Citigroup Global Markets Inc.

INSTITUTIONAL FUTURES AND SWAP CLEARING ACCOUNT DISCLOSURE DOCUMENTS

PLEASE READ ALL OF THE DOCUMENTS CAREFULLY BEFORE SIGNING THE INSTITUTIONAL FUTURES AND SWAP CLEARING ACCOUNT AGREEMENT

This booklet contains the following:

- Combined Risk Disclosure Statement for Futures and Options
- Disclosure For Cleared Swaps Customers
- Disclosure of Futures Commission Merchant Material Conflicts Of Interest
- Cross Trade Consent
- Notice Regarding Average Price System (“APS”)
- Electronic Trading and Order Routing Systems Disclosure Statement
- Uniform Notification Regarding Access to Market Data
- Disclosure Statement on Futures Exchange Ownership Interests and Incentive Programs
- CME Disclosure on Payment for Order Flow
- Direct Order Transmittal Client Disclosure Statement
- Foreign Trader Disclosure Statement
- Notice to Clients Exchange For Related Positions
- Ice Clear Credit Subordination of Claims (for Credit Default Swaps)
- Position Limit and Large Open Position Reporting Requirements (for Options and Futures Traded On Hong Kong Exchange)
- A Guide to the Structure and Market Technology of the London Metal Exchange
- Notice to Ontario and Quebec Clients Pursuant to Exemptions from Derivatives Dealer Registration Granted Citigroup Global Markets Inc. by Ontario Securities Commission and Autorite Des Marches Financiers
- CME Disclosure to Disclosed Singapore Market Participants
- Negative Contract Prices Risk Disclosure
- Security Futures Risk Disclosure
- LCH Swapclear Client Clearing End-User Notice
- CFTC Customer Advisory: Understand the Risks of Virtual Currency Trading
- NFA Investor Advisory – Futures on Virtual Currencies Including Bitcoin
- European Markets Infrastructure Regulation (EMIR) Article 7c(1) Information Statement
- EMIR Article 38(8) Disclosure Statement
- EMIR Article 38(9) and E.U. Central Counterparty Recovery and Resolution Regulation (CCPR) Disclosure Statement

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COMBINED RISK DISCLOSURE STATEMENT FOR FUTURES AND OPTIONS

The risk of loss in trading commodity futures contracts can be substantial. You should, therefore, carefully consider whether such trading is suitable for you in light of your circumstances and financial resources. You should be aware of the following points:

FUTURES

(1) You may sustain a total loss of the funds that you deposit with your broker to establish or maintain a position in the commodity futures market, and you may incur losses beyond these amounts. If the market moves against your position, you may be called upon by your broker to deposit a substantial amount of additional margin funds, on short notice, in order to maintain your position. If you do not provide the required funds within the time required by your broker, your position may be liquidated at a loss, and you will be liable for any resulting deficit in your account.

(2) The funds you deposit with a futures commission merchant for trading futures positions are not protected by insurance in the event of the bankruptcy or insolvency of the futures commission merchant, or in the event your funds are misappropriated.

(3) The funds you deposit with a futures commission merchant for trading futures positions are not protected by the Securities Investor Protection Corporation even if the futures commission merchant is registered with the Securities and Exchange Commission as a broker or dealer.

(4) The funds you deposit with a futures commission merchant are generally not guaranteed or insured by a derivatives clearing organization in the event of the bankruptcy or insolvency of the futures commission merchant, or if the futures commission merchant is otherwise unable to refund your funds. Certain derivatives clearing organizations, however, may have programs that provide limited insurance to customers. You should inquire of your futures commission merchant whether your funds will be insured by a derivatives clearing organization and you should understand the benefits and limitations of such insurance programs.

(5) The funds you deposit with a futures commission merchant are not held by the futures commission merchant in a separate account for your individual benefit. Futures commission merchants commingle the funds received from customers in one or more accounts and you may be exposed to losses incurred by other customers if the futures commission merchant does not have sufficient capital to cover such other customers' trading losses.

(6) The funds you deposit with a futures commission merchant may be invested by the futures commission merchant in certain types of financial instruments that have been approved by the Commodity Futures Trading Commission (the "Commission") for the purpose of such investments. Permitted investments are listed in Commission Regulation 1.25 and include: U.S. government securities; municipal securities; money market mutual funds; and certain corporate notes and bonds. The futures commission merchant may retain the interest and other earnings realized from its investment of customer funds. You should be familiar with the types of financial instruments that a futures commission merchant may invest customer funds in.

(7) Futures commission merchants are permitted to deposit customer funds with affiliated entities, such as affiliated banks, securities brokers or dealers, or foreign brokers. You should inquire as to whether your futures commission merchant deposits funds with affiliates and assess whether such deposits by the futures commission merchant with its affiliates increases the risks to your funds.

(8) You should consult your futures commission merchant concerning the nature of the protections available to safeguard funds or property deposited for your account.

(9) Under certain market conditions, you may find it difficult or impossible to liquidate a position. This can occur, for example, when the market reaches a daily price fluctuation limit ("limit move").

(10) All futures positions involve risk, and a "spread" position may not be less risky than an outright "long" or "short" position.

(11) The high degree of leverage (gearing) that is often obtainable in futures trading because the small margin requirements can work against you as well as for you. Leverage (gearing) can lead to large losses as well as gains.

(12) In addition to the risks noted in the paragraphs enumerated above, you should be familiar with the futures commission merchant you select to entrust your funds for trading futures positions. The Commodity Futures Trading Commission requires each futures commission merchant to make publicly available on its Web site firm specific disclosures and financial information to assist you with your assessment and selection of a futures commission merchant. Information regarding this futures commission merchant may be obtained by visiting our Web site, Regulatory Disclosures | Citi ICG

OPTIONS

Variable degree of risk

(13) Transactions in options carry a high degree of risk. Purchasers and sellers of options should familiarize themselves with the type of option (i.e., put or call) which they contemplate trading and the associated risks. You should calculate the extent to which the value of the options must increase for your position to become profitable, taking into account the premium and all transaction costs.

(14) The purchaser of options may offset or exercise the options or allow the options to expire. The exercise of an option results either in a cash settlement or in the purchaser acquiring or delivering the underlying interest. If the option is on a future, the purchaser will acquire a futures position with associated liabilities for margin (see the section on Futures above). If the purchased options expire worthless, you will suffer a total loss of your investment which will consist of the option premium plus transaction costs. If you are contemplating purchasing deep-out-of-the-money options, you should be aware that the chance of such options becoming profitable is ordinarily remote.

(15) Selling ('writing' or 'granting') an option generally entails considerably greater risk than purchasing options. Although the premium received by the seller is fixed, the seller may sustain a loss well in excess of that amount. The seller will be liable for additional margin to maintain the position if the market moves unfavorably. The seller will also be exposed to the risk of the purchaser exercising the option and the seller will be obligated to either settle the option in cash or to acquire or deliver the underlying interest. If the option is on a future, the seller will acquire a position in a future with associated liabilities for margin (see the section on Futures above). If the position is 'covered' by the seller holding a corresponding position in the underlying interest or a future or another option, the risk may be reduced. If the option is not covered, the risk of loss can be unlimited.

(16) Certain exchanges in some jurisdictions permit deferred payment of the option premium, exposing the purchaser to liability for margin payments not exceeding the amount of the premium. The purchaser is still subject to the risk of losing the premium and transaction costs. When the option is exercised or expires, the purchaser is responsible for any unpaid premium outstanding at that time.

ADDITIONAL RISKS COMMON TO FUTURES AND OPTIONS

Terms and conditions of contracts

(17) You should ask the firm with which you deal about the terms and conditions of the specific futures or options which you are trading and associated obligations (e.g., the circumstances under which you may become obligated to make or take delivery of the underlying interest of a futures contract and, in respect of options, expiration dates and restrictions on the time for exercise). Under certain circumstances the specifications of outstanding contracts (including the exercise price of an option) may be modified by the exchange or clearing house to reflect changes in the underlying interest.

Suspension or restriction of trading and pricing relationships

(18) Market conditions (e.g., illiquidity) and/or the operation of the rules of certain markets (e.g., the suspension of trading in any contract or contract month because of price limits or 'circuit breakers') may increase the risk of loss by making it difficult or impossible to effect transactions or liquidate/offset positions. If you have sold options, this may increase the risk of loss.

(19) Further, normal pricing relationships between the underlying interest and the future, and the underlying interest and the option may not exist. This can occur when, for example, the futures contract underlying the option is subject to price limits while the option is not. The absence of an underlying reference price may make it difficult to judge 'fair' value.

Deposited cash and property

(20) You should familiarize yourself with the protections accorded money or other property you deposit for domestic and foreign transactions, particularly in the event of a firm insolvency or bankruptcy. The extent to which you may recover your money or property may be governed by specified legislation or local rules. In some jurisdictions, property which has been specifically identifiable as your own will be pro-rated in the same manner as cash for purposes of distribution in the event of a shortfall.

Commission and other charges

(21) Before you begin to trade, you should obtain a clear explanation of all commission, fees and other charges for which you will be liable. These charges will affect your net profit (if any) or increase your loss.

Currency risks

(22) The profit or loss in transactions in foreign currency-denominated contracts (whether they are traded in your own or another jurisdiction) will be affected by fluctuations in currency rates where there is a need to convert from the currency denomination of the contract to another currency.

Trading facilities

(23) Most open-outcry and electronic trading facilities are supported by computer-based component systems for the order-routing, execution, matching, registration or clearing of trades. As with all facilities and systems, they are vulnerable to temporary disruption or failure. Your ability to recover certain losses may be subject to limits on liability imposed by the system provider, the market, the clearing house and/or member firms. Such limits may vary; you should ask the firm with which you deal for details in this respect.

Electronic trading

(24) Trading on an electronic trading system may differ not only from trading in an open-outcry market but also from trading on other electronic trading systems. If you undertake transactions on an electronic trading system, you will be exposed to risk associated with the system including the failure of hardware and software. The result of any system failure may be that your order is either not executed according to your instructions or is not executed at all.

Off-exchange transactions

(25) In some jurisdictions, and only then in restricted circumstances, firms are permitted to effect off-exchange transactions. The firm with which you deal may be acting as your counterparty to the transaction. It may be difficult or impossible to liquidate an existing position, to assess the value, to determine a fair price or to assess the exposure to risk. For these reasons, these transactions may involve increased risks. Off-exchange transactions may be less regulated or subject to a separate regulatory regime. Before you undertake such transactions, you should familiarize yourself with applicable rules and attendant risks.

ALL OF THE POINTS NOTED ABOVE APPLY TO ALL FUTURES TRADING WHETHER FOREIGN OR DOMESTIC. IN ADDITION, IF YOU ARE CONTEMPLATING TRADING FOREIGN FUTURES OR OPTIONS CONTRACTS, YOU SHOULD BE AWARE OF THE FOLLOWING ADDITIONAL RISKS:

(26) Foreign futures transactions involve executing and clearing trades on a foreign exchange. This is the case even if the foreign exchange is formally “linked” to a domestic exchange, whereby a trade executed on one exchange liquidates or establishes a position on the other exchange. No domestic organization regulates the activities of a foreign exchange, including the execution, delivery, and clearing of transactions on such an exchange, and no domestic regulator has the power to compel enforcement of the rules of the foreign exchange or the laws of the foreign country. Moreover, such laws or regulations will vary depending on the foreign country in which the transaction occurs. For these reasons, customers who trade on foreign exchanges may not be afforded certain of the protections which apply to domestic transactions, including the right to use domestic alternative dispute resolution procedures. In particular, funds received from customers to margin foreign futures transactions may not be provided the same protections as funds received to margin futures transactions on domestic exchanges. Before you trade, you should familiarize yourself with the foreign rules which will apply to your particular transaction.

(27) Finally, you should be aware that the price of any foreign futures or option contract and, therefore, the potential profit and loss resulting therefrom may be affected by any fluctuation in the foreign exchange rate between the time the order is placed and the foreign futures contract is liquidated or the foreign option contract is liquidated or exercised.

THIS BRIEF STATEMENT CANNOT, OF COURSE, DISCLOSE ALL THE RISKS AND OTHER ASPECTS OF THE COMMODITY MARKETS. SHOULD YOU REQUIRE ADDITIONAL INFORMATION OR HAVE ANY QUESTIONS CONCERNING THE ABOVE, PLEASE CONTACT YOUR CITI REPRESENTATIVE.

DISCLOSURE FOR CLEARED SWAPS CUSTOMERS

Default of a Non-Clearing Futures Commission Merchant

Citigroup Global Markets Inc. (“Citi”) may not be a clearing member of the derivatives clearing organization that you have selected to clear the Cleared Swaps that you may enter into. In such circumstances, Citi will enter into an agreement with a clearing member of such derivatives clearing organization that is registered with the CFTC as a futures commission merchant (“Clearing Broker”), pursuant to which Citi will maintain an omnibus account of behalf of all of its Cleared Swaps Customers (“Omnibus Account”).

In compliance with CFTC Rule 22.16, we are advising you that, in the event of Citi’s default, the agreement between the Clearing Broker and Citi provides that Clearing Broker, in its sole discretion, may terminate, liquidate and/or accelerate any and all Cleared Swaps, close out the Omnibus Account or any open positions of Citi in whole or in part, cancel any or all pending orders, and/or terminate Citi’s right to trade in the Omnibus Account. Further, the Clearing Broker may, but is not required to, transfer all non-defaulting customer positions to another futures commission merchant. Any such action that Clearing Broker may take will be in accordance with Applicable Law, including but not limited to the CFTC’s rules governing the protection of Cleared Swaps Customer Collateral. Therefore, in the event Citi’s default is caused by the default of one or more customers that are part of the Omnibus Account, Clearing Broker may not use the funds of non-defaulting customers to satisfy the obligations of the defaulting customers.

Default of a Clearing Futures Commission Merchant

Each derivatives clearing organization is required to have rules that govern the use of Cleared Swaps Customer Collateral, and the transfer, neutralization of risks, and liquidation of Cleared Swaps in the event of a default by a clearing futures commission merchant relating to a Cleared Swaps Customer Account.

In further compliance with CFTC Rule 22.16 (17 CFR 22.16), we are providing you with the URL links to the rules of the relevant derivatives clearing organizations. Please note that such rules and the URL links are susceptible to change. If you encounter difficulty accessing these rules, please contact your Citi Representative for an updated URL link.

http://www.cmegroup.com/rulebook/CME/index.html
https://www.eurex.com/ec-en/rules-regs/rules-and-regulations
https://www.theice.com/publicdocs/clear_credit/ICE_Clear_Credit_Rules.pdf
https://www.lch.com/resources/rules-and-regulations

THE INCLUSION OF A DERIVATIVES CLEARING ORGANIZATION ON THIS LIST DOES NOT MEAN THAT YOUR ACCOUNT IS ELIGIBLE TO CLEAR ANY OR ALL PRODUCTS ON THAT DERIVATIVES CLEARING ORGANIZATION. SHOULD YOU REQUIRE ADDITIONAL INFORMATION OR HAVE ANY QUESTIONS CONCERNING THE ABOVE, PLEASE CONTACT YOUR CITI REPRESENTATIVE.

DISCLOSURE OF
FUTURES COMMISSION MERCHANT
MATERIAL CONFLICTS OF INTEREST

The purpose of this document is to provide you with information about some of the material conflicts of interest that may arise between you and Citigroup Global Markets Inc. ("Citi") in connection with Citi performing services for you with respect to futures, options on futures, swaps (as defined in the Commodity Exchange Act), forwards or other commodity derivatives ("Contracts"). Conflicts of interests can arise in particular when Citi has an economic or other incentive to act, or persuade you to act, in a way that favors Citi or its affiliates.

Under applicable law, including regulations of the Commodity Futures Trading Commission ("CFTC"), not all swaps are required to be executed on an exchange or swap execution facility (each, a "Trading Facility"), even if a Trading Facility lists the swap for trading. In such circumstances, it may be financially advantageous for Citi or its affiliate to execute a swap with you bilaterally in the over-the-counter market rather than on a Trading Facility and, to the extent permitted by applicable law, we may have an incentive to persuade you to execute your swap bilaterally.

Applicable law may permit you to choose the CFTC-registered derivatives clearing organization ("Clearing House") to which you submit a swap for clearing. You should be aware that Citi may not be a member of, or may not otherwise be able to submit your swap to, the Clearing House of your choice. Citi consequently has an incentive to persuade you to use a Clearing House of which Citi or its affiliate is a member.

You also should be aware that Citi or its affiliate may own stock in, or have some other form of ownership interest in, one or more U.S. or foreign Trading Facilities or Clearing Houses where your transactions in Contracts may be executed and/or cleared. As a result, Citi or its affiliate may receive financial or other benefits related to its ownership interest when Contracts are executed on a given Trading Facility or cleared through a given Clearing House, and Citi would, in such circumstances, have an incentive to cause Contracts to be executed on that Trading Facility or cleared by that Clearing House. In addition, employees and officers of Citi or its affiliate may also serve on the board of directors or on one or more committees of a Trading Facility or Clearing House.

In addition, Trading Facilities and Clearing Houses may from time to time have in place other arrangements that provide their members or participants with volume, market-making or other discounts or credits, may call for members or participants to pre-pay fees based on volume thresholds, or may provide other incentive or arrangements that are intended to encourage market participants to trade on or direct trades to that Trading Facility or Clearing House. Citi or its affiliate may participate in and obtain financial benefits from such incentive programs.

When we provide execution services to you (either in conjunction with clearing services or in an execution-only capacity), we may direct orders to affiliated or unaffiliated market-makers, other executing firms, individual brokers or brokerage groups for execution. When such affiliated or unaffiliated parties are used, they may, where permitted, agree to price concessions, volume discounts or refunds, rebates or similar payments in return for receiving such business. Likewise, where permitted by law and the rules of the applicable Trading Facility, we may solicit a counterparty to trade opposite your order or enter into transactions for its own account or the account of other counterparties that may, at times, be adverse to your interests in a Contract. In such circumstances, that counterparty may make payments and/or pay a commission to Citi in connection with that transaction. The results of your transactions may differ significantly from the results achieved by us for our own account, our affiliates, or for other customers.

In addition, where permitted by applicable law (including, where applicable, the rules of the applicable Trading Facility), Citi, its directors, officers, employees and affiliates may act on the other side of your order or transaction by the purchase or sale for an account, or the execution of a transaction with a counterparty, in which Citi or a person affiliated with Citi has a direct or indirect interest, or may effect any such order with a counterparty that provides Citi or its affiliates with discounts related to fees for Contracts or other products. In cases where we have offered you a discounted commission or clearing fee for Contracts executed through Citi as agent or with Citi or its affiliate acting as counterparty, Citi or its affiliate may be doing so because of the enhanced profit potential resulting from acting as executing broker or counterparty.

Citi or its affiliate may act as, among other things, an investor, research provider, placement agent, underwriter, distributor, remarketing agent, structurer, securitizer, lender, investment manager, investment adviser, commodity trading advisor, municipal advisor, market maker, trader, prime broker or clearing broker. In those and other capacities, Citi, its directors, officers, employees and affiliates may take or hold positions in, or advise other customers and counterparties concerning, or publish research or express a view with respect to, a Contract or a related financial instrument that may be the subject of advice from us to you. Any such positions and other advice may not be consistent with, or may be contrary to, your interests or to positions which are the subject of advice previously provided by Citi or its affiliate to you, and unless otherwise disclosed in writing, we are not necessarily acting in your best interest and are not assessing the suitability for you of any Contract or related financial instrument. Acting in one or more of the capacities noted above may give Citi or its affiliate access to information relating to markets, investments and products. As a result, Citi or its affiliate may be in possession of information which, if known to you, might cause you to seek to dispose of, retain or increase your position in one or more Contracts or other financial instruments. Citi and its affiliate will be under no duty to make any such information available to you, except to the extent we have agreed in writing or as may be required under applicable law.

CROSS TRADE CONSENT

Citigroup Global Markets Inc. (“Citi”), its officers, directors employees or affiliates or other customers of Citi or of the servicing floor broker may be from time to time on the opposite side of orders for physicals or for purchase or sale of futures contracts and option contracts placed for your Account in conformity with regulations of the Commodity Futures Trading Commission and the by-laws, rules and regulations of the applicable market (and its clearing organization, if any) on which such order is executed.

NOTICE REGARDING AVERAGE PRICE SYSTEM ("APS")

You should be aware that certain US and non-US exchanges, including the CME Group and ICE, may now, or in the future, allow Citi to confirm trades executed on such exchanges to some or all of their customers on an average price basis, regardless of whether the exchanges have average price systems of their own. Average prices that are not calculated by an exchange system will be calculated by us. In either case, trades that are confirmed to you at average prices will be designated as such on your confirmation and monthly statements.

APS enables a clearing firm to confirm to customers an average price when multiple execution prices are received on an order or series of orders for the same accounts executed during the same trading day. For example, if an order transmitted by an account manager on behalf of several customers is executed at more than one price, those prices may be averaged and the average may be confirmed to each customer. Customers may choose whether to use APS, and may request that APS be used for discretionary or non-discretionary accounts. If you choose to use APS, you must request Citi to set up an APS account.

Each order subject to APS must be for the same product. An APS order may be used for futures, options or combination transactions. An APS order for futures must be for the same product and expiration month, and for options, it must be for the same product, expiration month, put/call and strike price.

An APS indicator will appear on the confirmation and monthly statement for a customer whose positions have been confirmed at an average price. This indicator will notify the customer that the confirmed price represents an average price.

The average price is not the actual execution price. APS will calculate the same price for all customers that participate in the order.

APS may be used when a series of orders are entered for a group of accounts. For example, a bunched APS order (an order that represents more than one customer account) executed at 10:00 a.m. could be averaged with a bunched APS order executed at 12:00 p.m. provided that each of the bunched orders is for the same accounts. In addition, market orders and limit orders may be averaged, as may limit orders at different prices, provided that each order is for the same accounts.

The following scenario exemplifies what occurs if an APS order is only partially executed. At 10:00 a.m. an APS order to buy 100 Dec S&P 500 futures contracts is transmitted at a limit price of 376.00; 50 are executed at 376.00, and the balance is not filled. At 12:00 p.m. an APS order to buy 100 Dec S&P 500 futures contracts is transmitted at a limit price of 375.00; 50 are executed at 375.00, and the balance is not filled. Both orders are part of a series for the same group of accounts. In this example, the two prices will be averaged. If the order was placed for more than one account, the account controller must rely on pre-existing allocation procedures to determine the proportions in which each account will share in the partial fill.

Upon receipt of an execution or match at multiple prices for an APS order, the weighted mathematical average will be computed by multiplying the number of contracts purchased or sold at each execution price by that price, adding the results together and dividing by the total number of contracts. An average price for a series of orders will be computed based on the average prices of each order in that series. The actual average price or the average price rounded to the next price increment may be confirmed to customers. If a clearing member confirms the rounded average price, the clearing member must round the average price up to the next price increment for a buy order and down to the next price increment for a sell order. The rounding process will create a cash residual of the difference between the actual average price and the rounded average price that must be paid to the customer.

APS may produce prices that do not conform to whole cent increments. In such cases, any amounts less than one cent may be retained by the clearing member. For example, if the total residual to be paid to a customer on a rounded average price for 10 contracts is $83.333333, the clearing member may pay $83.33 to the customer.

If you would like more information on APS orders, please contact your Agent or the Citi Representative.

ELECTRONIC TRADING AND ORDER ROUTING SYSTEMS DISCLOSURE STATEMENT[1]

Electronic trading and order routing systems differ from traditional open outcry pit trading and manual order routing methods. Transactions using an electronic system are subject to the rules and regulations of the exchange(s) offering the system and/or listing the contract. Before you engage in transactions using an electronic system, you should carefully review the rules and regulations of the exchange(s) offering the system and/or listing contracts you intend to trade.

Differences among Electronic Trading Systems

Trading or routing orders through electronic systems vary widely among the different electronic systems. You should consult the rules and regulations of the exchange offering the electronic system and/or listing the contract traded or order routed to understand, among other things, in the case of trading systems, the system's order matching procedure, opening and closing procedures and prices, error trade policies, and trading limitations or requirements; and in the case of all systems, qualifications for access and grounds for termination and limitations on the types of orders that may be entered into the system. Each of these matters may present different risk factors with respect to trading on or using a particular system. Each system may also present risks related to system access, varying response times, and security. In the case of internet-based systems, there may be additional types of risks related to system access, varying response times and security, as well as risks related to service providers and the receipt and monitoring of electronic mail.

Risk Associated with System Failure

Trading through an electronic trading or order routing system exposes you to risks associated with system or component failure. In the event of system or component failure, it is possible that, for a certain time period, you may not be able to enter new orders, execute existing orders, or modify or cancel orders that were previously entered. System or component failure may also result in loss of orders or order priority.

Simultaneous Open Outcry Pit and Electronic Trading

Some contracts offered on an electronic trading system may be traded electronically and through open outcry during the same trading hours. You should review the rules and regulations of the exchange offering the system and/or listing the contract to determine how orders that do not designate a particular process will be executed.

Limitation of Liability

Exchanges offering an electronic trading or order routing system and/or listing the contract may have adopted rules to limit their liability, the liability of Futures Commission Merchants, and software and communication system vendors and the amount of damages you may collect for system failure and delays. These limitations of liability provisions vary among the exchanges. You should consult the rules and regulations of the relevant exchange(s) in order to understand these liability limitations.[1]

[1] Each exchange's relevant rules are available upon request from the industry professional with whom you have an account. Some exchanges' relevant rules also are available from the exchange's internet home page.

UNIFORM NOTIFICATION REGARDING ACCESS TO MARKET DATA

As a market user you may obtain access to Market Data available through an electronic trading system, software or device that is provided or made available to you by a broker or an affiliate of such. Market Data may include, with respect to products of an exchange ("Exchange") or the products of third party participating exchanges that are traded on or through the Exchange's electronic trading platform ("Participating Exchange"), but is not limited to, "real time" or delayed market prices, opening and closing prices and ranges, high-low prices, settlement prices, estimated and actual volume information, bids or offers and the applicable sizes and numbers of such bids or offers.

You are hereby notified that Market Data constitutes valuable confidential information that is the exclusive proprietary property of Citi and/or the applicable exchange, and is not within the public domain. Such Market Data may only be used for your internal use in connection with trading on the Exchange or Participating Exchange. You may not, without the written authorization of the applicable Exchange or Participating Exchange, redistribute, sell, license, retransmit or otherwise provide Market Data, internally or externally and in any format by electronic or other means, including, but not limited to the Internet. Further, you may not, without the written authorization of Citi and the applicable exchange, use Market Data for purposes of determining any price, including any settlement price, for any futures product, options on futures product, or other derivatives instrument traded on any exchange other than an Exchange or a Participating Exchange; or in constructing or calculating the value of any index or indexed product. Additionally, you agree you will not, and will not permit any other individual or entity to, (i) use Market Data in any way so as to compete with an Exchange or to assist or allow a third party to compete with an Exchange; or (ii) use that portion of Market Data which relates to any product of a Participating Exchange in any way so as to compete with that Participating Exchange or to assist or allow a third party to compete with such Participating Exchange.

You must provide upon our request, or upon request of the applicable Exchange or Participating Exchange, information demonstrating your use of the Market Data in accordance with this Notification. Citi and each applicable Exchange or Participating Exchange reserves the right to terminate a market user's access to Market Data for any reason. You also agree that you will cooperate with an Exchange or Participating Exchange and permit an Exchange or Participating Exchange reasonable access to your premises should an Exchange or Participating Exchange wish to conduct an audit or review connected to the distribution of Market Data, and shall comply with all of such Exchange's most current policies.

NEITHER CITI NOR ANY EXCHANGE, PARTICIPATING EXCHANGE, NOR THE BROKER, NOR THEIR RESPECTIVE MEMBERS, SHAREHOLDERS, DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS, GUARANTEE THE TIMELINESS, SEQUENCE, ACCURACY OR COMPLETENESS OF THE DESIGNATED MARKET DATA, MARKET INFORMATION OR OTHER INFORMATION FURNISHED NOR THAT THE MARKET DATA OR SUCH INFORMATION HAVE BEEN VERIFIED. YOU AGREE THAT THE MARKET DATA AND OTHER INFORMATION PROVIDED IS FOR INFORMATION PURPOSES ONLY AND IS NOT INTENDED AS AN OFFER OR SOLICITATION WITH RESPECT TO THE PURCHASE OR SALE OF ANY SECURITY OR COMMODITY.

NEITHER CITI NOR AN EXCHANGE, ANY PARTICIPATING EXCHANGE, NOR THE BROKER NOR THEIR RESPECTIVE MEMBERS, SHAREHOLDERS, DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS, SHALL BE LIABLE TO YOU OR TO ANY OTHER PERSON, FIRM OR CORPORATION WHATSOEVER FOR ANY LOSSES, DAMAGES, CLAIMS, PENALTIES, COSTS OR EXPENSES (INCLUDING LOST PROFITS) ARISING OUT OF OR RELATING TO THE MARKET DATA IN ANY WAY, INCLUDING BUT NOT LIMITED TO ANY DELAY, INACCURACIES, ERRORS OR OMISSIONS IN THE MARKET DATA OR IN THE TRANSMISSION THEREOF OR FOR NONPERFORMANCE, DISCONTINUANCE, TERMINATION OR INTERRUPTION OF SERVICE OR FOR ANY DAMAGES ARISING THEREFROM OR OCCASIONED THEREBY, DUE TO ANY CAUSE WHATSOEVER, WHETHER OR NOT RESULTING FROM NEGLIGENCE ON THEIR PART. IF THE FOREGOING DISCLAIMER AND WAIVER OF LIABILITY SHOULD BE DEEMED INVALID OR INEFFECTIVE, NEITHER CITI NOR AN EXCHANGE, NOR ANY PARTICIPATING EXCHANGE, NOR THE BROKER, NOR THEIR RESPECTIVE SHAREHOLDERS, MEMBERS, DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS SHALL BE LIABLE IN ANY EVENT, INCLUDING THEIR OWN NEGLIGENCE, BEYOND THE ACTUAL AMOUNT OF LOSS OR DAMAGE, OR THE AMOUNT OF THE MONTHLY FEE PAID BY YOU TO BROKER, WHICHEVER IS LESS. YOU AGREE THAT NEITHER CITI NOR AN EXCHANGE, NOR ANY PARTICIPATING EXCHANGE, NOR THE BROKER NOR THEIR RESPECTIVE SHAREHOLDERS, MEMBERS, DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS, SHALL BE LIABLE TO YOU OR TO ANY OTHER PERSON, FIRM OR CORPORATION WHATSOEVER FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST PROFITS, COSTS OF DELAY, OR COSTS OF LOST OR DAMAGED DATA.

DISCLOSURE STATEMENT ON FUTURES EXCHANGE OWNERSHIP INTERESTS AND INCENTIVE PROGRAMS

You should be aware that we or one or more of our affiliates may own stock of, or have some other form of ownership interest in, one or more U.S. or foreign exchanges and clearing houses that you may trade on, or that may clear your trades. As a result, you should be aware that we or our affiliate might receive financial benefits related to our ownership interest when trades are executed on such an exchange or cleared at such a clearing house.

In addition, futures exchanges from time to time have in place other arrangements that may provide members with volume or market making discounts or credits, may call for participating members to pre-pay fees based on volume thresholds or may provide other incentive or arrangements that are intended to encourage market participants to trade on or direct trades to that exchange. We or one or more of our affiliates may participate in and obtain financial benefits from such an incentive program.

You should contact us directly if you would like to know whether we have an ownership interest in a particular exchange or clearing house, or whether we participate in any incentive program on a particular exchange or clearing house. You may also contact any particular futures exchange directly to ask if it has any such incentive program for member firms.

CME DISCLOSURE ON PAYMENT FOR ORDER FLOW

When firms provide execution services to customers, either in conjunction with clearing services or in an execution only capacity, they may, in some circumstances, direct orders to unaffiliated market makers, other executing firms, individual floor brokers or floor brokerage groups for execution. When such unaffiliated parties are used, they may, where permitted, agree to price concessions, volume discounts or refunds, rebates or similar payments in return for receiving such business. Likewise, on occasion, in connection with exchanges that permit pre-execution discussions and “off-floor” transactions such as block trading, exchanges of physicals, swaps or options for futures or equivalent transactions, a counterparty solicited to trade opposite customers of an executing firm may make payments described above and/or pay a commission to the executing firm in connection with that transaction. This could be viewed as an apparent conflict of interest. In order to determine whether transactions executed for your account are subject to the above circumstances, please contact your executing firm account representative.

DIRECT ORDER TRANSMITTAL CLIENT DISCLOSURE STATEMENT

This statement applies to the ability of authorized customers of Citi to place orders for foreign futures and options transactions directly with non-US entities (each, an “Executing Firm”) that execute transactions on behalf of Citi’s customer omnibus accounts.

Please be aware of the following should you be permitted to place the type of orders specified above:

- The orders you place with an Executing Firm are for Citi’s customer omnibus account maintained with a foreign clearing firm. Consequently, Citi may limit or otherwise condition the orders you place with the Executing Firm.

- You should be aware of the relationship of the Executing Firm and Citi. Citi may not be responsible for the acts, omissions, or errors of the Executing Firm, or its representatives, with which you place your orders. In addition, the Executing Firm may not be affiliated with Citi. If you choose to place orders directly with an Executing Firm, you may be doing so at your own risk.

- It is your responsibility to inquire about the applicable laws and regulations that govern the foreign exchanges on which transactions will be executed on your behalf. Any orders placed by you for execution on that exchange will be subject to such rules and regulations, its customs and usages, as well as any local laws that may govern transactions on that exchange. These laws, rules, regulations, customs and usages may offer different or diminished protection from those that govern transactions on US exchanges. In particular, funds received from customers to margin foreign futures transactions may not be provided the same protections as funds received to margin futures transactions on domestic exchanges. Before you trade, you should familiarize yourself with the foreign rules which will apply to your particular transaction. United States regulatory authorities may be unable to compel the enforcement of the rules of regulatory authorities or markets in non-US jurisdictions where transactions may be effected.

- It is your responsibility to determine whether the Executing Firm has consented to the jurisdiction of the courts in the United States. In general, neither the Executing Firm nor any individuals associated with the Executing Firm will be registered in any capacity with the Commodity Futures Trading Commission. Similarly, your contacts with the Executing Firm may not be sufficient to subject the Executing Firm to the jurisdiction of courts in the United States in the absence of the Executing Firm's consent. Accordingly, neither the courts of the United States nor the Commission's reparations program will be available as a forum for resolution of any disagreements you may have with the Executing Firm, and your recourse may be limited to actions outside the United States.

Unless you object within five (5) days by giving notice as provided in your customer agreement after receipt of this disclosure, Citi will assume your consent to the aforementioned conditions. [2]

[2] This disclosure statement is relevant only if Citi has granted the direct order transmittal authorization described above to you. Pursuant to CFTC Regulation 30.12, you are eligible to receive such authorization only if (1) you are an eligible swap participant, as defined in former CFTC Regulation 35.1(b)(2), or (2) your decisions to invest in foreign futures or foreign options transactions are made by a commodity trading advisor (“CTA”) that is subject to regulation under the Commodity Exchange Act or by a foreign person performing a similar role or function subject as such to foreign regulation, and certain other conditions are met.

FOREIGN TRADER DISCLOSURE STATEMENT

In accordance with Rules 15.05 and 21.03 of the Commodity Futures Trading Commission ("CFTC"), 17 C.F.R. §§15.05 and 21.03, we are considered to be your agent for purposes of accepting delivery and service of communications from or on behalf of the CFTC regarding any commodity futures contracts or commodity option contracts which are or have been maintained in your account(s) with us. In the event that you are acting as agent or broker for any other person(s), we are also considered to be their agent, and the agent of any person(s) for whom they may be acting as agent or broker, for purposes of accepting delivery and service of such communications. Service or delivery to us of any communication issued by or on behalf of the CFTC (including any summons, complaint, order, subpoena, special call, request for information, notice, correspondence or other written document) will be considered valid and effective service or delivery upon you or any person for whom you may be acting, directly or indirectly, as agent or broker.

You should be aware that Rule 15.05 also provides that you may designate an agent other than Citigroup Global Markets Inc. Any such alternative designation of agency must be evidenced by a written agency agreement which you must furnish to us and which we, in turn, must forward to the CFTC. If you wish to designate an agent other than us, please contact us in writing. You should consult 17 C.FR. § 15.05 for a more complete explanation of the foregoing.

Upon a determination by the CFTC that information concerning your account(s) with us may be relevant in enabling the CFTC to determine whether the threat of a market manipulation, corner, squeeze, or other market disorder exists, the CFTC may issue a call for specific information from us or from you. In the event that the CFTC directs a call for information to us, we must provide the information requested within the time specified by the CFTC. If the CFTC directs a call for information to you through us as your agent, we must promptly transmit the call to you, and you must provide the information requested within the time specified by the CFTC. If any call by the CFTC for information regarding your account(s) with us is not met, the CFTC has authority to restrict such account(s) to trading for liquidation only. You have the right to a hearing before the CFTC to contest any call for information concerning your account(s) with us, but your request for a hearing will not suspend the CFTC's call for information unless the CFTC modifies or withdraws the call. Please consult 17 C.F.R. §21.03 for a more complete description of the foregoing (including the type of information you may be required to provide).

Certain additional regulations may affect you. Part 17 of the CFTC Regulations, 17 C.F.R. Part 17, requires each futures commission merchant and foreign broker to submit a report to the CFTC with respect to each account carried by such futures commission merchant or foreign broker which contains a reportable futures position. (Specific reportable position levels for all futures contracts traded on U.S. exchanges are established in Rule 15.03.) In addition, Part 18 of the CFTC Regulations, 17 C.F.R. Part 18, requires all traders (including foreign traders) who own or control a reportable futures or options position and who have received a special call from the CFTC to file a Large Trader Reporting Form (Form 103) with the CFTC within one day after the special call upon such trader by the CFTC. Please consult 17 C.F.R. Parts 17 and 18 for more complete information with respect to the foregoing.

NOTICE TO CLIENTS
EXCHANGE FOR RELATED POSITIONS [3]

Certain futures exchanges permit eligible customers to enter into privately-negotiated off-exchange futures or option on futures transactions (collectively, "**futures**") known as exchange for related positions ("**EFRP**"). An EFRP involves the simultaneous execution of a futures transaction and an equivalent related position. A "related position" is defined to mean the cash commodity underlying the exchange contract or a by-product, a related product or an over-the-counter ("**OTC**") derivative instrument of such commodity that has a reasonable degree of price correlation to the commodity underlying the exchange contract.

Types of EFRPs include:

- Exchange of Futures for Physical ("**EFP**") or Against Actual ("**AA**") – the simultaneous execution of a futures contract and a corresponding physical transaction or a forward contract on a physical transaction.
- Exchange of Futures for Risk ("**EFR**") or Exchange of Futures for Swap ("**EFS**") – the simultaneous execution of a futures contract and a corresponding OTC swap or other OTC derivative transaction.
- Exchange of Option for Option ("**EOO**") – the simultaneous execution of an option contract and a corresponding transaction in an OTC option or other OTC instrument with similar characteristics.

EFRP transactions are subject to Applicable Law, as defined in the agreement between a futures commission merchant ("**FCM**") and its customers. Customers that engage in EFRP transactions are responsible for reviewing, understanding and complying with the provisions of Applicable Law governing EFRP transactions, including, but not limited to, Rule 538 of the CME Group (CME, CBOT and NYMEX) and Rule 4.06 of ICE Futures US, and the frequently asked questions and other guidance that each exchange has issued with respect thereto.[4]

Customers are subject to the jurisdiction of the exchange through which the EFRP transaction is entered into and, therefore, may be required to produce records and otherwise cooperate in any inquiry that the exchange may undertake with respect to the EFRP transaction. Moreover, customers may be sanctioned by the exchange if an EFRP transaction does not comply with the requirements of applicable exchange rules and guidance. For this reason, customers are encouraged to review these requirements with any employees that may engage in EFRP transactions on their behalf.

Certain common requirements of the rules and guidance issued by CME Group and ICE Futures US are summarized below. However, this summary is not a substitute for the customer's obligation to review and understand such rules and related guidance in their entirety.

- The futures contract and the related position must be effected for the account of the same beneficial owner. If the customer is the seller of (or the holder of the short market exposure associated with) the related position, the customer must be the buyer of the futures contract(s) being exchanged in the EFRP; conversely, if the customer is the buyer of (or the holder of the long market exposure associated with) the related position, the customer must be the seller of the futures contract(s) being exchanged in the EFRP.
- The opposing accounts to an EFRP transaction must be: (a) independently controlled accounts with different beneficial ownership; (b) independently controlled accounts of separate legal entities with common beneficial ownership; or (c) independently controlled accounts of the same legal entity, *provided* the account controllers operate in separate business units. For EFRP transactions between accounts with

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[3] This notice is provided for informational purposes only. Although care has been taken to assure that the content is accurate as of the date of publication, this Notice is not intended to constitute legal or regulatory advice. Citi specifically disclaims any legal responsibility for any errors or omissions and disclaims any liability for losses or damages incurred through the use of the information herein. Citi undertakes no obligations to update this Notice following the date of publication.

[4] The CME Group's most recent guidance with respect to EFRP transactions may be found at http://www.cmegroup.com/rulebook/rulebook-harmonization.html; ICE Futures US' most recent guidance with respect to EFRPs may be found at https://www.theice.com/futures-us/market-resources. This guidance may be revised from time-to-time. Customers should confirm that they are reviewing the most current guidance.

common beneficial ownership, the parties to the trade must be able to demonstrate the independent control of the accounts and that the transaction had economic substance for each party to the trade.

- Generally, there may be only two parties to an EFRP transaction. However, a third party, acting as principal, may facilitate the related position component of an EFRP on behalf of a customer, *provided* the third party is able to demonstrate that the related position was passed through to the customer that received the exchange contract as part of the EFRP.
- Each EFRP requires a *bona fide* transfer of ownership of the cash commodity between the parties or a *bona fide*, legally binding contract between the parties consistent with relevant market conventions for the particular related position transaction.
- Each side of an EFRP transaction must be independent. For example, confirmation of the related position may not be contingent on the acceptance of the futures transaction for clearing.
- Contingent EFRP transactions are prohibited. EFRP transactions may not be contingent upon the execution of another EFRP or related transaction that results in the offset of the related position without the incurrence of market risk that is material in the context of the related position transactions.
- Foreign currency EFPs, with immediate offset of the cash component of the transaction, are permitted, *provided* the parties to the transaction have acknowledged that, in the event the futures component of the transaction fails to clear, their responsibility for any resultant profit or loss associated with an offset of the cash component of the transaction.
- A party providing inventory financing for a storable agricultural, energy or metals commodity may, through the execution of an EFP, purchase the commodity and sell the equivalent quantity of futures contracts to a counterparty, and grant to the counterparty the non-transferable right, but not the obligation, to execute a second EFP during a specified time period in the future which will have the effect of reversing the original EFP.
- An EFRP may incorporate multiple exchange components with different market bias, *provided* the related components incur material market risk. An EFRP may incorporate multiple related position components, *provided* the net exposure of the related position components is approximately equivalent to the quantity of futures exchanged or, in the case of an EOO, the net delta-adjusted quantity of the OTC option components is approximately equivalent to the delta-adjusted quantity of the exchange-listed option.
- EFRP transactions may be executed at any commercially reasonable price agreed by the parties, *provided* the price of the exchange component of the EFRP transaction conforms to the minimum tick increment of the futures contract under exchange rules. Parties may be asked to demonstrate that EFRPs executed at prices away from the prevailing market price were executed at such prices for legitimate commercial purposes.
- The customer must maintain all records relevant to the futures transaction and the related cash, swap or derivative transaction in accordance with applicable exchange rules. Upon request, the customer must provide its FCM with documentation sufficient to verify its purchase or sale of the related position.
- EFR and EOO participants must comply with applicable Commodity Futures Trading Commission requirements governing eligibility to transact the related position component of an EFR or EOO. Generally, EFR and EOO participants must be "eligible contract participants," as defined in section 1a(18) of the Commodity Exchange Act.
- A swap that is traded on or subject to the rules of an exchange or a swap execution facility ("**SEF**") is ineligible to be the related position component of an EFR or EOO transaction. OTC swaps that are bilaterally negotiated and submitted for clearing-only to a DCO qualify as a related position, *provided* such swaps have a reasonable degree of correlation to the underlying exchange product. Such swaps should be governed by the terms and conditions of an ISDA agreement negotiated between the parties.

ICE CLEAR CREDIT SUBORDINATION OF CLAIMS (FOR CREDIT DEFAULT SWAPS)

This statement applies to the ability of authorized customers of Citi to place orders for credit default swaps ("CDS") cleared at ICE Clear Credit.

You should be aware that you may request Citi to open and maintain one or more accounts ("Account(s)") for and in your name to clear certain CDS, including (i) certain index credit default swaps, and (ii) certain credit default swaps on single-name and narrow-based indices ("security-based CDS"), through a clearing agency registered pursuant to Section 17A of the Securities Exchange Act of 1934 ("Exchange Act") and registered as a derivatives clearing organization pursuant to Section 5b of the Commodity Exchange Act ("CEA") (a "clearing agency/DCO") under a program to commingle and portfolio margin CDS ("CDS Portfolio Margin Program") offered by ICE Clear Credit. In so requesting such Account(s), you should also be aware that you will be requested to enter into an ICE Clear Credit Subordination Agreement that will provide the following:

- You represent and warrant that you reasonably believe that you will clear, and thereby place in the Account(s), both CDS and security-based CDS from time to time and on an on-going basis;

- You further acknowledge and agree:

1. In accordance with the terms and conditions of that certain exemption granted by the Securities and Exchange Commission by order dated November 1, 2021 (the "Order"), all money securities or property deposited with Citi by you to margin, guarantee or secure security-based CDS cleared through a clearing agency/DCO will be held in a Cleared Swaps Customer Account established and maintained in accordance with section 4d(f) of the CEA and the rules of the Commodity Futures Trading Commission thereunder for the purpose of clearing such Customer CDS positions under a CDS Portfolio Margin Program;

2. Such money, securities or property held in a Cleared Swaps Customer Account will not receive customer treatment under the Exchange Act or the Securities Investor Protection Act of 1970 ("SIPA") or be treated as "customer property" as defined in 11 USC 741 in a liquidation of Citi; such money, securities or property will be subject to applicable protections under Subchapter IV of Chapter 7 of Title 11 of the United States Code and rules and regulations thereunder; and

3. Any and all claims that you may have for such money, securities or property held in a Cleared Swaps Customer Account maintained by you with Citi are hereby subordinated to the claims of other securities customers and security-based swap customers of Citi whose money, securities or property are not held under a CDS Portfolio Margin Program pursuant to the Order. You understand that such subordination constitutes a waiver of the protection provided under SIPA, as amended, for the Account(s) and the money, securities or property in the Account(s).

Position Limit and Large Open Position Reporting Requirements for Options and Futures Traded on the Hong Kong Exchanges

The Hong Kong regulatory regime imposes position limit and reportable position requirements for stock options and futures contracts traded on the Stock Exchange of Hong Kong and on the Hong Kong Futures Exchange.

These requirements are set out in the Hong Kong Securities and Futures (Contracts Limits and Reportable Positions) Rules (as amended) (the "**Hong Kong Rules**") made by the Securities and Futures Commission ("**SFC**") under the Securities and Futures Ordinance. The Hong Kong Rules impose monitoring and reporting obligations with regard to large open positions. It is the responsibility of the person holding or controlling a position to comply with the prescribed limits and to fulfil its reporting obligations under the Hong Kong Rules. For the purposes of the Hong Kong Rules, a client is the person who is ultimately responsible for originating instructions you receive for transactions, i.e. the transaction originator.

Further guidance on the Hong Kong Rules and what they require is set out in the SFC's Guidance Note on Position Limits and Large Open Position Reporting Requirements ("**Guidance Note**"). Copies of the Hong Kong Rules and Guidance Note can be downloaded from the SFC's website (www.sfc.hk).

Purpose of the Hong Kong Rules

The purpose of the Hong Kong Rules is to avoid potentially destabilizing market conditions arising from an over-concentration of futures/options positions accumulated by a single person or group of persons acting in concert, and to increase market transparency.

Some of the major requirements of the Hong Kong Rules and Guidance Note are summarised below. However, you should review the Hong Kong Rules and Guidance Note in their entirety, and consult with your legal counsel in order to ensure that you have a full understanding of your obligations in connection with trading in Hong Kong.

Please note that the Hong Kong Rules make you responsible for ensuring that you comply with the Hong Kong Rules. Section 8 of the Hong Kong Rules makes it a criminal offence not to comply with the Hong Kong Rules (subject to a maximum fine of HK$100,000 and imprisonment for up to 2 years).

It should be noted that the SFC has expressly stated that it is not sympathetic to claims by overseas persons that they are not aware of the Hong Kong restrictions, and that a failure to trade within the limits or make reports reflects badly on a firm's internal control measures (which might itself lead to disciplinary actions).

Position Limits

The Hong Kong Rules say that you may not hold or control futures contracts or stock options contracts in excess of the prescribed limit, unless you have obtained the prior authorisation of the Hong Kong regulators. For example, for stock index futures and/or options contracts that have either the Hang Seng Index, the Hang Seng Index (Gross Total Return Index) or the Hang Seng Index (Net Total Return Index) as an underlying index, the prescribed limit for such contracts is 10,000 net long or short position delta limit for all contract periods (including contract months or contract weeks) combined. Please note that stock index futures options contracts that have such aforementioned stock index futures contract as an underlying contract might also be captured.

The prescribed limit for each contract traded on the Hong Kong exchanges (any one Hong Kong exchange being an "**Exchange**") is set out in Schedules 1 and 2 to the Hong Kong Rules. For futures contracts such as stock futures, stock index futures, stock index options contracts and currency futures contracts, the prescribed limits are calculated on a net basis for all contract months combined.

Reportable Positions

If you hold or control an open position in futures contracts or stock options contracts in excess of the reporting level, the Hong Kong Rules require you to report that position in writing to the relevant Exchange (i) within one business day[5] (or in the case of holiday contracts, within one holiday contract trading day[6]) of first holding or controlling that position, and (ii) on each succeeding day on which you continue to hold or control that position. For the avoidance of doubt, once you hold or control a reportable position, you will be required to file the notice of the reportable position to the relevant Exchange on each reporting day even though your position remains unchanged.

The report must state:

(a) the number of futures contracts or stock options contracts held or controlled by the person that comprise the reportable position in each relevant contract period (including contract month or contract week) or option series; and

(b) if the position is held or controlled for any other person(s) (e.g. a client or clients), the identity of each other person, and the number of futures contracts or stock options contracts held or controlled for his own account (if applicable) and for each other person that comprise the reportable position in each relevant contract period (including contract month or contract week) or option series.

Where the reportable position is held or controlled for one or more funds or sub-funds of one or more umbrella funds, the name of each fund and sub-fund (if applicable) and the number of futures contracts or stock options contracts held or controlled for his own account (if applicable) and for each fund and sub-fund (if applicable) that comprise the reportable position in each relevant contract period (including but not limited to contract month or contract week) or option series.

The reporting level for each contract traded on the relevant Exchange is set out in Schedules 1 and 2 to the Hong Kong Rules. Reporting levels for futures contracts are calculated based on the number of contracts held or controlled for a contract period (e.g. a contract month or contract week) or series, while the reportable positions reporting levels for stock options contracts are calculated based on the number of contracts held or controlled in an expiry month.

Scope of the Hong Kong Rules

You should note:

- The prescribed limits and reporting levels apply to all positions held or controlled by any person, including positions in any account(s) that such person controls, whether directly or indirectly. The SFC takes the view that a person is regarded as having control of positions if, for example, the person is allowed to exercise discretion to trade or dispose of the positions independently without the day-to-day direction of the owner of the positions. (Section 4 of the Hong Kong Rules and Para. 2.6 of the Guidance Note).

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5 For reference, "business day" means a day other than a Hong Kong public holiday, a Saturday, and a gale warning day or a black rainstorm warning day as defined in section 71(2) of the Interpretation and General Clauses Ordinance (Cap. 1) in the Securities and Futures Ordinance ("SFO").

However, please note that following HKEX's implementation of severe weather trading (SWT) arrangements (details of such arrangements are available on HKEX's website), you should be aware that "Business as Usual / BAU" operational arrangements, including but not limited to LOP and position limit reporting requirements, that apply on regular trading days will apply on SWT days. Notwithstanding the definition of "business day", this means your BAU reporting requirements applicable on regular trading days remain applicable on SWT days.

6 "Holiday contract trading day", in relation to a holiday contract, means a day determined by the Hong Kong Futures Exchange Limited to be a day on which the holiday contract may be traded through the facilities of the Hong Kong Futures Exchange Limited in accordance with the rules of the Hong Kong Futures Exchange Limited.

- A person who holds or controls futures contracts or stock options contracts for another person should disaggregate his own position and the positions he holds or controls for each of the other person in the application of prescribed limits and reporting levels, provided that he does not have discretion over the positions in question. If a person has discretion over positions held with him for other persons, all these positions should be aggregated with his own position in the application of the prescribed limits and reporting requirements. (Section 7 of the Hong Kong Rules and Paras. 5.1 and 5.3 of the Guidance Note).

- In situations where a person holds or controls positions for another person who is acting as agent, such person should obtain the ultimate client's identity information from the agent in order to decide whether the agent complies with the prescribed limits. If such person is unable to do so (e.g. the agent does not want to disclose the information for commercial reasons), such person should aggregate all positions held by this agent account in applying the prescribed limits. (Para. 5.6 of the Guidance Note).

- A person[7] who holds or controls futures contracts or stock options contracts for one or more funds or sub-funds should apply the prescribed limits and reporting levels separately to his own position and to the positions he holds or controls for each fund or each sub-fund. (Sections 7A(1) and 7A(2) of the Hong Kong Rules and Para. 6.1 of the Guidance Note).

- A person[8] who holds or controls futures contracts or stock options contracts for one or more funds or sub-funds **and** has discretion in relation to those contracts should apply the prescribed limits and reporting levels at two layers – (i) aggregately to his own position and the positions he holds or controls for each fund or each sub-fund; and (ii) separately to his own position and to the positions he holds or controls for each fund or each sub-fund. (Sections 7A(3) and 7A(4) of the Hong Kong Rules and Para. 6.2 of the Guidance Note).

- If a person holds or controls positions in accounts at more than one intermediary, the Hong Kong Rules require him to aggregate the positions for the purposes of applying the prescribed limits and reporting requirements. (Para. 7.1 of the Guidance Note).

- The person holding or controlling a reportable position in accounts at more than one intermediary has the sole responsibility to notify the relevant Exchange of the reportable position. The person may request its intermediary to submit the notice of the reportable position. If a firm agrees to submit the notice on his behalf, the person should provide to the firm its total positions held at other intermediaries so that the firm can submit the notice of the reportable position to the relevant exchange on the person's behalf. Alternatively, the person can ask all of his intermediaries to report the positions in each of the accounts separately to the relevant Exchange, even if the positions in the individual accounts may not exceed the reportable level. (Paras. 4.6 and 7.2 of the Guidance Note).

- The Hong Kong Rules apply separately to the positions held by each of the underlying clients of an omnibus account, except where the omnibus account operator has discretion over the positions in which case the account operator must also aggregate these positions with his own positions. Positions held by different underlying clients should not be netted off for purposes of calculating and reporting reportable positions or determining compliance with the prescribed limits. (Para. 7.11 of the Guidance Note).

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7 In this context, the "person" refers to the legal holder of the positions of the funds or sub-funds. If the fund is constituted in a structure with legal personality, e.g. a corporate fund, then the legal holder is the corporate fund itself. If the fund is constituted in a structure with no legal personality, e.g. a unit trust, then the legal holder is the legal person holding the legal title to the positions of the funds or sub-funds, i.e. the trustee.

8 In this context, the "person" in general refers to the fund manager of the funds or sub-funds.

A GUIDE TO THE STRUCTURE AND MARKET TERMINOLOGY OF THE LONDON METAL EXCHANGE

INTRODUCTION AND PURPOSE

This document is designed to provide customers of the London Metal Exchange (LME) with an overview of the structure of the LME, market terminology, and order execution. It is not a comprehensive trading guide, nor a complete guide to market terminology. Customers should always ensure that their requirements are explained in detail to the member responsible for order execution.

THE LME

Principal Nature

There are two types of contracts traded on the LME - Exchange Contracts and Client Contracts. Exchange Contracts are contracts between clearing members of the LME. Client Contracts are contracts between customers and ring dealing members (RDMs), or associate broker clearing members (ABCMs), or associate broker members (ABMs). Only RDMs, ABCMs and ABMs may issue Client Contracts. Open Position Statements issued to clients must state clearly "THIS IS AN LME REGISTERED CLIENT CONTRACT". Contract criteria relating to LME contracts, including metal/plastic specifications, acceptable currencies, prompt dates, option strike prices for metals etc. are detailed in the LME rulebook and appropriate notices.

Exchange Contracts are traded between members, **matched** in the LME matching and clearing system (LMEMS) and margined by LCH.Clearnet (LCH). Client Contracts are **registered** at the LCH but margining arrangements are left to members to agree with their customers (subject to LME rules).

All LME contracts are between parties acting as principals. This prevents any party entering into an LME Contract as agent for someone else but does not prevent an agent effecting a contract between two parties if the resulting LME contract is between disclosed parties, each acting as a principal. It is an essential requirement of an LME Client Contract that one party must be an RDM, ABCM or ABM. A list of members is available from the LME, and on the LME website: www.lme.com. A principal relationship does not mean that members do not take on quasi-fiduciary responsibilities when they effect trades for customers. In particular, if a member undertakes to deliver a particular service, for example, deal a specific number of lots 'in the Ring' (see below), then it should take care to ensure that it complies with all the terms of such a transaction.

In respect of Exchange Contracts, an LME broker buying metal or plastic under an Exchange Contract from another LME broker cannot do so as agent for his customer. Where an LME broker buys metal or plastic under an Exchange Contract with a view to selling that metal or plastic to his customer, this is achieved by entering into a back-to-back Client Contract with the customer. Brokers and customers can agree the conditions that apply to their

Client Contracts. For example, a customer may make it a condition of his Client Contract that the broker must enter into a back-to-back Exchange Contract for the metal or plastic being bought or sold. This does not make the customer a party to the Exchange Contract but does create additional duties and obligations owed by the broker under the Client Contract.

Customers should be clear about conditions that apply to their Client Contracts and about the obligations and duties that the broker owes as a result of those conditions.

Brokers should be clear about the duties and obligations they owe as a result of conditions attaching to their Client Contracts. They should also be clear about the duties they owe to their customers under the FSA's Conduct of Business Rules (COB).

Dual Capacity

LME members may act both in the capacity of market maker and broker. They may act in a particular manner depending on a number of circumstances, including the size of the order, the liquidity of the market at the time the order was placed, and, not least, the customer's instructions. Customer orders may be filled directly from a member's 'book' or following the purchase/sale of metal or plastic in the LME market. Furthermore, customer orders may be offset, amalgamated, broken-up or netted for execution. These methodologies apply equally to orders whether any resulting Exchange Contract is effected in the ring, in the inter-office market, or on LME Select.

Customers with specific order requirements must make these known to the member at the time the order is placed. Customers wishing to know how their order was executed should request such information from the member.

Trading on the LME

Trading takes place on the LME by open outcry in the rings and kerbs, between members in the inter-office, and over the Exchange's electronic trading system LME Select.

Open Outcry

Historically, during ring and kerb sessions, the majority of customer business reflects prices traded in the open outcry sessions. Customers can follow the market activity by monitoring quoted and traded prices disseminated via the LME market data system (MDS), or by listening to the simultaneous floor commentary provided by member(s). The MDS publishes prices traded during ring and kerb times on price vendor information services such as Reuters. Members can continue to 'make a market' when requested by a customer during the ring and kerb sessions, although this is entirely at the member's discretion. Alternatively, the customer can decide whether to place an order using the 'order styles' mentioned below.

Inter-office

Inter-office trading is conducted between members by telephone or by electronic means. On contacting an LME member for a quote, customers will usually be provided with the member's current bid and offer. The customer may trade on this quote, call another member in an attempt to improve the quote, leave a resting order with a member, or wait and monitor prices on the LME market data system. If an order cannot be filled from the member's book, it may be executed via a back-to-back Exchange Contract agreed via a telephone deal with another member or executed via an electronic trading system.

LME Select

LME Select allows members to trade LME futures contracts in metals and plastics, traded options and TAPOs, and an Index future and option. Some brokers offer their customers an order-routing facility via an API where they can view Select prices, execute trades, and place resting orders. All trading on LME Select is in US dollars.

LME Select replaces neither inter-office trading nor trading in the ring. Depending on the time of day, it is possible for members to deal by telephone or electronically in the inter-office, by LME Select, or in the rings. Customers should specify which mechanism their broker should use to effect an order, where they have a preference.

Firm prices of the best bid and offer available on LME Select, the total volumes available at these prices, and the price and volume of each trade transacted are distributed to and displayed in real time by information vendors. Only LME Select prices are displayed, not those of other third party electronic trading systems providing LME prices. Only RDMs and ABCMs are eligible to become LME Select Participants and to have direct access to the system. Customers may effect back-to-back Client Contracts with RDMs and ABCMs based upon prices available on LME Select, whether on the telephone or via electronic order-routing systems.

ORDER STYLES

Ring

Customer orders are not traded in the rings or kerbs, so an order using the term 'in/on/during the ring/kerb' will be executed on the basis of the prices traded/quoted during the particular session. If a customer requires their order to be 'shown' or traded across the ring/kerb then they should make this requirement known to their executor, who may or may not accept this as a term of the order. The equivalent Exchange Contract for a customer order may not replicate its terms. As the customer is **not** a party to any Exchange Contracts i.e. those traded in open outcry between members in the ring/kerb sessions, in specifying ring/kerb, the customer is merely identifying a pricing mechanism. A member which undertakes to match a price traded in the ring/kerb is not necessarily undertaking that it will trade during that ring/kerb, only that it may do so. However, a customer may place an order with the specific request that the member trades an Exchange Contract replicating its order in the ring. In such circumstance the RDM can only trade this order by open outcry in the ring.

If a customer trades at the prevailing market quote proffered in the ring/kerb, their executor is not necessarily obliged to effect an Exchange Contract at the same price. This can lead to situations where the customer has traded at the prevailing market quote, without that same price trading in open outcry across the floor of the Exchange. However, if the instructions from the customer are to achieve a specific price i.e. close of ring 2, then this is the price that should be given, if that specific order is accepted.

Market

In normal circumstances a market order is one executed on a timely basis at the prevailing market price. As mentioned above, at certain times of the business day, trading is taking place simultaneously in the ring or kerb, on

LME Select, and in the inter-office market. Traditionally, when open outcry trading is in session, the market is defined by activity within the ring/kerb. At other times, the market is split between inter-office trading and trading on LME Select. During inter-office sessions, indicative quotes are available on the MDS; firm prices are available on LME Select and the LME Select page on information vendors' systems. The indicative prices might not be available to all parties.

Best

Order styles on the LME using the word 'best' confer some discretion upon the members when executing the order, requiring them to use their 'best endeavours' on the customer's behalf. The extent of the discretion is fixed by the terms of the order. This type of order is distinct from 'best execution' as defined by the FSA.

Best orders may be executed both in rings/kerbs, inter-office and on LME Select. Inter-office trades rely upon the members' skill in determining the level of the market at any particular time. Best orders received during ring/kerb times may not result in the customer receiving the 'best' price achieved during the session if the price improves after the member has booked the metal or plastic intended to fill the order. At any given time, the best price on LME Select will be displayed on the system and by the information vendors. Customers should be aware that depending on market conditions, the best price may move during the period from when the order was placed and when it was executed.

Close

Most orders placed 'on the close' are for either the close of the second ring (official LME prices) or the final kerb (closing prices). Both these prices are demonstrable because of the publication of official and closing prices. Closing prices for other sessions are harder to determine, although the LME does publish unofficial prices which are established at the close of the fourth ring. In all circumstances, customers and members need to agree the style of execution i.e. bid/offer, mean or traded price. Members may not always be able to guarantee execution (price or volume) due to prevailing market conditions. A closing price on LME Select is the last price traded before the system closes.

Open

Customers placing orders to trade on the opening of a market session must provide clear instructions to the LME member which indicate how this order should be activated i.e. basis the opening bid/offer or basis the first trade in the session. Customers will also need to inform their executor of their requirements if the executor is unable to fill the order basis the 'opening' price in its entirety, due to market constraints such as insufficient liquidity. Customers may place orders with members for LME Select that can be placed into the system for activation when the market opens.

Resting Orders

When placing resting orders such as 'good 'til cancelled' ('GTC', or any derivations thereof) or stop loss orders, customers should ensure that they are in agreement with their executor's definition of the 'trigger' point of the order. Usually, this is interpreted as being the point when the order price is seen to be trading in the market, but it is possible to request the order be activated when the order level is either bid or offered as appropriate, via the prevailing market quote. Stop loss orders become market orders when a trade, or a bid or an offer triggers the stop, with members then executing the order at the current market price.

It is possible for a customer not to receive a 'fill' on a resting order despite the 'trigger' point being 'touched'. This could be due to a number of circumstances such as order priority, illiquidity, prevailing market conditions etc.

Whatever the reason, the executor should be able to provide the customer with a full explanation of why it was unable to fill the order.

Customers should be aware that resting orders might be activated during periods of illiquidity in the market. As previously mentioned, this could result in the trade not being filled, or for 'stop' orders, a worse fill than anticipated ('slippage'). Customers should ensure the executor is fully aware of their requirements regarding the execution of an order, and adheres to any limitations, especially if the customer is not in contact with the market/member when the trigger point is reached.

It is possible for customers to ask members to place resting orders in LME Select. Where the broker has an order routing system into Select, customers will be able to place orders more directly. The system accepts GTC and Good for Day (DAY) orders. DAY orders are automatically deleted from the system at close of trading.

Conclusion

The above order styles do not represent all possible methods of order execution on the LME. Members and customers should ensure that orders are communicated in meaningful terms that deliver the required execution in accordance with LME rules.

NOTICE TO ONTARIO AND QUEBEC CLIENTS PURSUANT TO THE EXEMPTIONS FROM DERIVATIVES DEALER REGISTRATION GRANTED TO CITIGROUP GLOBAL MARKETS INC. BY ONTARIO SECURITIES COMMISSION AND AUTORITE DES MARCHES FINANCIERS

Citi is not registered in Ontario to trade in Canadian Futures as principal or agent and is not registered in Quebec to trade in Quebec Derivatives as principal or agent.

Citi's head office and principal place of business is located in New York, New York, United States.

All or substantially all of Citi's assets may be situated outside of Canada.

There may be difficulty enforcing legal rights against Citi because of the above.

The name and address of Citi's agent for service of process in Ontario are as follows:

Citigroup Global Markets Canada Inc.

123 Front Street West, 17th Floor

Toronto, Ontario M5J 2M3

Canada

The name and address of Citi's agent for service of process in Quebec are as follows:

152928 Canada Inc.

c/o Stikeman Elliott LLP

1155 Rene-Levesque Blvd., 40th Floor

Montreal, Quebec H3B 3V2

Canada

CME DISCLOSURE TO DISCLOSED SINGAPORE MARKET PARTICIPANTS

Pursuant to the terms of the Monetary Authority of Singapore's order authorizing Chicago Mercantile Exchange Inc. ("CME") as a recognized clearing house in Singapore Citi makes the following disclosures to Singapore-based customers.

- CME Clearing's operations are subject to the laws of the United States and regulations promulgated by the U.S. Commodity Futures Trading Commission ("CFTC");

- The rights and remedies available to Singapore-based participants as stated in CME's rules, policies and procedures may be governed by U.S. law. Such rights and remedies under U.S. law may differ from those available to Singapore-based participants when accessing Singapore-based clearing houses which are primarily regulated by Singapore laws;

- Funds and collateral posted to a clearing intermediary registered as a U.S. futures commission merchant ("FCM") are subject to customer protection provisions of U.S. law;

- U.S. law and regulation mandate segregation of customer positions and collateral from the positions and collateral of FCM clearing members and prescribe the customer segregation model for futures and swaps, respectively, at both the FCM- and clearing house-levels. The structure and insolvency law impacts of the U.S. customer protection regime may differ from those of Singapore;

- Trades cleared at CME will be subject to U.S. business hours and settlement timelines as set forth in Exchange or Clearing House rules;

- Trades cleared at CME may be subject to U.S. tax law and applicable provisions of the U.S. Internal Revenue Code, which may have a different impact than Singapore tax law; and

- Costs associated with clearing should be discussed with the clearing member offering clearing services.

Nothing included in this disclosure should be regarded as legal advice. Tax advisors, legal counsel and exchange or clearing house rules, as applicable, should be consulted in all cases where a Singapore-based participant has questions concerning the conduct of their business or the impact of U.S. law or regulation thereon.

NEGATIVE CONTRACT PRICES RISK DISCLOSURE

When trading in the futures markets, there are risks if the market moves against your futures positions. These risks may be particularly acute in those instances in which a futures contract settles at a negative price. The circumstances that lead a futures contract to settle at a negative price may vary. One example of when a futures contract with a physical commodity as the underlying asset may settle at a negative price is when the supply of the commodity faces physical constraints in distribution or storage to such an extent that some suppliers are prepared to pay others to physically take away the commodity. Futures contracts across other asset classes may also settle at negative prices for any number of reasons. Regardless of whether prices are positive or negative, you should keep in mind that if the market moves against your futures positions:

- You may sustain a total loss of the funds that you have deposited to establish or maintain your positions and may incur additional losses beyond these amounts;
- You may be called upon to deposit additional margin funds, on short notice;
- If you do not provide the additional funds within the time we require, your positions may be liquidated at a loss; and
- You will be liable for any resulting deficit in your account.

PLEASE CONTACT YOUR CITI REPRESENTATIVE IF YOU HAVE QUESTIONS OR WANT ADDITIONAL INFORMATION.

Security Futures Risk Disclosure Statement

December 2024

FINRA and the National Futures Association (NFA), require members to deliver this Security Futures Risk Disclosure Statement to customers at or prior to the time a customer's account is approved for trading security futures. Customers also may receive revisions from time to time.

This Security Futures Risk Disclosure Statement has been prepared by FINRA and NFA with significant assistance from other futures and securities self-regulatory organizations.

Additional copies of this document may be obtained by contacting FINRA MediaSource at (240) 386-4200, or the NFA Information Center at (312) 781-1410, or from FINRA's website at *www.finra.org*, or NFA's website at *www.nfa.futures.org*.

Risk Disclosure Statement For Security Futures Contracts

This disclosure statement discusses the characteristics and risks of standardized security futures contracts traded on regulated U.S. exchanges. At present, regulated exchanges are authorized to list futures contracts on individual equity securities registered under the Securities Exchange Act of 1934 (including common stock and certain exchange-traded funds and American Depositary Receipts), futures on certain debt instruments as well as narrow-based security indices. Futures on other types of securities and options on security futures contracts may be authorized in the future. The glossary of terms appears at the end of the document.

Customers should be aware that the examples in this document are exclusive of fees and commissions that may decrease their net gains or increase their net losses. The examples also do not include tax

consequences, which may differ for each customer.

TABLE OF CONTENTS

SECTION 1

Risks Of Security Futures

1.1. Risks of Security Futures Transactions

Trading security futures contracts may not be suitable for all investors. You may lose a substantial amount of money in a very short period of time. The amount you may lose is potentially unlimited and can exceed the amount you originally deposit with your broker. This is because futures trading is highly leveraged, with a relatively small amount of money used to establish a position in assets having a much greater value. If you are uncomfortable with this level of risk, you should not trade security futures contracts.

1.2. General Risks

- **Trading security futures contracts involves risk and may result in potentially unlimited losses that are greater than the amount you deposited with your broker.** As with any high risk financial product, you should not risk any funds that you cannot afford to lose, such as your retirement savings, medical and other emergency funds, funds set aside for purposes such as education or home ownership, proceeds from student loans or mortgages, or funds required to meet your living expenses.

- **Be cautious of claims that you can make large profits from trading security futures contracts.** Although the high degree of leverage in security futures contracts can result in large and immediate gains, it can also result in large and immediate losses. As with any financial product, there is no such thing as a "sure winner."

- **Because of the leverage involved and the nature of security futures contract transactions, you may feel the effects of your losses immediately.** Gains and losses in security futures contracts are credited or debited to your account, at a minimum, on a daily basis. If movements in the markets for security futures contracts or the underlying security decrease the value of your positions in security futures contracts, you may be required to have or make additional funds available to your carrying firm as margin. If your account is under the minimum margin requirements set by the exchange or the brokerage firm, your position may be liquidated at a loss, and you will be liable for the deficit, if any, in your account. Margin requirements are addressed in Section 4.

- **Under certain market conditions, it may be difficult or impossible to liquidate a position.** Generally, you must enter into an offsetting transaction in order to liquidate a position in a security futures contract. If you cannot liquidate your position in security futures contracts, you may not be able to realize a gain in the value of your position or prevent losses from mounting. This inability to liquidate could occur, for example, if trading is halted due to unusual trading activity in either the security futures contract or the underlying security; if trading is halted due to recent news events involving the issuer of the underlying security; if systems failures occur on an exchange or at the firm carrying your position; or if the position is on an illiquid market. Even if you can liquidate your position, you may be forced to do so at a price that involves a large loss.

- **Under certain market conditions, it may also be difficult or impossible to manage your risk from open security futures positions by entering into an equivalent but opposite position in another contract month, on another market, or in the underlying security.** This inability to take positions to limit your risk could occur, for example, if trading is halted across markets due to unusual trading activity in the security futures contract or the underlying security or due to recent news events involving the issuer of the underlying security.

- **Under certain market conditions, the prices of security futures contracts may not maintain their customary or anticipated relationships to the prices of the underlying security or index.** These pricing disparities could occur, for example, when the market for the security futures contract is illiquid, when the primary market for the underlying security is closed, or when the reporting of transactions in the underlying security has been delayed. For index products, it could also occur when trading is delayed or halted in some or all of the securities that make up the index.

- **You may be required to settle certain security futures contracts with physical delivery of the underlying security.** If you hold your position in a physically settled security futures contract until the end of the last trading day prior to expiration, you will be obligated to make or take delivery of the underlying securities, which could involve additional costs. The actual settlement terms may vary from contract to contract and exchange to exchange. You should carefully review the settlement and delivery conditions before entering into a security futures contract. Settlement and delivery are discussed in Section 5.

- **You may experience losses due to systems failures.** As with any financial transaction, you may experience losses if your orders for security futures contracts cannot be executed 6 normally due to systems failures on a regulated exchange or at the brokerage firm carrying your position. Your losses may be greater if the brokerage firm carrying your position does not have adequate back-up systems or procedures.

- **All security futures contracts involve risk, and there is no trading strategy that can eliminate it.** Strategies using combinations of positions, such as spreads, may be as risky as outright long or short positions. Trading in security futures contracts requires knowledge of both the securities and the futures markets.

- **Day trading strategies involving security futures contracts and other products pose special risks.** As with any financial product, persons who seek to purchase and sell the same security future in the course of a day to profit from intra-day price movements ("day traders") face a number of special risks, including substantial commissions, exposure to leverage, and competition with professional traders. You should thoroughly understand these risks and have appropriate experience before engaging in day trading. The special risks for day traders are discussed more fully in Section 7.

- **Placing contingent orders, if permitted, such as "stop-loss" or "stop-limit" orders, will not necessarily limit your losses to the intended amount.** Some regulated exchanges may permit you to enter into stop-loss or stop-limit orders for security futures contracts, which are intended to limit your exposure to losses due to market fluctuations. However, market conditions may make it impossible to execute the order or to get the stop price.

- **You should thoroughly read and understand the customer account agreement with your brokerage firm before entering into any transactions in security futures contracts.**

- **You should thoroughly understand the regulatory protections available to your funds and positions in the event of the failure of your brokerage firm.** The regulatory protections available to your funds and positions in the event of the failure of your brokerage firm may vary depending on, among other factors, the contract you are trading and whether you are trading through a securities account or a futures account. Firms that allow customers to trade security futures in either securities accounts or futures accounts, or both, are required to disclose to customers the differences in regulatory protections between such accounts, and, where appropriate, how customers may elect to trade in either type of account.

Description Of A Security Futures Contract

2.1. What Is a Security Futures Contract?

A security futures contract is a legally binding agreement between two parties to purchase or sell in the future a specific quantity of shares of a security or of the component securities of a narrow-based security index, at a certain price. A person who buys a security futures contract enters into a contract to purchase an underlying security and is said to be "long" the contract. A person who sells a security futures contract enters into a contract to sell the underlying security and is said to be "short" the contract. The price at which the contract trades (the "contract price") is determined by relative buying and selling interest on a regulated exchange.

In order to enter into a security futures contract, you must deposit funds with your brokerage firm equal to a specified percentage (usually at least 20 percent) of the current market value of the contract as a performance bond. Moreover, all security futures contracts are marked-to-market at least daily, usually after the close of trading, as described in Section 3 of this document. At that time, the account of each buyer and seller reflects the amount of any gain or loss on the security futures contract based on the contract price established at the end of the day for settlement purposes (the "daily settlement price").

An open position, either a long or short position, is closed or liquidated by entering into an offsetting transaction (*i.e.*, an equal and opposite transaction to the one that opened the position) prior to the contract expiration. Traditionally, most futures contracts are liquidated prior to expiration through an offsetting transaction and, thus, holders do not incur a settlement obligation.

Examples:

Investor A is long one September XYZ Corp. futures contract. To liquidate the long position in the September XYZ Corp. futures contract, Investor A would sell an identical September XYZ Corp. contract.

Investor B is short one December XYZ Corp. futures contract. To liquidate the short position in the December XYZ Corp. futures contract, Investor B would buy an identical December XYZ Corp. contract.

Security futures contracts that are not liquidated prior to expiration must be settled in accordance with the terms of the contract. Some security futures contracts are settled by physical delivery of the underlying security. At the expiration of a security futures contract that is settled through physical delivery, a person who is long the contract must pay the final settlement price set by the regulated exchange or the clearing organization and take delivery of the underlying shares. Conversely, a person who is short the contract must make delivery of the underlying shares in exchange for the final settlement price.

Other security futures contracts are settled through cash settlement. In this case, the underlying security is not delivered. Instead, any positions in such security futures contracts that are open at the end of the last trading day are settled through a final cash payment based on a final settlement price determined by the exchange or clearing organization. Once this payment is made, neither party has any further obligations on the contract.

Physical delivery and cash settlement are discussed more fully in Section 5.

2.2. Purposes of Security Futures

Security futures contracts can be used for speculation, hedging, and risk management. Security futures contracts do not provide capital growth or income.

Speculation

Speculators are individuals or firms who seek to profit from anticipated increases or decreases in futures prices. A speculator who expects the price of the underlying instrument to increase will buy the security futures contract. A speculator who expects the price of the underlying instrument to decrease will sell the security futures contract. Speculation involves substantial risk and can lead to large losses as well as profits.

The most common trading strategies involving security futures contracts are buying with the hope of profiting from an anticipated price increase and selling with the hope of profiting from an anticipated price decrease. For example, a person who expects the price of XYZ stock to increase by March can buy a March XYZ security futures contract, and a person who expects the price of XYZ stock to decrease by March can sell a March XYZ security futures contract. The following illustrates potential profits and losses if Customer A purchases the security futures contract at $50 a share and Customer B sells the same contract at $50 a share (assuming 100 shares per contract).

Price of XYZ at Liquidation	Customer A Profit/Loss	Customer B Profit/Loss
$55	$500	- $500
$50	$0	$0
$45	- $500	$500

Speculators may also enter into spreads with the hope of profiting from an expected change in price relationships. Spreaders may purchase a contract expiring in one contract month and sell another contract on the same underlying security expiring in a different month (*e.g.*, buy June and sell September XYZ single stock futures). This is commonly referred to as a “calendar spread.”

Spreaders may also purchase and sell the same contract month in two different but economically correlated security futures contracts. For example, if ABC and XYZ are both pharmaceutical companies and an individual believes that ABC will have stronger growth than XYZ between now and June, he could buy June ABC futures contracts and sell June XYZ futures contracts. Assuming that each contract is 100 shares, the following illustrates how this works.

Opening Position	Price at Liquidation	Gain or Loss	Price at Liquidation	Gain or Loss
Buy ABC at 50	$53	$300	$53	$300
Sell XYZ at 45	$46	-$100	$50	-$500
Net Gain or Loss		$200		-$200

Speculators can also engage in arbitrage, which is similar to a spread except that the long and short positions occur on two different markets. An arbitrage position can be established by taking an economically opposite position in a security futures contract on another exchange, in an options contract, or in the underlying security.

Hedging

Generally speaking, hedging involves the purchase or sale of a security future to reduce or offset the risk of a position in the underlying security or group of securities (or a close economic equivalent). A hedger gives up the potential to profit from a favorable price change in the position being hedged in order to minimize the risk of loss from an adverse price change.

An investor who wants to lock in a price now for an anticipated sale of the underlying security at a later date can do so by hedging with security futures. For example, assume an investor owns 1,000 shares of ABC that have appreciated since he bought them. The investor would like to sell them at the current price of $50 per share, but there are tax or other reasons for holding them until September. The investor could sell ten 100- share ABC futures contracts and then buy back those contracts in September when he sells the stock. Assuming the stock price and the futures price change by the same amount, the gain or loss in the stock will be offset by the loss or gain in the futures contracts.

Price in September	Value of 1,000 Shares of ABC	Gain or Loss on Futures	Effective Selling Price
$40	$40,000	$10,000	$50,000
$50	$50,000	$0	$50,000
$60	$60,000	- $10,000	$50,000

Hedging can also be used to lock in a price now for an anticipated purchase of the stock at a later date. For example, assume that in May a mutual fund expects to buy stocks in a particular industry with the proceeds of bonds that will mature in August. The mutual fund can hedge its risk that the stocks will increase in value between May and August by purchasing security futures contracts on a narrow-based index of stocks from that industry. When the mutual fund buys the stocks in August, it also will liquidate the security futures position in the index. If the relationship between the security futures contract and the stocks in the index is constant, the profit or loss from the futures contract will offset the price change in the stocks, and the mutual fund will have locked in the price that the stocks were selling at in May.

Although hedging mitigates risk, it does not eliminate all risk. For example, the relationship between the price of the security futures contract and the price of the underlying security traditionally tends to remain constant over time, but it can and does vary somewhat. Furthermore, the expiration or liquidation of the security futures contract may not coincide with the exact time the hedger buys or sells the underlying stock. Therefore, hedging may not be a perfect protection against price risk.

Risk Management

Some institutions also use futures contracts to manage portfolio risks without necessarily intending to change the composition of their portfolio by buying or selling the underlying securities. The institution does so by taking a security futures position that is opposite to some or all of its position in the underlying securities. This strategy involves more risk than a traditional hedge because it is not meant to be a substitute for an anticipated purchase or sale.

2.3. Where Security Futures Trade

By law, security futures contracts must trade on a regulated U.S. exchange. Each regulated U.S. exchange that trades security futures contracts is subject to joint regulation by the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC).

A person holding a position in a security futures contract who seeks to liquidate the position must do so either on the regulated exchange where the original trade took place or on another regulated exchange, if any, where a fungible security futures contract trades. (A person may also seek to manage the risk in that position by taking an opposite position in a comparable contract traded on another regulated exchange.)

Security futures contracts traded on one regulated exchange might not be fungible with security futures contracts traded on another regulated exchange for a variety of reasons. Security futures traded on different regulated exchanges may be non-fungible because they have different contract terms (*e.g.*, size, settlement method), or because they are cleared through different clearing organizations. Moreover, a regulated exchange might not permit its security futures contracts to be offset or liquidated by an identical contract traded on another regulated exchange, even though they have the same contract terms and are cleared through the same clearing organization. You should consult your broker about the fungibility of the contract you are considering purchasing or selling, including which exchange(s), if any, on which it may be offset.

Regulated exchanges that trade security futures contracts are required by law to establish certain listing standards. Changes in the underlying security of a security futures contract may, in some cases, cause such contract to no longer meet the regulated exchange's listing standards. Each regulated exchange will have rules governing the continued trading of security futures contracts that no longer meet the exchange's listing standards. These rules may, for example, permit only liquidating trades in security futures contracts that no longer satisfy the listing standards.

2.4. How Security Futures Differ from the Underlying Security

Shares of common stock represent a fractional ownership interest in the issuer of that security. Ownership of securities confers various rights that are not present with positions in security futures contracts. For example, persons owning a share of common stock may be entitled to vote in matters affecting corporate governance. They also may be entitled to receive dividends and corporate disclosure, such as annual and quarterly reports.

The purchaser of a security futures contract, by contrast, has only a contract for future delivery of the underlying security. The purchaser of the security futures contract is not entitled to exercise any voting rights over the underlying security and is not entitled to any dividends that may be paid by the issuer. Moreover, the purchaser of a security futures contract does not receive the corporate disclosures that are received by shareholders of the underlying security, although such corporate disclosures must be made publicly available through the SEC's EDGAR system, which can be accessed at *www.sec.gov*. You should review such disclosures before entering into a security futures contract. See Section 8.1 for further discussion of the impact of corporate events on a security futures contract.

All security futures contracts are marked-to-market at least daily, usually after the close of trading, as described in Section 3 of this document. At that time, the account of each buyer and seller is credited with the amount of any gain, or debited by the amount of any loss, on the security futures contract, based on the contract price established at the end of the day for settlement purposes (the "daily settlement price"). By contrast, the purchaser or seller of the underlying instrument does not have the profit and loss from his or her investment credited or debited until the position in that instrument is closed out.

Naturally, as with any financial product, the value of the security futures contract and of the underlying security may fluctuate. However, owning the underlying security does not require an investor to settle his or her profits and losses daily. By contrast, as a result of the mark-to-market requirements discussed above, a person who is long a security futures contract often will be required to deposit additional funds into his or her account as the price of the security futures contract decreases. Similarly, a person who is short a security futures contract often will be required to deposit additional funds into his or her account as the price of the security futures contract increases.

Another significant difference is that security futures contracts expire on a specific date. Unlike an owner of the underlying security, a person cannot hold a long position in a security futures contract for an extended period of time in the hope that the price will go up. If you do not liquidate your security futures contract, you will be required to settle the contract when it expires, either through physical delivery or cash settlement. For cash-settled contracts in particular, upon expiration, an individual will no longer have an economic interest in the securities underlying the security futures contract.

2.5. Comparison to Options

Although security futures contracts share some characteristics with options on securities (options contracts), these products are also different in a number of ways. Below are some of the important distinctions between equity options contracts and security futures contracts.

If you purchase an options contract, you have the right, but not the obligation, to buy or sell a security prior to the expiration date. If you sell an options contract, you have the obligation to buy or sell a security prior to the expiration date. By contrast, if you have a position in a security futures contract (either long or short), you have both the right and the obligation to buy or sell a security at a future date. The only way that you can avoid the obligation incurred by the security futures contract is to liquidate the position with an offsetting contract.

A person purchasing an options contract runs the risk of losing the purchase price (premium) for the option contract. Because it is a wasting asset, the purchaser of an options contract who neither liquidates the options contract in the secondary market nor exercises it at or prior to expiration will necessarily lose his or her entire investment in the options contract. However, a purchaser of an options contract cannot lose more than the amount of the premium. Conversely, the seller of an options contract receives the premium and assumes the risk that he or she will be required to buy or sell the underlying security on or prior to the expiration date, in which event his or her losses may exceed the amount of the premium received. Although the seller of an options contract is required to deposit margin to reflect the risk of its obligation, he or she may lose many times his or her initial margin deposit.

By contrast, the purchaser and seller of a security futures contract each enter into an agreement to buy or sell a specific quantity of shares in the underlying security. Based upon the movement in prices of the underlying security, a person who holds a position in a security futures contract can gain or lose many times his or her initial margin deposit. In this respect, the benefits of a security futures contract are similar to the benefits of *purchasing* an option, while the risks of entering into a security futures contract are similar to the risks of *selling* an option.

Both the purchaser and the seller of a security futures contract have daily margin obligations. At least once each day, security futures contracts are marked-to-market and the increase or decrease in the value of the contract is credited or debited to the buyer and the seller. As a result, any person who has an open position in a security futures contract may be called upon to meet additional margin requirements or may receive a credit of available funds.

Example:

Assume that Customers A and B each anticipate an increase in the market price of XYZ stock, which is currently $50 a share. Customer A purchases an XYZ 50 call (covering 100 shares of XYZ at a premium of $5 per share). The option premium is $500 ($5 per share X 100 shares). Customer B purchases an XYZ security futures contract (covering 100 shares of XYZ). The total value of the contract is $5000 ($50 share value X 100 shares). The required margin is $1000 (or 20% of the contract value).

Price of XYZ at Expiration	Customer A Profit/Loss	Customer B Profit/Loss
65	$1000	$1500
60	$500	$1000
55	$0	$500
50	- $500	$0
45	- $500	- $500
40	- $500	- $1000
35	- $500	- $1500

The most that Customer A can lose is $500, the option premium. Customer A breaks even at $55 per share, and makes money at higher prices. Customer B may lose more than his initial margin deposit. Unlike the options premium, the margin on a futures contract is not a cost but a performance bond. The losses for Customer B are not limited by this performance bond. Rather, the losses or gains are determined by the settlement price of the contract, as provided in the example above. Note that if the price of XYZ falls to $35 per share, Customer A loses only $500, whereas Customer B loses $1500.

2.6. Components of a Security Futures Contract

Each regulated exchange can choose the terms of the security futures contracts it lists, and those terms may differ from exchange to exchange or contract to contract. Some of those contract terms are discussed below. However, you should ask your broker for a copy of the contract specifications before trading a particular contract.

2.6.1. Each security futures contract has a set size. The size of a security futures contract is determined by the regulated exchange on which the contract trades. For example, a security futures contract for a single stock may be based on 100 shares of that stock. If prices are reported per share, the value of the contract would be the price times 100. For narrow-based security indices, the value of the contract is the price of the component securities times the multiplier set by the exchange as part of the contract terms.

2.6.2. Security futures contracts expire at set times determined by the listing exchange. For example, a particular contract may expire on a particular day, *e.g.*, the third Friday of the expiration month. Up until expiration, you may liquidate an open position by offsetting your contract with a fungible opposite contract that expires in the same month. If you do not liquidate an open position before it expires, you will be required to make or take delivery of the underlying security or to settle the contract in cash after expiration.

2.6.3. Although security futures contracts on a particular security or a narrow-based security index may be listed and traded on more than one regulated exchange, the contract specifications may not be the same. Also, prices for contracts on the same security or index may vary on different regulated exchanges because of different contract specifications.

2.6.4. Prices of security futures contracts are usually quoted the same way prices are quoted in the underlying instrument. For example, a contract for an individual security would be quoted in dollars and cents per share. Contracts for indices would be quoted by an index number, usually stated to two decimal places.

2.6.5. Each security futures contract has a minimum price fluctuation (called a tick), which may differ from product to product or exchange to exchange. For example, if a particular security futures contract has a tick size of 1¢, you can buy the contract at $23.21 or $23.22 but not at $23.215.

2.7. Trading Halts

The value of your positions in security futures contracts could be affected if trading is halted in either the security futures contract or the underlying security. In certain circumstances, regulated exchanges are required by law to halt trading in security futures contracts. For example, trading on a particular security futures contract must be halted if trading is halted on the listed market for the underlying security as a result of pending news, regulatory concerns, or market volatility. Similarly, trading of a security futures contract on a narrow-based security index must be halted under such circumstances if trading is halted on securities accounting for at least 50 percent of the market capitalization of the index. In addition, regulated exchanges are required to halt trading in all security futures contracts for a specified period of time when the S&P 500 Index experiences one-day declines of seven-, 13- and 20-percent. The regulated exchanges may also have discretion under their rules to halt trading in other circumstances– such as when the exchange determines that the halt would be advisable in maintaining a fair and orderly market.

A trading halt, either by a regulated exchange that trades security futures or an exchange trading the underlying security or instrument, could prevent you from liquidating a position in security futures contracts in a timely manner, which could prevent you from liquidating a position in security futures contracts at that time.

2.8. Trading Hours

Each regulated exchange trading a security futures contract may open and close for trading at different times than other regulated exchanges trading security futures contracts or markets trading the underlying security or securities. Trading in security futures contracts prior to the opening or after the close of the primary market for the underlying security may be less liquid than trading during regular market hours.

Clearing Organizations And Mark-To-Market Requirements

Every regulated U.S. exchange that trades security futures contracts is required to have a relationship with a clearing organization that serves as the guarantor of each security futures contract traded on that exchange. A clearing organization performs the following functions: matching trades; effecting settlement and payments; guaranteeing performance; and facilitating deliveries.

Throughout each trading day, the clearing organization matches trade data submitted by clearing members on behalf of their customers or for the clearing member's proprietary accounts. If an account is with a brokerage firm that is not a member of the clearing organization, then the brokerage firm will carry the security futures position with another brokerage firm that is a member of the clearing organization. Trade records that do not match, either because of a discrepancy in the details or because one side of the transaction is missing, are returned to the submitting clearing members for resolution. The members are required to resolve such "out trades" before or on the open of trading the next morning.

When the required details of a reported transaction have been verified, the clearing organization assumes the legal and financial obligations of the parties to the transaction. One way to think of the role of the clearing organization is that it is the "buyer to every seller and the seller to every buyer." The insertion or substitution of the clearing organization as the counter-party to every transaction enables a customer to liquidate a security futures position without regard to what the other party to the original security futures contract decides to do.

The clearing organization also effects the settlement of gains and losses from security futures contracts between clearing members. At least once each day, clearing member brokerage firms must either pay to, or receive from, the clearing organization the difference between the current price and the trade price earlier in the day, or for a position carried over from the previous day, the difference between the current price and the previous day's settlement price. Whether a clearing organization effects settlement of gains and losses on a daily basis or more frequently will depend on the conventions of the clearing organization and market conditions. Because the clearing organization assumes the legal and financial obligations for each security futures contract, you should expect it to ensure that payments are made promptly to protect its obligations.

Gains and losses in security futures contracts are also reflected in each customer's account on at least a daily basis. Each day's gains and losses are determined based on a daily settlement price disseminated by the regulated exchange trading the security futures contract or its clearing organization. If the daily settlement price of a particular security futures contract rises, the buyer has a gain and the seller a loss. If the daily settlement price declines, the buyer has a loss and the seller a gain. This process is known as "marking-to-market" or daily settlement. As a result, individual customers normally will be called on to settle daily.

The one-day gain or loss on a security futures contract is determined by calculating the difference between the current day's settlement price and the previous day's settlement price.

For example, assume a security futures contract is purchased at a price of $120. If the daily settlement price is either $125 (higher) or $117 (lower), the effects would be as follows:

(1 contract representing 100 shares)

Daily Settlement Value	Buyer's Account	Seller's Account
$125	**$500 gain (credit)**	**$500 loss (debit)**
$117	**$300 loss (debit)**	**$300 gain (credit)**

The cumulative gain or loss on a customer's open security futures positions is generally referred to as "open trade equity" and is listed as a separate component of account equity on your customer account statement.

A discussion of the role of the clearing organization in effecting delivery is discussed in Section 5.

When a broker-dealer lends a customer part of the funds needed to purchase a security such as common stock, the term "margin" refers to the amount of cash, or down payment, the customer is required to deposit. By contrast, a security futures contract is an obligation and not an asset. A security futures contract has no value as collateral for a loan. Because of the potential for a loss as a result of the daily marked-to-market process, however, a margin deposit is required of each party to a security futures contract. This required margin deposit also is referred to as a "performance bond."

In the first instance, margin requirements for security futures contracts are set by the exchange on which the contract is traded, subject to certain minimums set by law. The basic margin requirement is 20% of the current value of the security futures contract, although some strategies may have lower margin requirements. Requests for additional margin are known as "margin calls." Both buyer and seller must individually deposit the required margin to their respective accounts.

It is important to understand that individual brokerage firms can, and in many cases do, require margin that is higher than the exchange requirements. Additionally, margin requirements may vary from brokerage firm to brokerage firm. Furthermore, a brokerage firm can increase its "house" margin requirements at any time without providing advance notice, and such increases could result in a margin call.

For example, some firms may require margin to be deposited the business day following the day of a deficiency, or some firms may even require deposit on the same day. Some firms may require margin to be on deposit in the account before they will accept an order for a security futures contract. Additionally, brokerage firms may have special requirements as to how margin calls are to be met, such as requiring a wire transfer from a bank, or deposit of a certified or cashier's check. You should thoroughly read and understand the customer agreement with your brokerage firm before entering into any transactions in security futures contracts.

If through the daily cash settlement process, losses in the account of a security futures contract participant reduce the funds on deposit (or equity) below the maintenance margin level (or the firm's higher "house" requirement), the brokerage firm will require that additional funds be deposited.

If additional margin is not deposited in accordance with the firm's policies, the firm can liquidate your position in security futures contracts or sell assets in any of your accounts at the firm to cover the margin deficiency. You remain responsible for any shortfall in the account after such liquidations or sales. Unless provided otherwise in your customer agreement or by applicable law, you are not entitled to choose which futures contracts, other securities or other assets are liquidated or sold to meet a margin call or to obtain an extension of time to meet a margin call.

Brokerage firms generally reserve the right to liquidate a customer's security futures contract positions or sell customer assets to meet a margin call at any time without contacting the customer. Brokerage firms may also enter into equivalent but opposite positions for your account in order to manage the risk created by a margin call. Some customers mistakenly believe that a firm is required to contact them for a margin call to be valid, and that the firm is not allowed to liquidate securities or other assets in their accounts to meet a margin call unless the firm has contacted them first. This is not the case. While most firms notify their customers of margin calls and allow some time for deposit of additional margin, they are not required to do so. Even if a firm has notified a customer of a margin call and set a specific due date for a margin deposit, the firm can still take action as necessary to protect its financial interests, including the immediate liquidation of positions without advance notification to the customer.

Here is an example of the margin requirements for a long security futures position.

A customer buys 3 July EJG security futures at 71.50. Assuming each contract represents 100 shares, the nominal value of the position is $21,450 (71.50 x 3 contracts x 100 shares). If the initial margin rate is 20% of the nominal value, then the customer's initial margin requirement would be $4,290. The customer deposits the initial margin, bringing the equity in the account to $4,290.

First, assume that the next day the settlement price of EJG security futures falls to 69.25. The marked-to-market loss in the customer's equity is $675 (71.50 – 69.25 x 3 contacts x 100 shares). The customer's equity decreases to $3,615 ($4,290 – $675). The new nominal value of the contract is $20,775 (69.25 x 3 contracts x 100 shares). If the maintenance margin rate is 20% of the nominal value, then the customer's maintenance margin requirement would be $4,155. Because the customer's equity had decreased to $3,615 (see above), the customer would be required to have an additional $540 in margin ($4,155 – $3,615).

Alternatively, assume that the next day the settlement price of EJG security futures rises to 75.00. The mark-to-market gain in the customer's equity is $1,050 (75.00 – 71.50 x 3 contacts x 100 shares). The customer's equity increases to $5,340 ($4,290 + $1,050). The new nominal value of the contract is $22,500 (75.00 x 3 contracts x 100 shares). If the maintenance margin rate is 20% of the nominal value, then the customer's maintenance margin requirement would be $4,500. Because the customer's equity had increased to $5,340 (see above), the customer's excess equity would be $840.

The process is exactly the same for a short position, except that margin calls are generated as the settlement price rises rather than as it falls. This is because the customer's equity decreases as the settlement price rises and increases as the settlement price falls.

Because the margin deposit required to open a security futures position is a fraction of the nominal value of the contracts being purchased or sold, security futures contracts are said to be highly leveraged. The smaller the margin requirement in relation to the underlying value of the security futures contract, the greater the leverage. Leverage allows exposure to a given quantity of an underlying asset for a fraction of the investment needed to purchase that quantity outright. In sum, buying (or selling) a security futures contract provides the same dollar and cents profit and loss outcomes as owning (or shorting) the underlying security. However, as a percentage of the margin deposit, the potential immediate exposure to profit or loss is much higher with a security futures contract than with the underlying security.

For example, if a security futures contract is established at a price of $50, the contract has a nominal value of $5,000 (assuming the contract is for 100 shares of stock). The margin requirement may be as low as 20%. In the example just used, assume the contract price rises from $50 to $52 (a $200 increase in the nominal value). This represents a $200 profit to the buyer of the security futures contract, and a 20% return on the $1,000 deposited as margin. The reverse would be true if the contract price decreased from $50 to $48. This represents a $200 loss to the buyer, or 20% of the $1,000 deposited as margin. Thus, leverage can either benefit or harm an investor.

Note that a 4% decrease in the value of the contract resulted in a loss of 20% of the margin deposited. A 20% decrease would wipe out 100% of the margin deposited on the security futures contract.

If you do not liquidate your position prior to the end of trading on the last day before the expiration of the security futures contract, you are obligated to either 1) make or accept a cash payment ("cash settlement") or 2) deliver or accept delivery of the underlying securities in exchange for final payment of the final settlement price ("physical delivery"). The terms of the contract dictate whether it is settled through cash settlement or by physical delivery.

The expiration of a security futures contract is established by the exchange on which the contract is listed. On the expiration day, security futures contracts cease to exist. Typically, the last trading day of a security futures contract will be the third Friday of the expiring contract month, and the expiration day will be the following Saturday. This follows the expiration conventions for stock options and broad-based stock indexes. Please keep in mind that the expiration day is set by the listing exchange and may deviate from these norms.

5.1. Cash Settlement

In the case of cash settlement, no actual securities are delivered at the expiration of the security futures contract. Instead, you must settle any open positions in security futures by making or receiving a cash payment based on the difference between the final settlement price and the previous day's settlement price. Under normal circumstances, the final settlement price for a cash-settled contract will reflect the opening price for the underlying security. Once this payment is made, neither the buyer nor the seller of the security futures contract has any further obligations on the contract.

5.2. Settlement by Physical Delivery

Settlement by physical delivery is carried out by clearing brokers or their agents with National Securities Clearing Corporation (NSCC), an SEC-regulated securities clearing agency. Such settlements are made in much the same way as they are for purchases and sales of the underlying security. Promptly after the last day of trading, the regulated exchange's clearing organization will report a purchase and sale of the underlying stock at the previous day's settlement price (also referred to as the "invoice price") to NSCC. In general, if NSCC does not reject the transaction by a time specified in its rules, settlement is effected pursuant to the rules of the exchange and NSCC's Rules and Procedures within the normal clearance and settlement cycle for securities transactions, which currently is two business days. However, settlement may be effected on a shorter timeframe based on the rules of the exchange and subject to NSCC's Rules and Procedures.

If you hold a short position in a physically settled security futures contract to expiration, you will be required to make delivery of the underlying securities. If you already own the securities, you may tender them to your brokerage firm. If you do not own the securities, you will be obligated to purchase them. Some brokerage firms may not be able to purchase the securities for you. If your brokerage firm cannot purchase the underlying securities on your behalf to fulfill a settlement obligation, you will have to purchase the securities through a different firm.

Positions in security futures contracts may be held either in a securities account or in a futures account. Your brokerage firm may or may not permit you to choose the types of account in which your positions in security futures contracts will be held. The protections for funds deposited or earned by customers in connection with trading in security futures contracts differ depending on whether the positions are carried in a securities account or a futures account. If your positions are carried in a securities account, you will not receive the protections available for futures accounts. Similarly, if your positions are carried in a futures account, you will not receive the protections available for securities accounts. You should ask your broker which of these protections will apply to your funds.

You should be aware that the regulatory protections applicable to your account are not intended to insure you against losses you may incur as a result of a decline or increase in the price of a security futures contract. As with all financial products, you are solely responsible for any market losses in your account.

Your brokerage firm must tell you whether your security futures positions will be held in a securities account or a futures account. If your brokerage firm gives you a choice, it must tell you what you have to do to make the choice and which type of account will be used if you fail to do so. You should understand that certain regulatory protections for your account will depend on whether it is a securities account or a futures account.

6.1. Protections for Securities Accounts

If your positions in security futures contracts are carried in a securities account, they are covered by SEC rules governing the safeguarding of customer funds and securities. These rules prohibit a broker-dealer from using customer funds and securities to finance its business. As a result, the broker-dealer is required to set aside funds equal to the net of all its excess payables to customers over receivables from customers. The rules also require a broker-dealer to segregate all customer fully paid and excess margin securities carried by the broker-dealer for customers.

The Securities Investor Protection Corporation (SIPC) also covers positions held in securities accounts. SIPC was created in 1970 as a nonprofit, non-government, membership corporation, funded by member broker-dealers. Its primary role is to return funds and securities to customers if the broker-dealer holding these assets becomes insolvent. SIPC coverage applies to customers of current (and in some cases former) SIPC members. Most broker-dealers registered with the SEC are SIPC members; those few that are not must disclose this fact to their customers. SIPC members must display an official sign showing their membership. To check whether a firm is a SIPC member, go to *www.sipc.org*, call the SIPC Membership Department at (202) 371-8300, or write to SIPC Membership Department, Securities Investor Protection Corporation, 1667 K Street, NW, Suite 1000, Washington, DC 20006-1620.

SIPC coverage is limited to $500,000 per customer, including up to $250,000 for cash. For example, if a customer has 1,000 shares of XYZ stock valued at $200,000 and $10,000 cash in the account, both the security and the cash balance would be protected. However, if the customer has shares of stock valued at $500,000 and $250,000 in cash, only a total of $500,000 of those assets will be protected.

For purposes of SIPC coverage, customers are persons who have securities or cash on deposit with a SIPC member for the purpose of, or as a result of, securities transactions. SIPC does not protect customer funds placed with a broker-dealer just to earn interest. Insiders of the broker-dealer, such as its owners, officers, and partners, are not customers for purposes of SIPC coverage.

6.2. Protections for Futures Accounts

If your security futures positions are carried in a futures account, they must be segregated from the brokerage firm's own funds and cannot be borrowed or otherwise used for the firm's own purposes. If the funds are deposited with another entity (*e.g.*, a bank, clearing broker, or clearing organization), that entity must acknowledge that the funds belong to customers and cannot be used to satisfy the firm's debts. Moreover, although a brokerage firm may carry funds belonging to different customers in the same bank or clearing account, it may not use the funds of one customer to margin or guarantee the transactions of another customer. As a result, the brokerage firm must add its own funds to its customers' segregated funds to cover customer debits and deficits. Brokerage firms must calculate their segregation requirements daily.

You may not be able to recover the full amount of any funds in your account if the brokerage firm becomes insolvent and has insufficient funds to cover its obligations to all of its customers. However, customers with funds in segregation receive priority in bankruptcy proceedings. Furthermore, all customers whose funds are required to be segregated have the same priority in bankruptcy, and there is no ceiling on the amount of funds that must be segregated for or can be recovered by a particular customer.

Your brokerage firm is also required to separately maintain funds invested in security futures contracts traded on a foreign exchange. However, these funds may not receive the same protections once they are transferred to a foreign entity (*e.g.*, a foreign broker, exchange or clearing organization) to satisfy margin requirements for those products. You should ask your broker about the bankruptcy protections available in the country where the foreign exchange (or other entity holding the funds) is located.

Certain traders who pursue a day trading strategy may seek to use security futures contracts as part of their trading activity. Whether day trading in security futures contracts or other securities, investors engaging in a day trading strategy face a number of risks.

- **Day trading in security futures contracts requires in-depth knowledge of the securities and futures markets and of trading techniques and strategies.** In attempting to profit through day trading, you will compete with professional traders who are knowledgeable and sophisticated in these markets. You should have appropriate experience before engaging in day trading.

- **Day trading in security futures contracts can result in substantial commission charges, even if the per trade cost is low.** The more trades you make, the higher your total commissions will be. The total commissions you pay will add to your losses and reduce your profits. For instance, assuming that a round-turn trade costs $16 and you execute an average of 29 round-turn transactions per day each trading day, you would need to generate an annual profit of $111,360 just to cover your commission expenses.

- **Day trading can be extremely risky.** Day trading generally is not appropriate for someone of limited resources and limited investment or trading experience and low risk tolerance. You should be prepared to lose all of the funds that you use for day trading. In particular, you should not fund day trading activities with funds that you cannot afford to lose.

8.1. Corporate Events

As noted in Section 2.4, an equity security represents a fractional ownership interest in the issuer of that security. By contrast, the purchaser of a security futures contract has only a contract for future delivery of the underlying security. Treatment of dividends and other corporate events affecting the underlying security may be reflected in the security futures contract depending on the applicable clearing organization rules. Consequently, individuals should consider how dividends and other developments affecting security futures in which they transact will be handled by the relevant exchange and clearing organization. The specific adjustments to the terms of a security futures contract are governed by the rules of the applicable clearing organization. Below is a discussion of some of the more common types of adjustments that you may need to consider.

Corporate issuers occasionally announce stock splits. As a result of these splits, owners of the issuer's common stock may own more shares of the stock, or fewer shares in the case of a reverse stock split. The treatment of stock splits for persons owning a security futures contract may vary according to the terms of the security futures contract and the rules of the clearing organization. For example, the terms of the contract may provide for an adjustment in the number of contracts held by each party with a long or short position in a security future, or for an adjustment in the number of shares or units of the instrument underlying each contract, or both.

Corporate issuers also occasionally issue special dividends. A special dividend is an announced cash dividend payment outside the normal and customary practice of a corporation. The terms of a security futures contract may be adjusted for special dividends. The adjustments, if any, will be based upon the rules of the exchange and clearing organization. In general, there will be no adjustments for ordinary dividends as they are recognized as a normal and customary practice of an issuer and are already accounted for in the pricing of security futures. However, adjustments for ordinary dividends may be made for a specified class of security futures contracts based on the rules of the exchange and the clearing organization.

Corporate issuers occasionally may be involved in mergers and acquisitions. Such events may cause the underlying security of a security futures contact to change over the contract duration. The terms of security futures contracts may also be adjusted to reflect other corporate events affecting the underlying security.

8.2. Position Limits and Large Trader Reporting

All security futures contracts trading on regulated exchanges in the United States are subject to position limits or position accountability limits. Position limits restrict the number of security futures contracts that any one person or group of related persons may hold or control in a particular security futures contract. In contrast, position accountability limits permit the accumulation of positions in excess of the limit without a prior exemption. In general, position limits and position accountability limits are beyond the thresholds of most retail investors. Whether a security futures contract is subject to position limits, and the level for such limits, depends upon the trading activity and market capitalization of the underlying security of the security futures contract.

Position limits are required for security futures contracts on a security. Position limits also apply only to an expiring security futures contract during its last three trading days. A regulated exchange must establish a default position limit on a security futures contract that is no greater than 25,000 100-share contracts (or the equivalent if the contract size is different than 100 shares), either net or on the same side of the market, unless the underlying security exceeds 20 million shares of estimated deliverable supply, in which case the limit may be set at a level no greater than 12.5 percent of the estimated deliverable supply of the underlying security, either net or on the same side of the market.

For a security futures contract on a security with a six-month total trading volume of more than 2.5 billion shares and there are more than 40 million shares of estimated deliverable supply, a regulated exchange may adopt a position accountability rule in lieu of a position limit, either net or on the same side of the market. Under position accountability rules, a trader holding a position in a security futures contract that exceeds 25,000 100-share contracts (or the equivalent if the contract size is different than 100 shares) or such lower level specified under the rules of the exchange, must agree to provide information regarding the position and consent to halt increasing that position if requested by the exchange.

Brokerage firms must also report large open positions held by one person (or by several persons acting together) to the CFTC as well as to the exchange on which the positions are held. The CFTC's reporting requirements are 1,000 contracts for security futures positions on individual equity securities and 200 contracts for positions on a narrow-based index. However, individual exchanges may require the reporting of large open positions at levels less than the levels required by the CFTC. In addition, brokerage firms must submit identifying information on the account holding the reportable position (on a form referred to as either an "Identification of Special Accounts Form" or a "Form 102") to the CFTC and to the exchange on which the reportable position exists no later than the following business day when a reportable position is first established.

8.3. Transactions on Foreign Exchanges

U.S. customers may not trade security futures on foreign exchanges until authorized by U.S. regulatory authorities. U.S. regulatory authorities do not regulate the activities of foreign exchanges and may not, on their own, compel enforcement of the rules of a foreign exchange or the laws of a foreign country. While U.S. law governs transactions in security futures contracts that are effected in the U.S., regardless of the exchange on which the contracts are listed, the laws and rules governing transactions on foreign exchanges vary depending on the country in which the exchange is located.

8.4. Tax Consequences

For most taxpayers, security futures contracts are not treated like other futures contracts. Instead, the tax consequences of a security futures transaction depend on the status of the taxpayer and the type of position (*e.g.*, long or short, covered or uncovered). Because of the importance of tax considerations to transactions in security futures, readers should consult their tax advisors as to the tax consequences of these transactions.

Glossary Of Terms

This glossary is intended to assist customers in understanding specialized terms used in the futures and securities industries. It is not inclusive and is not intended to state or suggest the legal significance or meaning of any word or term.

Arbitrage

Taking an economically opposite position in a security futures contract on another exchange, in an options contract, or in the underlying security.

Broad-based security index

A security index that does not fall within the statutory definition of a narrow-based security index (see Narrow-based security index). A future on a broad-based security index is not a security future. This risk disclosure statement applies solely to security futures and generally does not pertain to futures on a broad-based security index. Futures on a broad-based security index are under exclusive jurisdiction of the CFTC.

Cash settlement

A method of settling certain futures contracts by having the buyer (or long) pay the seller (or short) the cash value of the contract according to a procedure set by the exchange.

Clearing broker

A member of the clearing organization for the contract being traded. All trades, and the daily profits or losses from those trades, must go through a clearing broker.

Clearing organization

A regulated entity that is responsible for settling trades, collecting losses and distributing profits, and handling deliveries.

Contract

(1) the unit of trading for a particular futures contract (*e.g.*, one contract may be 100 shares of the underlying security);

(2) the type of future being traded (*e.g.*, futures on ABC stock).

Contract month

The last month in which delivery is made against the futures contract or the contract is cash-settled. Sometimes referred to as the delivery month.

Day trading strategy

An overall trading strategy characterized by the regular transmission by a customer of intra-day orders to effect both purchase and sale transactions in the same security or securities.

EDGAR

The SEC's Electronic Data Gathering, Analysis, and Retrieval system maintains electronic copies of corporate information filed with the agency. EDGAR submissions may be accessed through the SEC's website, *www.sec.gov.*

Futures contract

A futures contract is

(1) an agreement to purchase or sell a commodity for delivery in the future;

(2) at a price determined at initiation of the contract;

(3) that obligates each party to the contract to fulfill it at the specified price;

(4) that is used to assume or shift risk; and

(5) that may be satisfied by delivery or offset.

Hedging

The purchase or sale of a security future to reduce or offset the risk of a position in the underlying security or group of securities (or a close economic equivalent).

Illiquid market

A market (or contract) with few buyers and/or sellers. Illiquid markets have little trading activity and those trades that do occur may be done at large price increments.

Liquidation

Entering into an offsetting transaction. Selling a contract that was previously purchased liquidates a futures position in exactly the same way that selling 100 shares of a particular stock liquidates an earlier purchase of the same stock. Similarly, a futures contract that was initially sold can be liquidated by an offsetting purchase.

Liquid market

A market (or contract) with numerous buyers and sellers trading at small price increments.

Long

(1) the buying side of an open futures contact;

(2) a person who has bought futures contracts that are still open.

Margin

The amount of money that must be deposited by both buyers and sellers to ensure performance of the person's obligations under a futures contract. Margin on security futures contracts is a performance bond rather than a down payment for the underlying securities.

Mark-to-market

To debit or credit accounts daily to reflect that day's profits and losses.

Narrow-based security index

In general, and subject to certain exclusions, an index that has any one of the following four characteristics:

(1) it has nine or fewer component securities;

(2) any one of its component securities comprises more than 30% of its weighting;

(3) the five highest weighted component securities together comprise more than 60% of its weighting; or

(4) the lowest weighted component securities comprising, in the aggregate, 25% of the index's weighting have an aggregate dollar value of average daily trading volume of less than $50 million (or in the case of an index with 15 or more component securities, $30 million).

A security index that is not narrow-based is a "broad based security index." (*See* Broad-based security index).

Nominal value

The face value of the futures contract, obtained by multiplying the contract price by the number of shares or units per contract. If XYZ stock index futures are trading at $50.25 and the contract is for 100 shares of XYZ stock, the nominal value of the futures contract would be $5025.00.

Offsetting

Liquidating open positions by either selling fungible contracts in the same contract month as an open long position or buying fungible contracts in the same contract month as an open short position.

Open interest

The total number of open long (or short) contracts in a particular contract month.

Open position

A futures contract position that has neither been offset nor closed by cash settlement or physical delivery.

Performance bond

Another way to describe margin payments for futures contracts, which are good faith deposits to ensure performance of a person's obligations under a futures contract rather than down payments for the underlying securities.

Physical delivery

The tender and receipt of the actual security underlying the security futures contract in exchange for payment of the final settlement price.

Position

A person's net long or short open contracts.

Regulated exchange

A registered national securities exchange, a national securities association registered under Section 15A(a) of the Securities Exchange Act of 1934, a designated contract market, a registered derivatives transaction execution facility, or an alternative trading system registered as a broker or dealer.

Security futures contract

A legally binding agreement between two parties to purchase or sell in the future a specific quantify of shares of a security (such as common stock, an exchange-traded fund, or ADR) or a narrow-based security index, at a specified price.

Settlement price

(1) the daily price that the clearing organization uses to mark open positions to market for determining profit and loss and margin calls,

(2) the price at which open cash settlement contracts are settled on the last trading day and open physical delivery contracts are invoiced for delivery.

Short

(1) the selling side of an open futures contract,

(2) a person who has sold futures contracts that are still open.

Speculating

Buying and selling futures contracts with the hope of profiting from anticipated price movements.

Spread

(1) holding a long position in one futures contract and a short position in a related futures contract or contract month in order to profit from an anticipated change in the price relationship between the two,

(2) the price difference between two contracts or contract months.

Stop limit order

An order that becomes a limit order when the market trades at a specified price. The order can only be filled at the stop limit price or better.

Stop loss order

An order that becomes a market order when the market trades at a specified price. The order will be filled at whatever price the market is trading at. Also called a stop order.

Tick

The smallest price change allowed in a particular contract.

Trader

A professional speculator who trades for his or her own account.

Underlying security

The instrument on which the security futures contract is based. This instrument can be an individual equity security (including common stock and certain exchange-traded funds and American Depositary Receipts) or a narrow-based index.

Volume

The number of contracts bought or sold during a specified period of time. This figure includes liquidating transactions.

Investor protection. Market integrity.

1735 K Street, NW Washington, DC 2

LCH SWAPCLEAR CLIENT CLEARING END-USER NOTICE

*This Client Clearing End-User Notice (this "**Notice**"), in respect of SwapClear Client Clearing Business, is provided for information only and is neither a full description of the SwapClear Client Clearing Services (collectively, the "**Service**") nor a recommendation to make use of them. Accordingly, you may not rely upon the contents of this Notice and should make your own decisions in relation to the Service based upon independent advice obtained from such advisers as you consider necessary. This Notice does not apply to client clearing services which an FCM Clearing Member provides to an FCM Client.*

Definitions

All terms which begin with a capital letter, but which are not defined, in this Notice shall have the meaning given to them in the "General Regulations" of LCH Limited ("**LCH**") published by LCH from time to time and located at www.lch.com (or such alternative website as determined by LCH).

Description of the Service

A SwapClear Clearing Member ("**SCM**") who engages in SwapClear Client Clearing Business provides the Service to one or more of its SwapClear Clearing Client(s) (each, a "**Client**").

The Service operates on the basis that LCH will enter into one or more SwapClear Contracts with the SCM on a principal to principal basis, and such SCM will enter into one or more matching transactions with any relevant Client on the same economic terms as the SwapClear Contracts.

LCH will record such SwapClear Contracts, and any collateral provided in respect of such SwapClear Contracts, to the relevant client account which the SCM has opened with LCH in respect of its Client(s) (each such account, a "**SwapClear Client Account**").

There are four types of SwapClear Client Account:

1. **Individual Segregated Account ("ISA")** – This is an account which an SCM opens in respect of a single Client. The SCM will provide collateral to LCH in respect of the SwapClear Contracts the SCM enters into in respect of such Client. LCH will record such SwapClear Contracts and collateral to the account.

2. **Custodial Segregated Account** – This is an account which an SCM opens in respect of a single Client and is the same as ISA, except that the Client has the option to provide collateral directly to LCH in addition to, or instead of, the SCM providing collateral to LCH. LCH will record any SwapClear Contracts the SCM enters into in respect of such Client, as well as any collateral the SCM and/or the Client provides to LCH in respect of such SwapClear Contracts, to the account.

3. **Omnibus Segregated Account ("OSA")** – This is an account which an SCM opens in respect of multiple Clients. The SCM will provide collateral to LCH in respect of the SwapClear Contracts the SCM enters into in respect of any such Client. LCH will record such SwapClear Contracts and collateral to the account.

4. **Indirect Accounts** – There are two types of Indirect Account:

   (a) **Indirect Gross Account** – This is an account which an SCM opens in respect of a single Client, who is, in turn, providing clearing services to its clients. The SCM will provide collateral to

LCH in respect of the SwapClear Contracts the SCM enters into in respect of the Client. LCH will record such SwapClear Contracts and collateral to the account. The account operates in the same way as an ISA, but with certain characteristics resulting from European regulation applicable to indirect clearing services[9], including that LCH will determine margin requirements on a "gross" basis for this account, meaning that such requirements will be determined, separately, in respect of the SwapClear Contracts referable to a particular indirect client, rather than on a net basis across all SwapClear Contracts registered to the account; and

(b) **Indirect Net Account** – This is a type of OSA which an SCM opens in respect of multiple Clients who are, in turn, providing clearing services to their clients. The SCM will provide collateral to LCH in respect of the SwapClear Contracts the SCM enters into in respect of any such Client. LCH will record such SwapClear Contracts and collateral to the account.

The account types each have different costs and levels of protection. For example, porting of SwapClear Contracts and associated collateral from a Defaulting SCM to a Backup Clearing Member may be less likely to succeed in respect of an OSA compared with an ISA, or in respect of an Indirect Net Account compared with an Indirect Gross Account.

Portfolio Margining

The Portfolio Margining Service is an optional service available which provides portfolio-margining functionality in respect of pairs of accounts which are held in the SwapClear Service and the Listed Interest Rates Service. This potentially enables the transfer of Eligible Listed Interest Rates Contracts between a Listed Interest Rates Service Client Account and a SwapClear Client Account, in order to reduce the amount of collateral that must be provided to LCH in respect of Contracts recorded to such Client Accounts. Please see section 2 of Section 2C of the LCH Procedures for more information on this optional service.

Client Money and Client Assets Rules

LCH, a recognised central counterparty, is authorised under Regulation (EU) No. 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories and is supervised by the Bank of England within the UK regulatory framework.

LCH is not subject to the Financial Conduct Authority's client assets and client money rules (the "**CASS Rules**"). As a result, SwapClear Client Accounts do not benefit from the client money or client asset protections afforded by the CASS Rules. Please contact your SCM for further details.

Porting and Close-Out

If an SCM of a Client becomes a Defaulter, then either:

1. **Port –** LCH will port the Contracts and associated collateral recorded to the SwapClear Client Account, in respect of such Client, to a substitute SCM in accordance with, and subject to, the Default Rules ("**Porting**"); or

[9] This European regulation is:
(a) Article 30 of Regulation (EU) No. 600/2014;
(b) https://ec.europa.eu/transparency/regdoc/rep/3/2017/EN/C-2017-6270-F1-EN-MAIN-PART-1.PDF; and
(c) http://ec.europa.eu/transparency/regdoc/rep/3/2017/EN/C-2017-6268-F1-EN-MAIN-PART-1.PDF.

2. **Close-out** – if Porting is unsuccessful or not possible, LCH will close-out such Contracts and transfer any resulting net collateral balance to the Client (or to the Defaulting SCM for the account of the Client) in accordance with, and subject to, the Default Rules ("**Close-out**").

A Client may not, at any time prior to the Default of its SCM, instruct LCH as to the treatment of SwapClear Client Accounts that such SCM has opened in respect of the Client, except to notify LCH of any substitute SCM who is prepared to act as a Backup Clearing Member for the Client following such Default.

However, LCH will accept instructions from such Client following the Default of its SCM provided such instructions are in a form acceptable to LCH and they accord with, and are permitted under, the rules, agreements, deeds and other documentation of LCH.

An SCM which offers Client Clearing Services to a Client and which is incorporated in a particular jurisdiction specified by LCH, must enter into a Security Deed under which it charges its right, title and interest in and to any relevant Account Balances and Client Clearing Entitlements in favour of such Client. The aim of the Security Deed (where required) is to maximise the possibility of Porting or Close-out where the SCM of a Client becomes a Defaulter. In some jurisdictions, the Security Deed may need to be registered or filed as a security arrangement and there may be other legal and regulatory requirements or obligations under the law of such jurisdictions (collectively, the "**Requirements**"). Accordingly, a Client should be aware that its rights under the Security Deed may depend, *inter alia*, upon any applicable Requirements being fulfilled and a Client should take advice as to such Requirements.

A Client may be required to enter into appropriate legal commitments or agreements with LCH in order to facilitate Porting or Close-out. Additional information is available at www.lch.com/members-clients/members/fees-ltd/annual-account-structure-fees.

Discounting Rate Transition

The following documents are available at the links below, in connection with the change in the discounting rate from the Fed Funds Rate to the Secured Overnight Financing Rate ("**SOFR**"), and from the Euro Overnight Index Average to the Euro Short Term Rate:

1. The LCH SOFR risk disclosure, which is located at https://www.lch.com/risk-management/risk-management-ltd/ltd-risk-notices/lchs-transition-fed-funds-sofr-discounting-its; and

2. General Regulation 60B and the 'SwapClear SCM Service – Rate Change Annex – Euro Short Terms Rate (€STR)' and the 'SwapClear SCM Service – Rate Change Annex – Secured Overnight Financing Rate (SOFR)' within Section 2C of the LCH Procedures, which are located at www.lch.com/resources/rules-and-regulations/ltd-rulebooks.

CFTC CUSTOMER ADVISORY:
UNDERSTAND THE RISKS OF VIRTUAL CURRENCY TRADING

[See next page – remainder of page intentionally left blank]

Customer Advisory: Understand the Risks of Virtual Currency Trading

The U.S. Commodity Futures Trading Commission (CFTC) is issuing this customer advisory to inform the public of possible risks associated with investing or speculating in virtual currencies or recently launched Bitcoin futures and options.

Virtual currency is a digital representation of value tha functions as a medium of exchange, a unit of account, or store of value, but it does not have legal tender status. Virtua currencies are sometimes exchanged for U.S. dollars or othe currencies around the world, but they are not currently backe nor supported by any government or central bank. Their valu is completely derived by market forces of supply and demand and they are more volatile than traditional fiat currencies Profits and losses related to this volatility are amplified i margined futures contracts.

For hedgers – those who own Bitcoin or other virtual currencie and who are looking to protect themselves against potentia losses or looking to buy virtual currencies at some point in th future – futures contracts and options are intended to provid protection against this volatility. However, like all future products, speculating in these markets should be considered high-risk transaction.

Bitcoin is a Commodity

Bitcoin and other virtual currencies have been determined to be commodities under the **Commodity Exchange Act** (CEA). The Commission primarily regulates commodity derivatives contracts that are based on underlying commodities. While its regulatory oversight authority over commodity cash markets is limited, the CFTC maintains general anti-fraud and manipulation enforcement authority over virtual currency cash markets as a commodity in interstate commerce.

What makes virtual currency risky?

Purchasing virtual currencies on the cash market – spending dollars to purchase Bitcoin for your personal wallet, for example – comes with a number of risks, including:

- most cash markets are not regulated or supervised by a government agency;
- platforms in the cash market may lack critical system safeguards, including customer protections;
- volatile cash market price swings or flash crashes;
- cash market manipulation;
- cyber risks, such as hacking customer wallets; and/or
- platforms selling from their own accounts and putting customers at an unfair disadvantage.

It's also important to note that market changes that affect the cash market price of a virtual currency may ultimately affect the price of virtual currency futures and options.

When customers purchase a virtual currency-based futures contract, they may not be entitled to receive the actual virtual currency, depending on the particular contract. Under most futures contracts currently being offered, customers are buying the right to receive or pay the amount of an underlying commodity value in dollars at some point in the future. Such futures contracts are said to be "cash settled." Customers will pay or receive (depending on which side of the contract they have taken –

long or short) the dollar equivalent of the virtual currency based on an index or auction price specified in the contract. Thus, customers should inform themselves as to how the index or auction prices used to settle the contract are determined.

Entering into futures contracts through leveraged accounts can amplify the risks of trading the product. Typically, participants only fund futures contracts at a fraction of the underlying commodity price when using a margin account. This creates "leverage," and leverage amplifies the underlying risk, making a change in the cash price even more significant. When prices move in the customers' favor, leverage provides them with more profit for a relatively small investment. But, when markets go against customers' positions, they will be forced to refill their margin accounts or close out their positions, and in the end may lose more than their initial investments.

Beware of related fraud

Virtual currencies are commonly targeted by hackers and criminals who commit fraud. There is no assurance of recourse if your virtual currency is stolen. Be careful how and where you store your virtual currency. The CFTC has received complaints about virtual currency exchange scams, as well as Ponzi and "pyramid" schemes.

If you decide to buy virtual currencies or derivatives based on them, remember these tips:

- If someone tries to sell you an investment in options or futures on virtual currencies, including Bitcoin, verify they are registered with the CFTC. Visit **SmartCheck.gov** to check registrations or learn more about common investment frauds.
- Remember—much of the virtual currency cash market operates through Internet-based trading platforms that may be unregulated and unsupervised.
- Do not invest in products or strategies you do not understand.
- Be sure you understand the risks and how the product can lose money, as well as the likelihood of loss. Only speculate with money you can afford to lose.
- There is no such thing as a guaranteed investment or trading strategy. If someone tells you there is no risk of losing money, do not invest.
- Investors should conduct extensive research into the legitimacy of virtual currency platforms and digital wallets before providing credit card information, wiring money, or offering sensitive personal information.
- The SEC has also warned that some token sales or initial coin offerings (ICOs) can be used to improperly entice investors with promises of high returns.[1]

If you believe you may have been the victim of fraud, or to report suspicious activity, contact us at 866.366.2382 or visit **CFTC.gov/TipOrComplaint**.

[1] See https://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_coinofferings.The CFTC has provided this information as a service to investors. It is neither a legal interpretation nor a statement of CFTC policy. If you have questions concerning the meaning or application of a particular law or rule, consult an attorney.

<u>**NFA Investor Advisory—Futures on Virtual Currencies Including Bitcoin**</u>

The purpose of this investor advisory is to remind investors that, just like any other speculative investment, trading futures on virtual currencies, including Bitcoin, have certain benefits and various risks. While futures on virtual currencies must be traded on regulated futures exchanges, trading these products involves a high level of risk and may not be suitable for all investors.

It is critical, therefore, for investors who are considering trading virtual currency futures to educate themselves about these products, understand their risks, and conduct due diligence before making investment decisions. Investor protection begins with investor education.

- Conduct due diligence on any individuals and firms soliciting for an investment in futures on virtual currencies including Bitcoin by checking their Commodity Futures Trading Commission (CFTC) registration status, NFA membership status, and background using NFA's BASIC system or calling NFA's Information Center at 800-621-3570.
- Virtual currencies including Bitcoin experience significant price volatility, and fluctuations in the underlying virtual currency's value between the time you place a trade for a virtual currency futures contract and the time you attempt to liquidate it will affect the value of your futures contract and the potential profit and losses related to it. Be very cautious and monitor any investment that you make.
- Be aware of sales pitches offering investment schemes that promise significant returns with little risk or that encourage you to "act now." If an investment sounds too good to be true (e.g., high returns, guaranteed to perform in a certain way), then it probably is.
- Virtual currency futures contracts are bought and sold using initial margin money that can enable you to hold a virtual currency futures contract valued more than your initial investment. This is referred to as leverage. If the price of the futures contract moves in an unfavorable direction, the leveraged nature of the futures investment can produce large losses in relation to your initial investment. In fact, even a small move against your position may result in a large loss, including the loss of your entire initial deposit, and you may be liable for additional losses.
- Be aware of the risk of Ponzi scheme operators and fraudsters seeking to capitalize on the current attention focused on virtual currencies, including Bitcoin.

Outlined above are just some of the risks associated with trading futures on virtual currencies, including Bitcoin. Investors should consult the risk disclosures provided by their FCM and fully educate themselves on all of the associated risks before trading.

With CFTC oversight, each futures exchange listing a virtual currency futures contract is responsible for regulating its futures market. NFA performs market regulation services on behalf of certain futures exchanges and swap execution facilities. Please be aware, however, that just because futures on virtual currencies, including Bitcoin, must be traded on regulated futures exchanges does not mean that the underlying virtual currency markets are regulated in any manner, and as discussed above what occurs in a virtual currency's underlying market will impact the price of a virtual currency's futures contract.

Investors with questions or concerns regarding trading futures on virtual currencies including Bitcoin should contact NFA's Information Center (312-781-1410 or 800-621-3570 or information@nfa.futures.org).

EMIR Article 7c(1) Information Statement

December 2024

Throughout this document references to "we", "our" and "us" are references to Citigroup Global Markets Inc. and references to "you" and "your" are references to the client.

Citigroup Global Markets Inc. provides clearing services at one or more central counterparties ("**CCPs**") recognised under EMIR Article 25 ("**a recognised non-EU CCP**"), as well as at one or more CCPs authorised under EMIR Article 14 ("**an authorised EU CCP**").

Pursuant to EMIR Article 7c(1), we are required to inform you that, where we offer the relevant clearing service, it is possible to clear contracts through an authorised EU CCP in addition to, or in place of, a recognised non-EU CCP. We note that you would need to be satisfied that you will continue to meet your local regulatory requirements by clearing contracts through the relevant authorised EU CCP, and we cannot be held responsible for any non-compliance thereof.

The list of CCPs that have been authorised to offer services and activities in the European Union under EMIR Article 14 together with the classes of financial instruments covered by the CCP's authorisation is available on ESMA's website (here), and may be updated from time to time.

EMIR Article 38(8) Disclosure Statement

December 2024

*Throughout this document references to "we", "our" and "us" are references to Citigroup Global Markets Inc. (referred to as the '**clearing service provider**'). References to "you" and "your" are references to the client.*

1. Introduction

Pursuant to EMIR Article 38(8), we are required to provide the following information to our clearing customers about CCPs organized and authorized in the European Union, namely Eurex, Euronext Clearing, and any others listed in the Appendix:

(a) information on the way that the margin models of the CCP work;

(b) information on the situations and conditions that might trigger margin calls;

(c) information on the procedures used to establish the amount to be posted by the clients; and

(d) a simulation of the margin requirements to which clients might be subject under different scenarios.

The European Securities and Markets Authority ("**ESMA**") is required to develop and submit draft regulatory technical standards, within 12 months from the date of entry into force of EMIR 3.0, to further specify (among other things): (i) the information to be provided by clearing service providers to their clients and (ii) the requirements of the simulation of margins to be provided to clients and the type of output to be provided.

At the time of this Disclosure Statement, ESMA has not yet published the draft regulatory technical standards referred to above, therefore this document has been drafted on a 'best efforts basis' considering the requirements in EMIR Article 38(8) set out above and considering information made publicly available by CCPs.

2. Information on the way that the margin models of the CCP work

2.1 <u>General CCP margin information</u>

CCPs usually call their members for two margin types, namely variation margin and initial margin.[10]

[10] Please note that margin terminology may differ from one EU CCP to the other, and clients are advised to refer to the rules of each CCP to familiarise themselves with the margin terminology that the specific CCP uses in its rules.

2.1.1 Variation margin

Variation margin (VM) represents margin collected or paid out to reflect current exposures resulting from actual changes in market price[11]. VM, normally paid in cash and transferred outright or with full title to a CCP or by a CCP, is a risk management tool designed to ensure that amounts representing the gains and losses under cleared derivatives contracts are transferred regularly as market prices fluctuate, preventing the build-up of large, unrealized losses. CCPs typically require that VM be posted in cash in the currency of the underlying transactions, depending on the specific terms of the contract.

For some other contracts, VM is collected and accrued by the CCP for the duration of the contract. This is often referred to as "contingent" VM.[12] Such contingent VM is considered as Initial Margin (see below) and can be covered in cash or non-cash collateral.

2.1.2 Initial margin and additional margins

Initial margin (IM) represents margins collected by the CCP to cover potential future exposure to clearing members providing the margin and, where applicable, to interoperable CCPs. This margin is intended to cover the market risk resulting in a change in mark-to-market value of the cleared contracts held by the clearing member at the CCP during the period between the last margin collection and the liquidation of positions following a default of a clearing member or of an interoperable CCP.[13]

IM is posted by clearing members to the CCPs either by way of cash (which is usually transferred outright) or securities (by way of security or outright transfer). As reference above, IM primarily covers market risk, which is the risk of a change in the mark-to-market before additional VM is posted or the position is closed out. Essentially, this is a function of the time it takes to post VM, the volatility of the cleared derivative and the close out timeline (margin period of risk). Other types of risk, such as concentration or stress conditions, can be covered via additional margins.

The application of IM and additional margins is CCP-specific. For example, some CCPs may include risks other than price risks in their IM, while other CCPs may apply additional margins. CCPs also reserve the right in their rules to call for any extraordinary additional margins to their members. CCPs use margin models to compute IM and additional margins. IM is typically calculated by applying one of the following two model types: SPAN like model or portfolio VaR model[14].

In the European Union (EU), CCPs are required to have anti-procyclical tools embedded in their margin models to mitigate risks associated with rapid margin changes. For IM, CCPs can use three different options: (a) applying a margin buffer at least equal to 25 % of the calculated margins, (b) assigning at least 25 % weight to stressed observations in the lookback period, or (c) ensuring that its

[11] See Article 1(6) of COMMISSION DELEGATED REGULATION (EU) No 153/2013 of 19 December 2012 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council with regard to regulatory technical standards on requirements for central counterparties (EMIR CCP RTS), as amended.

[12] This is a prevalent VM method for listed equity options.

[13] See Article 1(5) of the EMIR CCP RTS.

[14] Please refer to Section 2 of the ECB Occasional Paper Series on CCP initial margin models in Europe published by the ECB in April 2023 for further details of the main modelling frameworks used, including Standard Portfolio Analysis of Risk (SPAN) and Value at Risk (VaR) models.

margin requirements are not lower than those that would be calculated using volatility estimated over a 10-year historical lookback period.[15]

CCPs have a right to amend their margin methodologies and relevant parameters subject to applicable governance. Typically, CCPs review margin parameters on a periodic basis to ensure the level of margin coverage remains appropriate under any prevailing market conditions to cover market and counterparty credit risk.

Key CCP margin model parameters include:

- Margin period of risk (MPOR) which is the period of time from the last transfer of collateral covering a set of transactions with a defaulting clearing member, until the transactions are closed out and the resulting market risk is re-hedged. The MPOR for specific product sets is prescribed in the EU by regulation and currently stands at a minimum of
  - 2-days for exchange-traded derivatives (ETDs) or
  - 1-day for ETDs on a gross basis for client accounts under specific conditions[16] and
  - 5-days for cleared OTC derivatives;
- The "confidence interval" for calculating IM, based on historical volatility and anticipated liquidation periods, which is set to 99.0% for ETDs and 99.5% for cleared OTC derivatives under EU regulations[17];
- The anti-procyclical parameters: (a) the weight of stress periods, (b) the length of the lookback period, or (c) the buffer size.

CCPs typically compute margin for groups of positions in portfolios that are part of a specific clearing service or market, such as exchange-traded equity derivatives, exchange-traded interest rate derivatives or cleared OTC interest rates derivatives. However, some CCPs allow cross-product margining between correlated markets, such as, for example, exchange-traded and OTC cleared interest rate derivatives.

Appendix to this Disclosure Statement includes basic EU CCP-specific margin information for illustration purposes.

2.1.3 Collateral

IM can be met by market participants in the form of eligible collateral, typically cash in the main fiat currencies and high credit quality and liquid non-cash collateral in the form of US/EU and UK government bonds. CCPs establish a list of eligible collateral which may be subject to a 'haircut' that represents a discount to mitigate for the potential decrease in value of the collateral.

CCP haircut models, similar to CCP margin models, estimate the potential loss in value of eligible collateral. Considering the liquidity, credit risk, price volatility and other factors of the instrument, the CCP haircut model will dictate the discounted value of the instrument[18].

[15] See Article 28 of the EMIR CCP RTS.

[16] See Article 26(1)(c) of the EMIR CCP RTS, called "liquidation period" therein.

[17] See Article 24(1) of the EMIR CCP RTS.

[18] For example, assuming a margin requirement of EUR95 for a counterparty. That counterparty decides to use 10Y Italian Government Bonds against which the CCP set a 5% haircut. The counterparty should post in excess

CCPs also set concentration limits with respect to the amount of certain collateral types that can be posted as IM and set limit on the level of excess collateral that can posted to cover future IM requirements.

2.1.4 CCP margin payment cycle

CCPs have specific daily payment schedules to receive and pay VM and IM (typically once a day) and may also require ad hoc payments of margin (intraday margin calls).

Intraday IM calls can often only be met with cash collateral, but some CCPs may have stricter collateral criteria in place and only accept specific cash currency (such as Euro). These ad hoc calls usually occur during business hours, but, depending on market conditions, they can also take place outside of business hours and can be met in a different currency (such as US Dollars, for example).

2.1.5 CCP Transparency

CCPs provide information to their clearing members in different formats and at different levels. Certain CCPs do not distinguish between the impact of house and client activity on additional margin applied to the clearing member's business. For this reason, the information that clearing members make available to their clients is highly dependent on the level of transparency and disclosure that they receive from each individual CCP. The same applies with respect to the level of information available to clearing service providers further down the clearing chain.

CCPs have margin simulation tools enabling computations of IM. Some CCPs make their margin simulation tools publicly available, whereas others make them available to their members and clients only. These tools may also include features to compute CCP additional margins. *(See Section 5 below for further details.)*. It may be the case that new types of additional margin are not immediately reflected in CCP margin simulation tool, which limits the transparency that can be shared with clients.

3. Information on the situations and conditions that trigger margin calls

3.1 General information

CCPs typically collect IM and VM once a day based on the settlement price or mark-to-market value of cleared derivative positions at the end of the previous day (EoD margin), usually on a T+1 basis (i.e., at open of business the next morning). As mentioned above, CCPs can also call for margin outside the traditional EoD schedule. Intraday payments may be triggered if the cleared derivative positions have suffered unrealised or realised losses beyond a certain limit as defined by the CCP.

Several factors can result in changes to CCP IM. For example, trading activity that results in changes to the size of a position or composition of a portfolio can lead to higher CCP IM requirements. Larger or more concentrated positions generally require more IM to ensure adequate coverage.

Another key factor that can trigger a change in IM is increased market volatility. When markets become more volatile, the likelihood of large price movements increases, prompting CCPs to require higher margins to cover any such potential price movements.

of EUR100 notional value of the 10 Y Italian Government Bond to meet its margin requirement (collateral = margin requirement / (1 - haircut) = 95 / (1-0.05) = 100).

CCPs also periodically review and update their risk models. Changes in these models can lead to adjustments in IM requirements to better reflect current market conditions and risks.

It is important to note that both VM and IM requirements can change daily even if cleared derivative positions remain unchanged.

In summary, CCP margin calls can be triggered by a number of different factors including (but not limited to) a change in trading activity, increased market volatility and CCP margin models reacting to market conditions. For more detailed information, please refer to relevant CCP margin documentation on the relevant CCP websites.

3.2 Margin calls by clearing service providers

Clearing members typically call clients for the CCP required VM and/or IM called by the CCP. A client of a clearing member providing clearing services to its clients would in turn call its clients for at least the same amount of margin following a call from the clearing member.

Clearing service providers may call clients for additional margin in line with the contractual framework that they have in place with them. This can be done either by applying a multiplier to the CCP margin requirement or via a fixed margin buffer. In some cases, clearing service providers may also apply their own in-house margin methodology.

To determine whether additional margin is required, clearing service providers perform daily monitoring of client portfolios, evaluating a wide array of quantitative and qualitative factors. These include (but are not limited to) counterparty risk, credit risk, portfolio risk, country risk, market price movements, potential future volatility, the capacity of clients to respond to intraday margin calls and other risks assessed against each individual client. It is important to note that these risks may not be assessed by CCPs, and CCPs may not be aware of the identity of end clients in certain segregation models.

Clearing service providers also evaluate the level of the CCP margin in relation to their assessment of anticipated market conditions, the specific client portfolios, or other client specificities, and may apply additional margin. They may also apply additional margin to facilitate clients' intraday trade registrations and to absorb potential negative intraday market movements, which clients might not be able to respond to promptly. Clients should contact their relationship managers at the clearing firm for further information around the terms of their contractual framework with the clearing service provider.

4. Information on the procedures used to establish the amount to be posted by the clients

For more details on the procedures used to determine the amount of margin required by each CCP, please refer to the CCP margin information in the Appendix below that is not exhaustive and has been produced for illustration purposes only.

Client clearing agreements typically govern the provision of margin by clients to clearing service providers. The agreement may also cover the provision of margin by clearing service providers to clients, where relevant and mutually agreed upon. Clients are typically required to transfer margin to the clearing service provider to meet the requirements set by the CCP, as well as any additional margin requirement set by the clearing service provider, as explained above.

Where a CCP provides different clearing services, CCP rules may require clearing members to make separate margin calls on clients in respect of transactions cleared through each CCP Service. Client clearing documentation may provide for the option that the clearing service provider may make separate, or aggregated, margin calls on a client in the clearing service provider's sole and absolute discretion.

The ability for the clearing service provider to apply additional margin is governed by the terms of the client clearing agreement. To determine whether additional margin is required, clearing service providers usually assess a wide range of client-specific and portfolio-specific factors among others. In the event additional margin is to be applied, the client is notified and informed in accordance with the terms that govern its relationship with the clearing service provider.

Clients should contact their relationship managers at the clearing service provider for further information around the terms of their client clearing documentation.

5. Simulation of the margin requirements to which clients might be subject under different scenarios

CCPs provide margin simulation tools that help clearing service providers and clients estimate their margin requirements. In some instances, these tools also allow for scenario-based simulations. However, as mentioned above, certain margin components, such as additional margins, may not be always immediately included in those simulations.

You will find a link to CCP-specific margin tools for each of the CCPs listed in the Appendix. Some CCP tools allow simulation of the same portfolio at different historical dates, which can help clearing service providers and/or clients get a sense of the volatility of margin requirements during stressed periods.

When additional margins are required by a clearing service provider, a comprehensive assessment of various quantitative and qualitative factors is conducted. As these requirements are specific to each client, clearing service providers might not be in a position to simulate such information systematically across their client base. Clients should contact their relationship manager at their clearing service provider should they require further information on the margin requirements under different scenarios.

Appendix – CCP-specific margin information

CCPs typically publicly disclose information of their margin models on their websites.

Disclaimer: *CCP-specific margin information provided in this Appendix is accurate as of the date specified for each CCP separately below. CCP margin models can change from time to time and we have no obligation to dynamically review and update information set out in this Appendix. Clients should refer to the relevant CCP websites for the most up to date information.*

EUREX (Date: 9 December 2024)	**Nasdaq Equity (Date: 9 December 2024)**
CCP Name: Eurex Clearing AG	CCP Name: Nasdaq OMX Clearing AB
Margin model documentation weblink: Eurex Clearing Prisma	Margin model documentation weblink: Nasdaq Clearing Margin Methodology
Margin simulation model weblink: https://cpme.eurex.com/	Margin simulation model weblink: Nasdaq Clearing Technology and Connectivity (only available upon contacting Nasdaq)
Margin model Name: Prisma	Margin model Name: OMS II Model
Margin model Type: Portfolio VaR	Margin model Type: Span-like
Risks captured by margin model: Market risk, liquidity (or concentration) risk, option risk and time-to-expiry (settlement) risk	Risks captured by margin model: Market risk, option risk and time-to-expiry (settlement) risk
Cross-product margining: Applicable between ETDs and Cleared OTC Interest Rates	Cross-product margining: Only between equity products
Margin Period of Risk (holding period): 2-days for ETDs / 5-days for OTC	Margin Period of Risk (holding period): 2-days for ETDs
Anti-Procyclical component: Yes – 25% weighted stress period scenarios	Anti-Procyclical component: Undisclosed
Lookback period: 3 years	Lookback period: 1 year
Confidence level: 99.0% for ETDs / 99.5% for OTC	Confidence level: 99.2%
Metric: Value-at-Risk (VaR)	Metric: Stress Value

Nasdaq Fixed Income (Date: 9 December 2024)	**Nasdaq Commodities (Date: 9 December 2024)**
CCP Name: Nasdaq OMX Clearing AB Margin model documentation weblink: Nasdaq Clearing Margin Methodology Margin simulation model weblink: Nasdaq Clearing Technology and Connectivity (only available upon contacting Nasdaq) Margin model Name: CFM Model (Cash Flow Margin) Margin model Type: Principal Component Analysis Risks captured by margin model: Market risk (Curve Risk) Cross-product margining: Only between fixed income products Margin Period of Risk (holding period): 2-days for ETDs and 5-day for OTC Anti-Procyclical component: Undisclosed Lookback period: 10 years and 1 year Confidence level: 99.2% for ETDs and 95% for OTC Metric: Stress Value	CCP Name: Nasdaq OMX Clearing AB Margin model documentation weblink: Nasdaq Clearing Margin Methodology Margin simulation model weblink: Nasdaq Clearing Technology and Connectivity (only available upon contacting Nasdaq) Margin model Name: SPAN® Model Margin model Type: SPAN Risks captured by margin model: Market risk, option risk and time-to-expiry (settlement) risk Cross-product margining: Only between certain commodities product group Margin Period of Risk (holding period): 2-days to 5-days for ETD Anti-Procyclical component: Undisclosed Lookback period: 1 year Confidence level: 99.2% for ETDs Metric: Stress Value

Euronext Equity Derivatives (Date: 9 December 2024)	Euronext Fixed Income Derivatives (Date: 9 December 2024)
CCP Name: Euronext Clearing Margin model documentation weblink: • Methodologies | Euronext Clearing • Parameters | Euronext Clearing Margin simulation model weblink: The tool is not available publicly, for access please contact CCP-rm.group@euronext.com Margin model Name: EQDER Risk Engine Margin model Type: SPAN-like Risks captured by margin model: Market risk, option risk and time-to-expiry (settlement) risk Cross-product margining: Only between equity products Margin Period of Risk (holding period): 2-days for ETDs and 5-days for OTC Anti-Procyclical component: 25% Stressed weight Lookback period: 5 years Confidence level: 99.5% Metric: Stress Value	CCP Name: Euronext Clearing Margin model documentation weblink: • Methodologies | Euronext Clearing • Parameters | Euronext Clearing Margin simulation model weblink: The tool is not available publicly, for access please contact CCP-rm.group@euronext.com Margin model Name: Fixed Income Risk Engine Margin model Type: VaR Risks captured by margin model: Market risk Cross-product margining: Only for instruments from same issuer Margin Period of Risk (holding period): 5-days Anti-Procyclical component: 10 Year lookback period Lookback period: Anchored from 2004 Confidence level: from 99.5% to 99.8% Metric: Expected Shortfall Note the following margin add-ons are applied separately: decorrelation, concentration/idiosyncratic and repo concentration

Euronext Commodity Derivatives (Date: 9 December 2024) CCP Name: Euronext Clearing Margin model documentation weblink: • Methodologies | Euronext Clearing • Parameters | Euronext Clearing Margin simulation model weblink: The tool is not available publicly, for access please contact CCP-rm.group@euronext.com Margin model Name: COMDER Risk Engine Margin model Type: VaR Risks captured by margin model: Market risk, option risk and time-to-expiry (settlement) risk Cross-product margining: Between commodity products excluding farmed salmon Margin Period of Risk (holding period): 2-days Anti-Procyclical component: 25% Stressed weight Lookback period: 5-year Confidence level: from 99.5% Metric: Expected Shortfall Note the following margin add-ons are applied separately: decorrelation	

ECC Derivatives Margining (Date: 9 December 2024)	BME Financial derivatives (Date: 9 December 2024)
CCP Name: European Commodity Clearing AG Margin model documentation weblink: Margining Margin simulation model weblink: Q & A Session – PC-Span® (Please follow these steps to install and run ECC margin simulation tool) Margin model Name: SPAN® Model Margin model Type: SPAN Risks captured by margin model: Market risk, option risk and time-to-expiry (settlement) risk Cross-product margining: Only applicable between "cross margin group" Margin Period of Risk (holding period): 2-days Anti-Procyclical component: Undisclosed Lookback period: 1-year Confidence level: from 99% Metric: stress value Note the following margin add-ons are applied separately: Concentration, power, gas, emission and short option delivery	CCP Name: BME Clearing Margin model documentation weblink: MEFFCOM2 | BMEClearing Margin simulation model weblink: Not available publicly Margin model Name: MEFFCOM2 Margin model Type: SPAN-like Risks captured by margin model: Undisclosed Cross-product margining: Undisclosed Margin Period of Risk (holding period): Undisclosed Anti-Procyclical component: Undisclosed Lookback period: Undisclosed Confidence level: Undisclosed Metric: Undisclosed Note the following margin add-ons are applied separately: Undisclosed

KDPW CCP Listed derivatives (Date: 9 December 2024)	
CCP Name: KDPW_CCP S.A. Margin model documentation weblink: SPAN – margin calculation methodology Margin simulation model weblink: SPAN – margin calculation methodology (please follow the steps in this page to install and run KDPW_CCP margin simulation tool) Margin model Name: **SPAN®** Margin model Type: SPAN Risks captured by margin model: Market risk, option risk and time-to-expiry (settlement) risk Cross-product margining: Yes Margin Period of Risk (holding period): 2-Days Anti-Procyclical component: 10-Years lookback Lookback period: 10-Year Confidence level: 99% (and 99.5% where history is shorter than the lookback period) Metric: Stress value Note the following margin add-ons are applied separately: Undisclosed	

EMIR ARTICLE 38(9) AND CCPR DISCLOSURE STATEMENT

In accordance with Citigroup Global Market Inc.'s obligations under the EU CCP Recovery and Resolution Regulation ("**CCPR**")[19] and the European Market Infrastructure Regulation ("**EMIR**")[20], we are including this document to inform you, with respect to central counterparties ("**CCPs**") organized and authorized in the EU, (i) about how measures in a CCP's recovery plan may affect you (Article 9(23) CCPR), and (ii) of the potential losses or other costs that you may bear as a result of the application of the default management procedures and loss and position allocation arrangements under the CCP's operating rules (Article 38(9) of EMIR, which was introduced by Article 87(7) CCPR and replaced pursuant to Article 1(41) of EMIR 3.0[21]).

I. CCPR

CCPR establishes a harmonised framework for the recovery and resolution of EU CCPs. CCPR is intended to ensure that both CCPs and their regulators will act decisively in a crisis scenario to keep CCPs providing their critical functions and to limit the impact on the financial system and on public funds.

CCPR comprises the following three pillars:

1. **Preparation**

   a. **Recovery plans**

CCPs are required to prepare recovery plans setting out measures they would take in crisis scenarios to restore their financial soundness and continue providing their critical functions. Recovery plans are not standardised and will likely differ from CCP to CCP. CCP Recovery plans are required to include a comprehensive range of:

i. capital actions;

ii. loss allocation actions (including recovery cash calls and a reduction in the value of gains payable by the CCP to non-defaulting clearing members);

[19] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0023&from=EN

[20] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202402987

[21] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202402987

iii. position allocation actions; and

iv. liquidity actions,

to maintain or restore the viability and financial soundness of the CCP.

b. **Resolution plans**

Resolution authorities are required to prepare resolution plans setting out the resolution actions they would take if the CCP were likely to fail, in order to keep the CCP providing its critical functions and to limit the impact on the financial system and on public funds.

c. **Resolvability**

Where a resolution authority identifies obstacles to the resolvability of a CCP in the course of the planning process, it can also require the CCP to take appropriate measures. These measures may include changes to the CCP's operational or legal structure or to its pre-funded loss-absorbing resources.

2. **Early intervention**

Where a CCP is about to breach its prudential requirements, CCPR gives regulators powers to intervene before the problems become critical and the financial situation deteriorates irreparably. These powers may include requiring a CCP to undertake specific actions envisaged in its recovery plan or to make changes to its business strategy or legal or operational structure.

3. **Resolution**

CCPR gives resolution authorities resolution tools to manage the failure of a CCP in an orderly way and to ensure that essential clearing functions and services are preserved.

Specifically, CCPR envisages the following resolution tools:

a. the **position and loss allocation tools**, including:

(i) the **tear-up tool**: This resolution tool allows the resolution authority to terminate specific clearing contracts to balance the books of the CCP. In practice, this tool would be used by a resolution authority if a clearing member defaults and its positions cannot be auctioned off. In these circumstances, the resolution authority would terminate corresponding opposing positions to re-balance the CCP's books.

(ii) the **variation margin gain haircut (VMGH) tool**: This resolution tool allows the resolution authority to reduce the amount the CCP owes a clearing member in respect of post-resolution variation margin gains due in accordance with the CCP's process for paying variation margin. B.

b. the **write-down and conversion tool**: This resolution tool allows the resolution authority to write down or convert instruments of ownership, debt instruments or other unsecured liabilities of the CCP.

c. the **sale of business tool**: This resolution tool allows the resolution authority to sell all or part of the failing CCP to another entity.

d. the **bridge CCP tool**: This resolution tool allows the resolution authority to separate out essential functions of a CCP and transfer them to a new CCP (the bridge CCP), which is controlled by the resolution authority.

To apply the resolution tools, resolution authorities are given wide resolution powers, including the power to:

(a) close out and terminate financial contracts;

(b) reduce the amount of variation margin due to a clearing member;

(c) cancel or modify the terms of a contract with the CCP;

(d) suspend payment and delivery obligations;

(e) restrict security interest enforcement; and

(f) suspend termination rights.

The application of the resolution tools and powers under CCPR is subject to certain safeguards (such as the 'no creditor worse off' principle). CCPR does not apply these safeguards to the recovery plans or default management procedures discussed in Section II below.

II. Impact on you

Provisions under CCPR and EMIR require us to inform you:

(a) if and in what way measures in the CCP’s recovery plan may affect you; and

(b) of the potential losses or other costs that you may bear as a result of the application of the default management procedures and loss and position allocation arrangements under a CCP's operating rules.

The measures described below may affect transactions we are clearing for ourselves as well as transactions we are clearing for you or, where we are providing a clearing service to you as a client of a clearing member (known as "indirect clearing"), transactions cleared by that clearing member for us and you. Therefore, if the measures below are exercised, what we pay or deliver to you may be correspondingly reduced.

In addition to the specific costs and losses set out below, you may incur further costs and losses as a result of any market disruptions ensuing from the financial difficulties of the relevant CCP or its clearing members (such as increased margin requirements or stressed market circumstances which may adversely impact the value of your transactions).

1. CCP recovery plan measures

As CCPs are not required to make their recovery plans public, we cannot confirm with certainty which measures will be included in each CCP's recovery plan.

However, we expect each CCP's recovery plan to comprise one or more of the following measures, each of which may impact you in the ways outlined in the table below. The appendices to this letter set out details of which of the below measures have been provided for in the rulebook of each CCP we clear at on your behalf or, where we are facilitating an indirect clearing service, at which your transactions are cleared by a clearing member. If a measure is provided for in a CCP's rulebook, we would also expect that measure to be included in that CCP's recovery plan.

Measure	Description	Impact on you
Tear up	A process by which a CCP may terminate a class of contracts in order to rebalance its book. This tool is normally available to CCPs if a clearing member defaults and its positions cannot be auctioned off. The CCP can terminate corresponding positions in whole or part to re-balance the CCP's books. It may also be available following a non-default loss, a force majeure or other emergency. Normally a tear-up will be in the form of a partial tear-up, in which only a portion of each contract of a particular class of contracts will be subject to the tear-up. Generally, this	If the CCP implements tear-up measures in respect of a contract we are clearing for you, the CCP will terminate the relevant contract (or a portion of it), perform a close-out calculation and pay any positive resulting sum to us or require us to pay any resulting amount to it. Where we are facilitating an indirect clearing service, the CCP will make the initial payment of any positive resulting sum to or require payment of any resulting amount from the clearing member providing indirect clearing services and the clearing member will either make a corresponding payment to us or

	portion will be sized at the minimum level to permit the CCP to rebalance the contracts of that class following the default or other event leading to the tear-up. A partial tear-up may lead to the tear-up of only portions of contracts that have an opposing directional position to contracts in the defaulting clearing member's portfolio or it may lead to the tear-up of portions of contracts that have both an opposing directional position and the same directional position. A tear-up may also be in respect of the entirety of the contracts in a particular class. Such a tear-up will lead to the tear-up of all contracts in the class, regardless of the direction of the position. Typically, a CCP will have broad discretion to determine what constitutes a class of contracts for these purposes. Partial tear-up is to be contrasted with an invoicing back (described below) because it will apply to all the contracts of a particular class of contracts cleared by a CCP (as opposed to only certain contracts identified to offset the defaulted contracts) and so its impact will fall evenly across all equivalent contracts forming part of the same class, although the impact may fall upon only those contracts having an opposing directional position to the defaulted contracts.	require us to make a corresponding payment to it. Whilst we will account to you for any payment we receive, if we are required to make a payment to the CCP or our clearing member, we will claim that amount from you. In this context, you may incur incidental costs in the process of the closing out of your contracts and you may incur additional costs if you decide to enter into a replacement contract. You may also suffer a loss if the close-out value is different to the value of the closed-out contract recorded in your books. If you decide not to enter into a replacement contract, you will be exposed to the risk of adverse market movements that were previously hedged by the contract.
Invoicing Back	A process by which a CCP may terminate specific contracts in order to rebalance its book. This tool is normally available to CCPs if a clearing member defaults and its	If the CCP implements invoicing back measures in respect of a contract we are clearing for you, the CCP will terminate the relevant contract, perform a close-out

	positions cannot be auctioned off. The CCP can terminate contracts that have an opposing directional position to re-balance the CCP's books. It may also be available following a non-default loss, a force majeure or other emergency. Invoicing back is to be contrasted with a partial tear-up (described above) because it will apply to some, but not all the contracts of a particular class of contracts cleared by a CCP (as opposed to portions of all those contracts in the same class as the defaulted contracts) and so its impact may not fall evenly across all clearing members holding equivalent contracts forming part of the same class. Unlike partial tear-up, which may apply to contracts having different directional positions, invoicing back will only apply to contracts having a corresponding opposing directional position to the defaulted contracts.	calculation and pay any positive resulting sum to us or require us to pay any resulting amount to it (although a requirement to pay the CCP is significantly less likely in an invoicing back). Where we are facilitating an indirect clearing service, the CCP will make the initial payment of any positive resulting sum to or require payment of any resulting amount from the clearing member providing indirect clearing services and the clearing member will either make a corresponding payment to us or require us to make a corresponding payment to it. Whilst we will account to you for any payment we receive, if we are required to make a payment to the CCP or our clearing member, we will claim that amount from you. In this context, you may incur incidental costs in the process of the closing out of your contracts and you may incur additional costs if you decide to enter into a replacement contract. You may also suffer a loss if the close-out value is different to the value of the closed-out contract recorded in your books. If you decide not to enter into a replacement contract, you will be exposed to the risk of adverse market movements that were previously hedged by the contract.
Forced allocation	A process by which a CCP may require a clearing member to enter into a contract at a price and on terms specified by the CCP in order to rebalance its book.	If the CCP implements forced allocation measures in respect of a category of contracts we clear on your behalf or, where we are facilitating an indirect clearing

	Similar to invoicing back, this tool is normally available to CCPs if a clearing member defaults and its positions cannot be auctioned off. In the case of forced allocation, the CCP will divide up the unsold portfolio of the defaulted clearing member and allocate portions of such portfolio to the remaining non-defaulting clearing members. In most cases, the CCP has ultimate discretion to determine which clearing members are allocated such trades and the price at which the portfolio is allocated. This tool may also be available following a non-default loss, a force majeure or other emergency.	service, a category of contracts which a clearing member clears on your behalf, we may allocate certain of the contracts we are required to enter into to your client account. Following the allocation of such contracts to your client account, related back-to-back contracts will automatically arise between you and us and you will be required to perform payment and margining obligations in respect of such related back-to-back contracts.
Variation Margin Gains Haircutting (VMGH) measures	VMGH is used to reduce the amount of variation margin a CCP is required to transfer to non-defaulting clearing members where such obligation arises from a move in the mark-to-market value of a contract in favour of the clearing member after the CCP triggers a default process. Different drafting may be used to achieve this effect, for example, there may be a permanent reduction in the variation margin obligation that affects the value of the affected contract or an additional payment obligation may arise in favour of the CCP under the affected contract that has the effect of reducing the CCP's variation margin obligation.	If the CCP implements VMGH measures in respect of any variation margin to be transferred in respect of your contracts, we will pass the impact of any reduction in such variation margin on to you or, where we are facilitating an indirect clearing service, the impact of any reduction of variation margin on the clearing member acting for us in respect to contracts cleared on your behalf. This may result in you not receiving any variation margin in respect of any increase in the mark-to-market value of such contracts in your favour. This may mean that you do not obtain the full value that would otherwise accrue to your affected contracts that would have arisen from market movements after the default and, to the extent that you hold an opposite position in relation to any asset or liability that was hedged by the affected contract, you may face a loss on that position.

Assessments	Assessments are additional contributions to the default fund, which the CCP may call upon a non-defaulting clearing member to make during the default management process in order to ensure that it has sufficient resources to enable the CCP to manage the default of one or more clearing members. Assessments are amounts called for in addition to default fund contributions already made by clearing members. They will only be called for during a default management process and should be differentiated from replenishments, which the CCP will call to restore the default fund to its steady state following the end of the default management process.	If the CCP or, where we are facilitating an indirect clearing service, the clearing member calls us for an assessment as part of a default management process, we may call for an amount equal to a portion of such assessment from you. The amount we will call for shall represent the portion of the portfolio of contracts we clear at the CCP which comprises contracts we clear on your behalf or, where we are facilitating an indirect clearing service, the proportion of contracts we clear at the CCP through that clearing member which comprises contracts we clear on your behalf.
Changes to Margin Criteria	A CCP may have discretion under its rulebook to amend the criteria used to determine the quantum of margin calls (whether variation margin or initial margin), the timing of such margin calls and the assets it will accept as eligible collateral.	If the CCP amends its margin criteria such that the type or amount of variation margin or initial margin we are required to transfer in respect of your contracts (or, where we are facilitating an indirect clearing service, the clearing member acting for us is required to transfer), or the timing on which we are required (or the clearing member, as applicable, is required) to make such transfer, changes, we will pass the impact of such changes onto you. This may result in you having to post additional margin in respect of your contracts, no longer being able to transfer certain assets as eligible collateral or us changing the deadline by which you must transfer margin to us on each business day.
Contingent Variation Margin	In certain situations (e.g. following the default of a clearing member), in order to preserve its cashflow, the CCP may credit a clearing member	We will only transfer an amount of variation margin to you equal to the amount of variation margin we receive from the CCP in respect of

	with an entitlement to variation margin (e.g. by way of a credit to their account) whilst, at the same time, restricting payment of such variation margin to the clearing member or withdrawal of amounts credited to its account by the clearing member. In the future, the clearing member may be able to use this contingent variation margin credit in settlement of an obligation to post variation margin (and so the clearing member will not need to transfer variation margin to satisfy such obligation).	the contracts we clear on your behalf or, where we are facilitating an indirect clearing service, the amount of variation margin the clearing member acting for us receives from the CCP in respect to contracts cleared on your behalf. Therefore, if the CCP implements contingent variation margin measures in respect of any variation margin to be transferred in respect of your contracts, you may not receive the full amount of variation margin due in respect of those contracts at the time such transfer is due. However, you will be credited with an entitlement to such variation margin which you may be able to use against your variation margin obligations in the future (rather than transferring additional variation margin).
Emergency Powers	In emergency conditions (such as market disruption, war, force majeure or following governmental or regulatory action), a CCP may have additional powers to amend its rulebook or require clearing members to take certain actions with regard to the performance of each clearing member's contracts. Such emergency powers may include Tear ups, Invoicing Back, Contingent Variation Margin and Forced Allocation (each as described above). The CCP may also elect to close one or more of its services and terminate all outstanding contracts cleared at that service.	See further above as to the impact of Tear ups, Invoicing Back, Contingent Variation Margin and Forced Allocation and below as to the impact of a service closure. In addition, if the CCP's exercise of emergency powers impacts the terms of any of your contracts or the amount of margin we are required to transfer to the CCP or a clearing member on your behalf or the CCP or clearing member is required to transfer to us in respect of your contracts, we will pass the impact of such changes onto you. This may result in an amendment to the terms of your contracts, the close-out of contracts to which you are party, an increase in the amount of margin you are required to

		transfer or a decrease in the amount of margin you may receive. If a contract which is being cleared for you is closed out, you may incur incidental costs in the process of the closing out of such contract and you may incur additional costs if you decide to enter into a replacement contract at another CCP. You may also suffer a loss if the close-out value is different to the value of the closed-out contract recorded in your books. If you decide not to enter into a replacement contract, you will be exposed to the risk of adverse market movements that were previously hedged by the contract. If you receive less margin in respect of a contract we clear on your behalf or, where we are facilitating an indirect clearing service, which is cleared by a clearing member on your behalf, this may mean that you do not obtain the full value that would otherwise accrue to such contract as a result of market movements and, to the extent that you hold an opposite position in relation to any asset or liability that was hedged by the affected contract, you may face a loss on that position.
Service Closure	The CCP may elect to close one or more of its services and terminate all outstanding contracts cleared at that service.	If the CCP closes a service at which we are clearing contracts for you and you have not arranged for your positions to be closed out yourself before the closure, the CCP will terminate the relevant contracts, perform a close-out calculation and pay any positive resulting sum to us or require us to pay any resulting amount to it.

		Where we are facilitating an indirect clearing service, the CCP will pay any positive resulting sum to or require payment of any resulting amount from the clearing member providing indirect clearing services and the clearing member will either make a corresponding payment to us or require us to make a corresponding payment to it. Whilst we will account to you for any payment we receive, if we are required to make a payment to the CCP or our clearing member, we will claim that amount from you. In this context, you may incur incidental costs in the process of the closing out of your contracts and you may incur additional costs if you decide to enter into a replacement contract at another CCP. You may also suffer a loss if the close-out value determined by the CCP is different to the value of the closed-out contract recorded in your books. If you decide not to enter into a replacement contract, you will be exposed to the risk of adverse market movements that were previously hedged by the contract. Due to the closure of the relevant service, it also may not be possible to enter into replacement contracts.

Please see further the Appendices to this letter for details as to which of these measures are included in the rulebook of the relevant CCPs at which we clear on your behalf.

2. Default management procedures

In summary, if a clearing member is declared to be in default under a CCP's default management procedures, the CCP will usually try to transfer (port) transactions and assets related to the clients of that clearing member to another clearing member. If porting cannot be achieved, the CCP will terminate the transactions related to the clients of that clearing member and perform a close-out calculation in respect of them. If there is an amount owed by the CCP, the CCP may pay such amount directly to such clients subject to certain conditions, including if it knows their identity. If the CCP does not pay directly to such clients, it will pay such amount to the defaulting clearing member (or its insolvency practitioner) for the account of the clearing member's clients.

If we are or, where we are facilitating an indirect clearing service, the clearing member providing the indirect clearing service is declared to be in default, you may incur costs and losses, the most relevant of which we expect to be the following:

(a) If your transactions and assets are ported and (i) we are the defaulting clearing member, you may incur incidental costs for transferring your positions and assets to another clearing broker; or (ii) we are facilitating an indirect clearing service, whilst we will continue to provide you with an indirect clearing service, we may pass on to you incidental costs associated for transferring your positions and assets to another clearing broker. In each case, you may be required to post additional collateral to enable porting to occur.

(b) If your transactions are terminated and (i) we are the defaulting clearing member and the resulting sum is paid directly to you, you may incur incidental costs in the process of the closing out of your contracts; or (ii) if we are facilitating an indirect clearing service through a clearing member that has defaulted and the resulting sum is paid directly to us, we will hold this sum for you and you may incur incidental costs in the process of the closing out of your contracts. In each case, you may also suffer a loss if the close-out value is different to the value of the closed-out contract recorded in your books. Further, you may incur additional costs if you decide to enter into replacement transactions and if you decide not to (or cannot) enter into a replacement contract, you will be exposed to the risk of adverse market movements that were previously hedged by the contract.

(c) If we are the defaulting clearing member and your transactions are terminated and the resulting sum is paid to us, you may incur the costs and losses described in the paragraph above and additional losses resulting from our insolvency. If your transactions are terminated, we are facilitating an indirect clearing service through a clearing member that has defaulted and the resulting sum is paid directly to the defaulted clearing member, you may incur the costs and losses described in the paragraph above and additional losses resulting from the insolvency of the defaulted clearing member.

If another clearing member is declared to be in default, the CCP will terminate any outstanding transactions of that clearing member. Any losses suffered by the CCP in respect of those transactions will be allocated amongst the CCP and its members in accordance with its loss and position allocation tools. The CCP may also seek to reduce those losses through the application of certain other measures provided for in its rulebook.

As part of such loss allocation and reduction tools, the CCP may apply default contributions provided by its clearing members against losses it incurs in respect of any transactions it has entered into with the defaulting clearing member. If we are your clearing member, to the extent any default fund contributions we have made in respect of transactions we clear on your behalf are applied to reduce such losses, we may pass on the amount by which such default fund contributions are reduced to you under the client clearing agreement between us. If we are facilitating an indirect clearing service through a clearing member and that clearing member, to the extent any default fund contributions that clearing member has made in respect of transactions we clear on your behalf are applied to reduce such losses and such costs are passed on to us, we may pass on the amount of such costs incurred by us to you under the client clearing agreement between us,

Such loss allocation and reduction tools may also include the following, each of which will impact you in the manner described under "CCP recovery plan measures" above:

(a) assessments;

(b) tear up;

(c) invoicing back;

(d) forced allocation;

(e) variation margin gains haircutting (VMGH) measures;

(f) changes to margin criteria;

(g) service closure;

(h) contingent variation margin; and

(i) use of emergency powers.

Please see further the Appendices to this letter for details as to which of these measures are included in the rulebook of the relevant CCPs at which we clear or, where we are facilitating an indirect clearing service, at which your transactions are cleared by a clearing member on your behalf.

III. Disclaimer

Recovery plans are not public and clearing members have to rely on voluntary disclosures by CCPs and the provisions of CCPs' rulebooks. Additionally, CCPs may take actions which are not reflected in the information they have provided. Therefore, there may be other ways in which a CCP's recovery plan may impact you which are not reflected in this notification.

The information in this notification is based on the general provisions of CCPR and EMIR, as well as the information publicly available on CCPs' websites (including in the rulebooks of those CCPs).

This notification may be updated from time to time to reflect regulatory guidance and the appendices hereto may be updated as CCPs update their rulebooks or disclose information about their recovery plans. However, we are under no obligation to keep the disclosure contained in this notification up to date at all times and there may therefore be some delay between a CCP updating its rulebook, or disclosure relating thereto, and consequential updates being made to the disclosure in this notification. Clients are therefore advised to consult the latest version of the relevant CCP's rulebook, in addition to the latest version of this notification and the appendices, which are available here: Regulatory Disclosures | Citi.

This notification does not constitute legal or any other form of advice and must not be relied on as such. This notification provides a high-level overview of a complex and new area of law, the effect of which will vary depending on the specific facts of any particular case. You and, where applicable, your clients may wish to appoint independent professional advisors to advise you on this.

This notification is not an exhaustive information document, please also refer to other disclosure documents on other aspects of CCPR and EMIR.

If you have questions in the meantime, please contact your usual Citi relationship manager.

Appendix to FIA Template CCPR Client Notification – Nasdaq Clearing AB

Version 1.0

March 2023

This Appendix sets out the recovery and default tools available to, or that may be applied to, Nasdaq Clearing AB ("**Nasdaq**") in a recovery and resolution scenario as set out in the Clearing Rules of Nasdaq Derivatives Markets (the "**Rulebook**") and certain other documentation published by Nasdaq referred to in this Appendix.

* indicates that while this measures is not specifically contemplated in the Rulebook, it is likely to be available to Nasdaq by virtue of its general powers.

Measure	Contemplated in Rulebook	Rulebook Reference	Additional Comments
Tear-up	✓	Schedule 2 to Appendix 16 of the Rulebook.	Tear-up may be applied in both directions (i.e. tear-up may be applied to portions of contracts that have both an opposing directional position and the same directional position to contracts in the defaulting clearing member's portfolio).
Invoicing Back	**x***	n/a	n/a
Forced Allocation	**x***	n/a	n/a
Variation Margin Gains Haircutting (VMGH)	**x***	n/a	n/a
Assessments	✓	Articles 1.9A.26 -28 of Appendix 16 of the Rulebook.	There is a cap on the amount of assessments that may be called.
Changes to Margin Criteria	✓	Articles 2.8.2a, 2.8.14, 2.8.16 and 2.8.17 of the Rulebook	-
Contingent Variation Margin	**x***	n/a	n/a
Emergency Powers	✓	Articles 1.17.1 and 1.19 of the Rulebook.	In.an emergency situation, Nasdaq may take various measures (including

			amending its rules) without notice. This means that Nasdaq could in practice adopt any of the measures outlined above which are not specifically provided for explicitly in the Rulebook.
Service Closure	✓	Schedule 4 of Appendix 16 of the Rulebook.	-

Appendix to FIA Template CCPR Client Notification - BME Clearing, S.A.U

Version 1.0

March 2023

This Appendix sets out the recovery and default tools available to, or that may be applied to, BME Clearing S.A.U ("**BME**") in a recovery and resolution scenario as set out in the BME Central Counterparty Rulebook effective from 12 February 2023 (the "**Rulebook**") and certain other documentation published by BME referred to in this Appendix.

* indicates that while this measure is not specifically contemplated in the Rulebook, it is likely to be available to BME by virtue of its general powers.

Measure	Contemplated in Rulebook	Rulebook Reference	Additional Comments
Tear-up	x*	n/a	n/a
Invoicing Back	x*	n/a	n/a
Forced Allocation	x*	n/a	n/a
Variation Margin Gains Haircutting (VMGH)	x*	n/a	n/a
Assessments	✓	Articles 29(5)(F), 45(8)(C)(7) and 55(1) of the Rulebook and Condition 1.14 of the General Conditions[22].	Although the BME rulebook does not explicitly provide for assessments, a clearing member may be required to provide additional contribution amounts to ensure the continuity of the service. A resolution authority may call a clearing member for a cash contribution of an amount equal to up to twice its contribution to the default. A failure to meet the required amount may result in the member being declared in default.

[22] BME Central Counterparty General Conditions, Financial Derivatives Segment dated 3 June 2021 and effective from 1 July 2021 ("**General Conditions**").

Changes to Margin Criteria	✓	CPMI-IOSCO Self-Assessment 2020 (*Q6.7.2*); Articles 2(5) and 29(4) of the Rulebook; and Financial Derivatives General Conditions, Circular C GEN 12/2022 (*Valuation of Securities posted as Margins*).	-
Contingent Variation Margin	x*	n/a	n/a
Emergency Powers	✓	Article 2(5) of the Rulebook	In.an emergency situation, BME has broad powers to amend its rules without notice. This means that BME could in practice adopt any of the measures outlined above which are not specifically provided for explicitly in the Rulebook.
Service Closure	✓	Article 45.8(C)(10) of the Rulebook	-

Appendix to FIA Template CCPR Client Notification – European Commodity Clearing AG

Version 1.0

May 2023

This Appendix sets out the recovery and default tools available to, or that may be applied to, European Commodity Clearing AG ("**ECC**") in a recovery and resolution scenario as set out in the Clearing Conditions of European Commodity Clearing effective from 8 May 2023 (the "**Rulebook**") and the guide published by ECC entitled "Impact of Recovery and Resolution Tools on Members and Clients" effective from 19 December 2022 (the "**Recovery Guide**").

* indicates that while this measure is not specifically contemplated in the Rulebook, it is likely to be available to ECC by virtue of its general powers.

Measure	Contemplated in Rulebook or Recovery Guide	Rulebook Reference	Additional Comments
Tear-up	✓	Section 3.11.9 of the Rulebook.	ECC may effect a "Partial Tear-Up" of remaining opposing positions held by a non-defaulting Clearing Member after at least one voluntary auction has been held and was insufficient to close out all positions in the default portfolio.
Invoicing Back	x*	n/a	n/a
Forced Allocation	✓	Sections 3.11 and 3.11.8 of the Rulebook.	ECC may hold mandatory auctions if at least one voluntary auction has been held and was insufficient to sufficiently reduce the risk in the default portfolio. ECC may also apply Forced Allocation in respect of remaining open positions after at least one voluntary and one mandatory auction has been held.
Variation Margin Gains	x*	n/a	n/a

Haircutting (VMGH)			
Assessments	✓	Sections 3.4.6.2(3) and 3.7.4 of the Rulebook.	-
Changes to Margin Criteria	✓	Sections 3.4.6.1(1) and 3.4.7(1) of the Rulebook.	
Contingent Variation Margin	x*	n/a	n/a
Emergency Powers	✓	Section 3.3.11 of the Rulebook.	In certain emergency scenarios, ECC has broad powers to take all appropriate and necessary measures to ensure orderly clearing. This means that ECC could in practice adopt any of the measures outlined above which are not specifically provided for in the Rulebook.
Service Closure	x*	n/a	n/a

Appendix to FIA Template CCPR Client Notification – Eurex Clearing

Version 1.0

March 2023

This Appendix sets out the recovery and default tools available to, or that may be applied to, Eurex Clearing AG ("**Eurex**) in a recovery and resolution scenario as set out in the Clearing Conditions of Eurex Clearing AG as published on 12 February 2023 (the "**Rulebook**") and certain other documentation published by Eurex referred to in this Appendix.

* indicates that while this measure is not specifically contemplated in the Rulebook, it is likely to be available to Eurex in certain circumstances by virtue of its general powers.

Measure	Contemplated in Rulebook	Rulebook Reference	Additional Comments
Tear-up	✓	Chapter I Part 1, Conditions 7.5.4.1, 7.5.4.3, 17.7.2(2)(a) and 17.7.2(b)(i) and (iii).	Eurex or the resolution authority may terminate transactions with opposite directional positions to those of the defaulting clearing member. Eurex or the resolution authority may also terminate all transactions within a liquidation group on the occurrence of a clearing member default where the resources available to Eurex are not sufficient to cover its losses.
Invoicing Back	✓	Chapter I Part 1, Conditions 13.3.1 and 13.3.3.	Eurex may establish opposite corresponding transactions with respect to transactions affected by a force majeure event, market disorder event or an impossibility event.
Forced Allocation	**x***		-
Variation Margin Gains Haircutting (VMGH)	✓	Chapter I, Part 1, 17.7.2(3).	-
Assessments	✓	Chapter I Part 1, Conditions 6.3.1 and 17.7.2(4).	There is a cap on the amount of assessments that may be called

Changes to Margin Criteria	✓	Chapter I Part 1 Conditions 1.6.3 (b), 3.2.1, 3.2.4, 3.2.5 and 16.1.	
Contingent Variation Margin	x*	n/a	n/a
Emergency Powers	✓	Chapter I, Part 1, Condition 13.3.1(2)(ii) and 17.3.1(2) Chapter VIII, Part 1, Condition 1.5	Eurex has broad powers to take any action or amend the rulebook following a market disorder event, impossibility event or force majeure event and to pass emergency resolutions in the event of extraordinary market conditions. This means that Eurex could in practice adopt any of the measures outlined above which are not specifically provided for explicitly in the Rulebook.
Service Closure	✓	Chapter I, Part 1, Condition 13.3.1(3).	Eurex may suspend clearing services following a market disruption event, force majeure event or impossibility event.

Appendix to FIA Template CCPR Client Notification – Euronext Clearing

Version 1.0

March 2023

This Appendix sets out the recovery and default tools available to, or that may be applied to, Cassa di Compensazione e Garanzia S.p.A. ("**CC&G**"), trading under the name Euronext Clearing, in a recovery and resolution scenario as set out in the Cassa di Compensazione e Garanzia Regulations dated 12 February 2023 (the "**Rulebook**") and certain other documentation published by CC&G referred to in this Appendix.

Measure	Contemplated in Rulebook	Rulebook Reference	Additional Comments
Tear-up	x	n/a	n/a
Invoicing Back	x	n/a	n/a
Forced Allocation	✓	Article B.6.2.1 of the Rulebook.	Forced allocation is only applicable in respect of agricultural commodity derivatives (and, in the case of severe market illiquidity, single stock dividend futures and futures on the FTSE MIB dividend index).
Variation Margin Gains Haircutting (VMGH)	✓	Article B.7.1.1(2)(iii) of the Rulebook.	This power is only available after CC&G has determined to close a clearing service.
Assessments	✓	Articles B.4.2.5 and B.6.2.3.1 of the Rulebook.	There is a cap on the amount of assessments that may be called.
Changes to Margin Criteria	✓	Articles B.4.1.3 and B.4.1.1.7 of the Rulebook and Condition 7.3 of General Conditions I.	Urgent changes to the margin criteria may be made on 5 calendar days' notice.
Contingent Variation Margin	x	n/a	n/a
Emergency Powers	✓	Condition 7.3 of the General Conditions I. A.1.1.3.5, Regulations	In.an emergency situation, CC&G has broad powers to amend its rules or take action on little or no notice. This means that CC&G

			could in practice adopt any of the measures outlined above which are not specifically provided for explicitly in the Rulebook.
Service Closure	✓	Article B.7.1.1 of the Rulebook.	