to determine the underlying modified rate, as such price or rate is calculated and reported by the reporting authority.

Amended November 1, 1994; April 4, 2007.

T.

Reserved.

U.

Underlying Currency Pair

(1) The term “underlying currency pair,” when used in respect of a rate-modified foreign currency option, means the two currencies (one of which may be the U.S. dollar or both of which may be non-U.S. currencies) that are the subject of the underlying modified rate.

Adopted April 4, 2007.

Underlying Modified Rate

(2) The term “underlying modified rate” as used in respect of a rate-modified currency option means the spot price at which one currency of the underlying currency pair may be exchanged for the other as reported by the reporting authority, multiplied by a numerical modifier specified by the Exchange on which such options are traded.

Adopted April 4, 2007.

V. – Z.

Reserved.

[Section 1 of this Article adds certain new definitions relevant to cash-settled foreign currency options, and replaces certain definitions in Section 1 of Article I of the By-Laws as applied to cash-settled foreign currency options.]

General Rights and Obligations of Holders and Writers of Cash-Settled Foreign Currency Options

SECTION 2. (a) Subject to the provisions of the By-Laws and Rules, the holder of a single cash-settled foreign currency option has the right on (and only on) the expiration date, expiring at the expiration time therefor on such date, to receive the exercise settlement amount from the Corporation in accordance with Exchange Rules and the By-Laws and Rules.

(b) The writer of a single cash-settled foreign currency option is obligated, upon the assignment to such writer of an exercise in respect of such option, to pay to the Corporation the exercise settlement amount in accordance with Exchange Rules and the By-Laws and Rules.

[Section 2 of this Article replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Adopted January 19, 1994. Amended November 2, 1995.

Adjustments

SECTION 3. In the event that (i) a trading or an underlying currency is replaced by a new currency, or (ii) the exchange rate or exchange characteristics of a trading or underlying currency with respect to other currencies are officially altered, the Corporation may adjust the exercise price, unit of trading, number of contracts, underlying currency, or other terms of option contracts affected by such event. The provisions of Article VI, Section 11 of the By-Laws shall apply equally to adjustments made by the Corporation pursuant to this Article XXII, Section 4.

[Section 3 of this Article replaces Section 11A, and the Interpretations and Policies promulgated thereunder, of Article VI of the By-Laws.]

. . . Interpretations and Policies:

.01 The Corporation will not ordinarily adjust the terms of cash-settled foreign currency options in response to devaluations or revaluations of trading or underlying currencies.

Adopted January 19, 1994. Amended November 1, 1994; December 10, 1998; December 23, 2005; November 12, 2018.

Unavailability or Inaccuracy of Spot Price

SECTION 4. (a) If the Corporation shall determine that the spot price for the currency underlying any series of cash-settled foreign currency options (the "affected series") is unreported, inaccurate, unreliable, unavailable or inappropriate for purposes of calculating the exercise settlement amount for exercised contracts of the affected series, then, in addition to any other actions that the Corporation may be entitled to take under the By-Laws and Rules, the Corporation shall be empowered to do any or all of the following with respect to the affected series:

(1) The Corporation may suspend the settlement obligations of exercising and assigned Clearing Members with respect to cash-settled foreign currency option contracts of the affected series. At such time as the Corporation determines that the spot price is available or the Corporation has fixed the exercise settlement amount pursuant to subparagraph (2) of this Section, the Corporation shall fix a new date for settlement of the exercised option contracts.

(2) The Corporation may fix the exercise settlement amount for exercised contracts of an affected series. The exercise settlement amount shall be fixed by a panel consisting of two designated representatives of each Exchange on which the affected series is open for trading and the Executive Chairman. The panel shall fix the exercise settlement amount based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to holders and writers of options of the affected series, the maintenance of a fair and orderly market in such affected series, consistency of interpretation and practice, and consistency with actions taken in related futures or other markets. Without limiting the generality of the foregoing, the panel may fix the exercise settlement amount using: (i) the reported price of the underlying currency at the close of regular trading hours for options on the affected series (as determined by the Corporation) on the last preceding trading day for which such a price was reported by the reporting authority; (ii) the reported price of the underlying currency at the opening of regular trading hours for options on the affected series (as determined by the Corporation) on the next trading day for which such a price is reported by the reporting authority; or (iii) the price of the underlying currency at such other time, or representing a combination or average of prices or quotations at such time or times, and reported in such manner, as the Corporation deems appropriate. The provisions of Article VI, Section 11(c) of the By-Laws with respect to the vote required to constitute the determination of a panel, the voting rights of members of such panels, the ability of such panels to conduct their business by telephone or other designated means, and the ability of the Executive Chairman and Exchange representatives to designate others to serve in their place on such panels shall apply equally to panels convened pursuant to this Section. Every determination of a panel convened pursuant to this Section shall be within the sole discretion of such panel and shall be conclusive and binding on all investors and not subject to review.

(3) If a panel acting pursuant to subsection (2) above delays fixing an exercise settlement amount for a series of options past the last trading day before expiration of that series, the expiration date exercise procedures of Rules 805 and 2302 shall not apply to expiring cash-settled foreign currency options of the affected series, and each Clearing Member shall be deemed to have properly and irrevocably tendered to the Corporation prior to the Expiration Time an exercise notice with respect to each expiring cash-settled foreign currency option contract of the affected series carried in a long position in each account of the

Article XXIII – Reserved

Clearing Member if, and only if, the exercise settlement amount fixed by the panel for options of that series is \$1.00 or more. The exercise settlement date for such options shall be postponed until the business day next following the day on which the exercise settlement amount is fixed. Options for which the exercise settlement amount is fixed by the panel is less than \$1.00 shall be deemed to have expired unexercised.

(b) Unless the Corporation directs otherwise, the spot price for each trading day as initially reported by the reporting authority shall be conclusively presumed to be accurate and shall be deemed final for the purpose of calculating exercise settlement amounts, even if such price is subsequently revised or determined to have been inaccurate.

. . . Interpretations and Policies:

.01 The Corporation will not adjust officially reported spot prices for exercise settlement purposes, even if those prices are subsequently found to have been erroneous, except in extraordinary circumstances. Such circumstances might be found to exist where, for example, the spot price as initially reported is clearly erroneous and inconsistent with prices reported earlier in the same trading day, and a corrected spot price is promptly announced by the reporting authority. In no event will a completed settlement be adjusted due to errors in officially reported spot prices.

[Section 4 of this Article replaces Section 19 of Article VI of the By-Laws and supplements Rule 801.]

Adopted January 19, 1994. Amended November 1, 1994; December 13, 2006; July 2, 2012; June 17, 2013; March 6, 2014; November 12, 2018; February 15, 2019

Time for Determination of Spot Price

SECTION 5. The day and the time of day as of which and the method by which the spot price for any series of cash-settled foreign currency options is determined for purposes of calculating the exercise settlement amount for exercised option contracts shall be as specified by the Exchange on which such series is traded. Any change in the time or method for determining such spot price may be made applicable to contracts outstanding at the time of the change if the Exchange so specifies.

Adopted January 19, 1994. Amended April 4, 2007.

ARTICLE XXIII – RESERVED

Reserved.

* * * *

ARTICLE XXIV – BOUNDS

Introduction

By-Laws in this Article are applicable only to BOUNDS. The By-Laws in Articles I through XI are also applicable to such BOUNDS, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of BOUNDS by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I through XI, that fact is indicated in brackets following the By-Law in this Article.

Definitions

SECTION 1.

A. – B.

Reserved.

C.

Class of BOUNDS

(1) The term "class of BOUNDS" means all BOUNDS covering the same underlying security.

Closing Price

(2) The term "Closing Price" in respect of a class of BOUNDS means, subject to the provisions of Section 6 of this Article XXIV, the closing price for the underlying security on the primary market for such security on the business day preceding the expiration date; provided, however, that, if the Exchange(s) on which any series of BOUNDS is traded shall so specify prior to the opening of trading in such series, the Closing Price may be based upon an average of prices for the underlying security near the close of trading on such business day as determined in accordance with a procedure specified by such Exchange(s).

D.

Dividend Equivalent

(1) The term "dividend equivalent" in respect of a class of BOUNDS means the cash amount, securities or other property that a holder of a BOUND of that class is entitled to receive, and the writer of a BOUND of that class is required to pay or deliver, to reflect dividends and other distributions made by the issuer to holders of the underlying security, as determined by the Corporation in accordance with Chapter XXV of the Rules.

Ex Dividend Date

(2) The "ex dividend date" as used in respect of a dividend equivalent on a BOUNDS contract is the "ex" date for the corresponding dividend on the underlying security.

Dividend Payable Date

(3) The term "dividend payable date" in respect of BOUNDS shall mean the date on which the dividend equivalent is required to be paid by the writer of a BOUND to the Corporation and by the Corporation to the holder of a BOUND. The dividend payable date shall be, unless otherwise specified by the Corporation, the payable date for the dividend on the underlying security.

E.

Expiration Settlement Date

(1) The term "expiration settlement date" means the date specified in Rule 2502 on which settlement is to be made in respect of an expired series of BOUND contracts.

F. – R.

Reserved.

S.

Series of BOUNDS

(1) The term "series of BOUNDS" means all BOUNDS of the same class having identical terms, including the same strike price, expiration date and unit of trading.

Strike Price

(2) The term "strike price" means a stated price per share for the underlying security, which price shall be the basis for determining the manner of settlement for a BOUND at the specified expiration date. References to the term "exercise price" in the By-Laws and Rules, when applied to a BOUND, shall mean the strike price of the BOUND.

T.

Reserved.

U.

Underlying Security

(1) The term "underlying security" in respect of a BOUND means the security that is required to be delivered if the closing price of such security at expiration of the BOUND is less than or equal to the strike price of the BOUND.

Unit of Trading

(2) The term "unit of trading" in respect of a series of BOUNDS means the number of units of the underlying security that is covered by a single BOUND in such series of BOUNDS. In the absence of any such designation for a series of BOUNDS in which the underlying security is a common stock, the unit of trading shall be 100.

V.

Variable Terms

(1) The term "variable terms" in respect of a BOUND means the name of the underlying security, the strike price, and the expiration month of such BOUND.

[Section 1 of this Article adds certain new definitions relevant to BOUNDS and replaces (with respect to BOUNDS) certain other definitions found in Article I, Section 1 of the By-Laws.]

W. – Z.

Reserved.

Adopted August 26, 1996.

General Rights and Obligations of Holders and Writers of BOUNDS

SECTION 2. (a) Subject to the provisions of the By-Laws and Rules, the holder of a single BOUND has the right:

- (1) To receive dividend equivalents from the Corporation in accordance with the By-Laws and Rules;
- (2) If the Closing Price of the underlying security at expiration of the BOUND contract is less than or equal to the strike price of the BOUND, to receive from the Corporation the number of shares of the underlying security equal to the unit of trading; and
- (3) If the Closing Price of the underlying security at expiration of the BOUND contract is greater than the strike price of the BOUND, to receive from the Corporation an amount of cash equal to the strike price times the unit of trading.

(b) Subject to the provisions of the By-Laws and Rules, the writer of a single BOUND contract is obligated:

- (1) To pay dividend equivalents to the Corporation in accordance with the By-Laws and Rules;
- (2) If the Closing Price of the underlying security at expiration of the BOUND contract is less than or equal to the strike price of the BOUND, to deliver to the Corporation the number of shares of the underlying security equal to the unit of trading; and
- (3) If the Closing Price of the underlying security at expiration of the BOUND contract is greater than the strike price of the BOUND, to pay to the Corporation an amount of cash equal to the strike price times the unit of trading.

[Section 2 of this Article replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Adopted August 26, 1996.

Agreements of Writing Clearing Member in an Opening Writing Transaction

SECTION 3. The Writing Clearing Member in an opening writing transaction agrees with the Corporation that (a) upon the Corporation's acceptance of such transaction, the short position of the Clearing Member in the account in which the transaction is effected shall be created or increased, and subsequently maintained, in accordance with Section 13 of Article VI of the By-Laws, (b) so long as such short position is thereafter maintained, the Writing Clearing Member shall make all required margin payments in accordance with the Rules, and shall make all payments and deliveries of securities or other property in respect of dividend equivalents in accordance with the Rules, and (c) upon the expiration of the BOUNDS constituting such short position, the Clearing Member shall make all payments and deliveries of underlying securities when due in respect of such BOUNDS in accordance with the Rules.

[Section 3 of this Article replaces Section 14 of Article VI of the By-Laws.]

Adopted August 26, 1996.

Adjustments

SECTION 4. (a) The provisions of Section 11 and Section 11A of Article VI of the By-Laws, and the Interpretations and Policies following Section 11A, shall apply to BOUNDS, subject to the provisions of this Section 4. For that purpose, the term "option contract" or "option" as used therein shall mean a BOUND, the term "exercise price" shall mean the "strike price" of a BOUND

Article XXIV – BOUNDS

and the term "exercise settlement procedures" shall mean the expiration settlement procedures for BOUNDS. In addition to the actions provided for in paragraph (a) of Article VI, Section 11A, the expiration date of a BOUND contract may be adjusted as provided in paragraph (e) of this Section 4.

(b) Whenever an adjustment is considered in respect of options on an underlying security which is also an underlying security for a class of BOUNDS, the Corporation shall make a determination as to both the options and the BOUNDS; and it shall be the general rule that, if an adjustment is made in respect of the options, a corresponding adjustment will be made in respect of the BOUNDS. Notwithstanding the foregoing, an additional or different adjustment may be made in respect of BOUND contracts when the Corporation considers such additional or different adjustment to be necessary or appropriate to reflect differences between BOUNDS and options.

(c) Whenever additional shares or other property are distributed with respect to shares of an underlying security and the number of BOUND contracts outstanding is adjusted to reflect the number of shares distributed or the unit of trading for such BOUND contracts is adjusted to include the distributed property, then holders of such BOUNDS shall not be entitled to receive, and writers thereof shall not be obligated to deliver or pay, a dividend equivalent with respect to such distribution. If an adjustment panel determines that a non-cash distribution in respect of an underlying security, either because such property is non-transferable or for other reasons, is inappropriate for delivery in kind as a dividend equivalent or for inclusion in the unit of trading, then the adjustment panel may fix a cash value for such distributed property and declare a cash dividend equivalent in an amount equal to such value.

(d) If a distribution governed by the provisions of paragraph (e) of Section 11A of Article VI of the By-Laws is made with respect to shares of an underlying security, and BOUNDS of the affected class are adjusted by including the distributed property within the unit of trading covered by such BOUNDS, the "Closing Price" for such BOUND contract at expiration shall also include the value of the distributed property. If such distributed property is a security that is traded on a national securities exchange, then the value of the distributed security shall be determined in the same way that the Closing Price of any other underlying security would ordinarily be determined. In other cases, the Corporation shall use its discretion to determine how the current market value of the distributed property is to be fixed.

(e) When an underlying security is converted into a right to receive a fixed amount of cash, such as in a merger, the BOUNDS will ordinarily be adjusted to require payment at expiration of an amount per share equal to the lesser of the conversion price of the underlying security or the strike price of the BOUND. In addition, the expiration date of the BOUND will ordinarily be accelerated so as to cause the expiration settlement date to correspond to the date on which the conversion of the underlying security occurs.

(f) The foregoing are general rules, and the Corporation shall have the same discretionary authority with respect to the adjustment of BOUNDS as it has with respect to adjustments of option contracts under Article VI, Section 11 and Section 11A of the By-Laws.

[Section 4 of this Article supplements Section 11A of Article VI of the By-Laws.]

Adopted August 26, 1996. Amended December 23, 2005; November 12, 2018.

Shortage of Securities

Effective for Series of Options Opened for Trading Before September 16, 2000

SECTION 5. Section 19 of Article VI of the By-Laws, except for subparagraph (a)(2) thereof, shall apply to BOUNDS. For that purpose, the phrase "writers of outstanding call option contracts for

the affected security" shall mean writers of outstanding BOUND contracts that are required to make delivery of the affected security, references to "Clearing Members that are assigned exercise notices in respect of call option contracts" shall be deemed to be references to Clearing Members that are obligated to deliver such underlying security upon the expiration of such BOUNDS, "exercising Clearing Member" shall be deemed to mean the purchasing Clearing Member of an expired BOUND that is obligated to deliver the underlying security, references to "exercised" option contracts shall be deemed to be references to expired BOUNDS, other references to options or options contracts shall be deemed to be reference to BOUNDS, and references to settlement of exercises shall be deemed to be references to expiration settlement of BOUNDS.

Effective for Series of Options Opened for Trading After September 16, 2000

SECTION 5. Section 19 of Article VI of the By-Laws, except for subparagraph (a)(2) thereof, shall apply to BOUNDS. For that purpose, the word "exercised" shall mean "expired", references to call option contracts shall be deemed to be references to BOUNDS, and references to settlement of exercises shall be deemed to be references to expiration settlement of BOUNDS.

[Section 5 of this Article supplements Section 19 of Article VI of the By-Laws.]

Adopted August 26, 1996. Amended September 15, 2000.

Unavailability of Closing Price

SECTION 6. (a) If the underlying security was not traded in the primary market on the business day preceding the expiration date, or if the Corporation determines that a closing price for the underlying security is unreported or otherwise unavailable, then, in addition to any other actions that the Corporation may be entitled to take under the By-Laws and Rules, the Corporation shall be empowered to do any or all of the following with respect to any series of BOUNDS affected by such event ("affected series"):

(1) The Corporation may suspend the settlement obligations of Clearing Members with respect to BOUNDS contracts of the affected series. At such time as the Corporation determines that the required Closing Price is available or the Corporation has fixed the Closing Price pursuant to subparagraph (2) of this definition, the Corporation shall fix a new date for settlement of the BOUNDS contracts.

(2) The Corporation may fix the Closing Price for BOUNDS contracts of an affected series. The Closing Price shall be fixed by a panel consisting of two designated representatives of each Exchange on which the affected series is open for trading and the Executive Chairman. The panel shall fix the Closing Price based on its judgment as to what is appropriate for the protection of investors and the public interest, taking into account such factors as fairness to holders and writers of affected BOUNDS contracts, the maintenance of a fair and orderly market in such contracts, and consistency of interpretation and practice. Without limiting the generality of the foregoing, the panel may, if it deems such action appropriate for the protection of investors and the public interest, fix the Closing Price on the basis of the price at the close of trading on the last preceding trading day for which a Closing Price was reported by the primary market. The provisions of Article VI, Section 11(c) of the By-Laws with respect to the vote required to constitute the determination of a panel, the voting rights of members of such panels, the ability of such panels to conduct their business by telephone or other designated means, and the ability of the Executive Chairman and Exchange representatives to designate others to serve in their place on such panels shall apply equally to panels convened pursuant to this subparagraph. Every determination of a panel convened pursuant to this subparagraph shall be within the sole discretion of such panel and shall be conclusive and binding on all investors and not subject to review.

Article XXV – Reserved

(b) Unless the Corporation directs otherwise, the Closing Price for the underlying security as officially announced by the Corporation shall be conclusively presumed to be accurate and shall be deemed final for the purpose of determining settlement rights and obligations with respect to BOUNDS, even if such Closing Price is subsequently determined to have been inaccurate.

. . . Interpretations and Policies:

.01 The Corporation will not adjust an officially reported Closing Price for exercise settlement purposes, even if the Closing Price is subsequently found to have been erroneous, except in extraordinary circumstances. Such circumstances might be found to exist where, for example, the Closing Price as initially reported is clearly erroneous and inconsistent with prices reported earlier in the same trading day, and a corrected Closing Price is promptly announced by the vendor or market on which the security is traded. In no event with a complete settlement be adjusted due to errors in officially report Closing Prices.

Adopted August 26, 1996. Amended July 2, 2012; March 6, 2014; November 12, 2018; February 15, 2019.

ARTICLE XXV – RESERVED

Reserved.

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ARTICLE XXVI – PACKAGED SPREAD OPTIONS

Introduction

By-Laws in this Article are applicable only to packaged spread options. The By-Laws in Articles I-XI are also applicable to packaged spread options, in some cases supplemented by one or more By-Laws in this Article, except for By-Laws that have been replaced in respect of such options by one or more By-Laws in this Article and except where the context otherwise requires. Whenever a By-Law in this Article supplements or, for purposes of this Article, replaces one or more By-Laws in Articles I-XI, that fact is indicated in brackets following the By-Law in this Article.

Definitions

SECTION 1.

A.

Reserved.

B.

Base Exercise Price

(1) The term "base exercise price" in respect of a series of packaged spread options means the index value specified as such to the Corporation by the Exchange on which such series is to be traded.

C.

Class of Packaged Spread Options

(1) The term "class of options" in respect of packaged butterfly spread options means all such options having the same underlying index, and in respect of packaged vertical spread options means all such options of the same type and having the same underlying index.

Current Index Value

(2) The definition of "current index value" in respect of an index underlying a packaged spread option shall be as set forth in Section 1 of Article XVII of the By-Laws, interpreting the term "index option" as used therein to include a packaged spread option.

D.

Reserved.

E.

Exercise Settlement Amount

(1) The term "exercise settlement amount" in respect of a packaged spread option means the amount calculated in accordance with Rule 2705.

Expiration Date

(2) The term "expiration date" in respect of a series of packaged spread options expiring prior to February 1, 2015 means the Saturday following the third Friday of the month specified as the expiration month by the Exchange on which such series is listed at the time such series is opened for trading, and in respect of a series of packaged spread options expiring on or after February 1, 2015 means the third Friday of the expiration month, or if such Friday is a day on which the Exchange on which such series is listed is not open for business, the preceding day on which such Exchange is open for business.

F. – H.

Reserved.

I.

Index Group

(1) The definition of "index group" in Section 1 of Article XVII of the By-Laws shall apply to packaged spread options.

Index Multiplier

(2) The definition of "index multiplier" in Section 1 of Article XVII of the By-Laws shall apply to packaged spread options, interpreting the term "index option contract" as used therein to include a packaged spread option.

J. – O.

Reserved.

P.

Packaged Butterfly Spread Option

(1) The term "packaged butterfly spread option" means a cash-settled European-style option contract that has a specified underlying index, index multiplier, expiration date, base exercise price and spread interval and that synthetically creates for the holder thereof a spread position consisting of four European-style index options of the same class, and having the same expiration date, as follows: (i) two short options with an exercise price equal to the base exercise price of the packaged butterfly spread option, (ii) one long option with an exercise price equal to the base exercise price plus the spread interval, and (iii) one long option with an exercise price equal to the base exercise price minus the spread interval.

Packaged Spread Option

(2) The term "packaged spread option" means an option contract that is a packaged vertical spread option or a packaged butterfly spread option.

Packaged Vertical Spread Option

(3) The term "packaged vertical spread option" means a packaged vertical call spread option or a packaged vertical put spread option.

Packaged Vertical Call Spread Option

(4) The term "packaged vertical call spread option" means a cash-settled European-style option contract that has a specified underlying index, index multiplier, expiration date, base exercise price and spread interval and that synthetically creates for the holder thereof a spread position consisting of two European-style index call options of the same class, and having the same expiration date, as follows: (i) a long call with an exercise price equal to the base exercise price of the packaged vertical call spread option and (ii) a short call with an exercise price equal to the base exercise price plus the spread interval.

Packaged Vertical Put Spread Option

(5) The term "packaged vertical put spread option" means a cash-settled European-style option contract that has a specified underlying index, index multiplier, expiration date, base exercise price and spread interval and that synthetically creates for the holder thereof a spread position consisting of two European-style index put options of the same class, and having the same expiration date, as follows: (i) a long put with an exercise price equal to the base exercise price of the packaged vertical put spread option and (ii) a short put with an exercise price equal to the base exercise price minus the spread interval.

Premium

(6) The term “premium” in respect of a confirmed trade in packaged spread options means the price of each such option (expressed in points), as agreed upon by the purchaser and seller in such transaction, times the index multiplier and the number of options subject to the transaction.
Amended December 14, 2012.

Q.

Reserved.

R.

Reporting Authority

(1) The definition of "reporting authority" in Section 1 of Article XVII of the By-Laws shall apply to packaged spread options.

S.

Series of Packaged Spread Options

(1) The term "series" in respect of packaged butterfly spread options means all such option contracts of the same class, with the same index multiplier, expiration date, base exercise price and spread interval; and in respect of packaged vertical spread options means all such option contracts of the same class with the same index multiplier, expiration date, base exercise price and spread interval.

Spread Interval

(2) The term "spread interval" in respect of a series of packaged spread options means a value specified as such to the Corporation by the Exchange on which such series is to be traded.

T. – U.

Reserved.

V.

Variable Terms

(1) The term "variable terms" in respect of a packaged spread option contract means the name of the underlying index, the base exercise price, the spread interval, and the expiration date of such option contract.

W. – Z.

Reserved.

[Section 1 of this Article supplements Section 1 of Article I.]

Adopted September 24, 1997.

General Rights and Obligations of Holders and Writers of Packaged Spread Options

SECTION 2. (a) Subject to the provisions of the By-Laws and Rules, the holder of a single European-style packaged spread option has the right, on (and only on) the expiration date, expiring at the expiration time therefor on such date, to claim the right to receive the exercise settlement amount from the Corporation in accordance with Exchange Rules and the By-Laws and Rules.

Article XXVI – Packaged Spread Options

(b) The writer of a single European-style packaged spread option is obligated, upon the assignment to such writer of an exercise in respect of such packaged spread option, to pay to the Corporation the exercise settlement amount in accordance with Exchange Rules and the By-Laws and Rules.

[Section 2 of this Article replaces paragraphs (a) and (b) of Section 9 of Article VI of the By-Laws.]

Adopted September 24, 1997.

Adjustments

SECTION 3. Section 3 of Article XVII of the By-Laws shall apply to packaged spread options interpreting the term "index option" as used therein to include packaged spread options.

Adopted September 24, 1997.

Unavailability or Inaccuracy of Current Index Value

SECTION 4. Section 4 of Article XVII of the By-Laws shall apply to packaged index spread options interpreting the term "index option" as used therein to include packaged spread options and interpreting the term "current index value" to mean the settlement value for a series of packaged spread options that is to be furnished by the Exchange to the Corporation for purposes of calculating the exercise settlement amount as provided in the Rules.

Adopted September 24, 1997.

Time for Determination of Current Index Value

SECTION 5. Section 5(a) of Article XVII of the By-Laws shall apply to packaged index spread options interpreting the term "index option" as used therein to include packaged spread options.

Adopted September 24, 1997.

Last Modified: June 5, 2020