

Clearing Membership
Handbook

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Summary

This handbook is designed to familiarize firms with the requirements for clearing membership and to assist them in becoming clearing members.

The use of the term "clearing member" in the handbook includes all clearing members of CME, CBOT, NYMEX and COMEX. Thus, unless specifically stated otherwise, wherein a rule and/or requirement states clearing member, such rule and/or requirement applies to clearing members of all four exchanges.

The handbook supplements and clarifies the rules for clearing members as adopted in CME, CBOT and NYMEX Rulebooks. This handbook is compiled for the convenience of the user and is furnished without responsibility for any errors or omissions contained therein. In the event of a conflict between this Handbook and the applicable Exchange's rules, the Exchange's rules shall control.

Clearing Membership Introduction

CME Clearing ("Clearing House") is the clearing house division of Chicago Mercantile Exchange Inc. ("CME"), a Delaware corporation, which is wholly owned by CME Group Inc. ("CME Group"), a publicly traded Delaware corporation. CME Group was formed by the merger of Chicago Mercantile Exchange Holdings Inc. and CBOT Holdings, Inc. in 2007, and subsequently merged with NYMEX Holdings, Inc. in 2008. CME Group is the ultimate parent of: (1) CME; (2) Board of Trade of the City of Chicago, Inc. ("CBOT"); (3) New York Mercantile Exchange, Inc. ("NYMEX"); and (4) Commodity Exchange, Inc. ("COMEX").

Exchange-traded futures and options are listed by CME Group Designated Contract Markets ("DCM") and cleared by the Clearing House, CME Group's Derivatives Clearing Organization ("DCO"). In addition, CME Group's DCO provides clearing services for over-the-counter ("OTC") derivatives. If a clearing member will only clear OTC derivatives, it should consider an OTC Derivatives Clearing Membership. While this manual generally applies to clearing members which will clear exchange-traded futures and options, a summary of the requirements for clearing members which will also clear OTC derivative products is located in Chapter 5.

Clearing membership in CME, CBOT, NYMEX and/or COMEX (hereafter referred to individually as "Exchange" and collectively as "Exchanges") is a privilege granted by the Clearing House Oversight Committee of CME. Clearing members assume full financial and performance responsibility for all transactions executed through them and cleared by the Clearing House. They are responsible and accountable for every position they carry, whether it is for the account of a member, non-member customer or their own account.

A clearing member is an elected member in the Clearing House. The Clearing House is a division of CME through which all trades are confirmed, matched and settled on a daily basis until either offset or delivered and through which all financial settlement is made. In every matched transaction executed through the Clearing House's facilities, the Clearing House is substituted as the buyer to the seller and the seller to the buyer, with a clearing member assuming the opposite side of each transaction.

The Clearing House conducts business only with its clearing members, not with their customers or individual members of the Exchanges. As the contra-side to every position, the Clearing House is held accountable to clearing members for performance on all open positions. The Clearing House, by monitoring and overseeing its clearing members, guarantees performance on each contract to protect both buyers and sellers from financial loss.

Each of the Exchanges offers separate and distinct clearing membership options as follows:

CME

- Clearing Member
- Clearing Member Bank
- Clearing Member Hedge Fund

CBOT

- Clearing FCM
- Clearing Member Bank
- Clearing Member Hedge Fund
- Clearing Corporate Member May not be an FCM or Hedge Fund

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NYMEX

- Clearing Member
- Clearing Member Bank
- Clearing Member Hedge Fund

COMEX

- Clearing Member
- Clearing Member Bank
- Clearing Member Hedge Fund

Clearing members are not required to clear or carry positions directly with the Clearing House. A firm may be approved as a clearing member and not actively clear its positions with the Clearing House. These clearing members who do not actively clear have all the rights and responsibilities as all other (active) clearing members; however, they do not clear or carry positions directly with the Clearing House or qualify traders on the Exchanges' trading floors.

Clearing Membership Application Process

Clearing member applicants who wish to clear their Exchange trading activity with the Clearing House must complete the following:

Non-Hedge Fund Applicants:

Application for Clearing Membership can be found on CME Group's Web site at: http://www.cmegroup.com/company/membership/files/application-and-clearing-agreement-writeable.pdf

Hedge Fund Applicants:

All hedge fund clearing member applicants must complete the Application for Clearing Membership – Hedge Fund Information. This can be found on CME's Web site at: https://www.cmegroup.com/company/membership/files/corporate-membership-application-hedge-fund.pdf

The application must be submitted with the organizational chart, constitutional documents, prospectus, offering documents, investment management agreements, investment advisor agreements, partnership or limited liability company operating agreements, and any other relevant agreements for each fund requesting approval under CBOT Rule 106.S. or CME Rule 106.S. in addition to the clearing member. Hedge fund applicants which are structured as "master-feeders" are required to submit all required documentation for the master fund as well as all feeder funds (U.S. and non-U.S.) with the application.

Exchanges' Rule 911 (Screening Procedures) requires the Exchange membership community be notified of all applicants for clearing membership for a 20-day period (i.e., the "20-day posting")

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period"). Clearing membership applicants are posted to the membership on the Monday following receipt of a completed clearing membership application.

Once all requirements of membership have been met, or exemptions granted, the clearing applicant is presented to the Clearing House Risk Committee for review and feedback. The clearing applicant and any CHRC feedback is then taken to the Clearing House Oversight Committee for review and approval. If approved and all applicable requirements have been met, the approval of the clearing member may become effective.

To be effective as a clearing member, all conditions and requirements of membership must be satisfied and the 20-day posting period must have expired.

OTC Derivatives Clearing Membership

OTC Derivative Clearing Members are eligible to clear OTC derivative products only and must meet all requirements for the clearing of a particular OTC derivative contract (i.e. operational, capital and risk management requirements). An OTC Derivatives Clearing Member is a member of the Clearing House and it is afforded full rights and privileges to clear for its own account, and on behalf of customers if it is properly registered as an FCM, transactions in OTC derivative products. OTC Derivatives Clearing Members are not entitled to clear products other than OTC derivative products.

For additional information on OTC Derivatives Clearing Membership, please refer to Chapter 5 of this Handbook.

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Clearing Membership General Requirements

Exchanges' Rule 901. (General Requirements and Obligations) states the general requirements which must be satisfied to become a clearing member of the Exchange. Significant clearing membership requirements are outlined in other sections of this handbook. The general requirements for clearing membership include but are not limited to the following:

- A clearing member must be a corporation (including a C Corporation, Subchapter S
 Corporation or Limited Liability Company), partnership (including a Limited Partnership or
 General Partnership) or cooperative association. The articles of incorporation, operating
 agreement, or partnership agreement (and all sub-agreements) shall be submitted with a
 clearing applicant's application.
- 2. A clearing member shall agree to (a) abide by all Exchange Rules and to cooperate in their enforcement; (b) be responsible even after it has withdrawn as a clearing member, for any violations of Exchange Rules committed by it while it was a clearing member; and (c) continue to meet all requirements applicable to clearing members, including all financial requirements.
- 3. A clearing member shall have an authorized representative satisfactory to the Clearing House Risk Committee who shall represent the clearing member before the Exchanges and its committees.
- 4. A clearing member shall be qualified to do business in the State of Illinois or the State of New York or have an agency agreement in place with an entity already qualified in the State of Illinois or the State of New York. Such agency agreement must be in an Exchange approved format. Refer to Exhibit A.
 - This requirement provides a place for service of process and other communications in connection with the business of the clearing member.
- 5. A clearing member shall be engaged in or demonstrate immediate capacity to engage in the conduct of the business of a clearing member. A clearing member applicant is responsible to ensure that any and all necessary approvals have been received from regulatory authorities to allow the firm to conduct the business of a clearing member.
- 6. A clearing member shall demonstrate such fiscal and moral integrity as would justify the Clearing House's assumption of the risks inherent in clearing its trades.
- 7. A clearing member shall guarantee and assume complete financial responsibility for all trading activity routed through a Globex portal or routed through any other electronic trading system to CME via any connection, terminal, link, telecommunications hub or handheld unit as well as any other applicable electronic trading systems and terminals that the clearing member provides to a third party to enter orders.
- 8. It shall be responsible for the acts of Globex terminal operators accessing the Globex system through its connections, including direct connections.

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Clearing Membership General Requirements

- 9. A clearing member shall agree to guarantee and assume complete responsibility for trades executed on Marketplaces for which the Exchange provides clearing services.
- 10. A clearing member shall comply with all credit control policies developed by the Exchange for customer and proprietary transactions. Such credit control policies may include, but not be limited to, registration of credit control administrators with the Exchange, definition of credit control limits, and maintenance of written procedures verifying compliance with Exchange credit control requirements. Any credit control functionality required by the Exchange shall be in addition to a clearing member's initial risk monitoring and credit control procedures. Refer to Rule 949 (Credit Controls).

Exchanges' Rule 905. (Choice of Law) states, in summary, the Rules of the Exchanges shall be governed by and construed in accordance with the laws of the State of Illinois. Any action, claim, dispute or litigation of any kind between the Clearing Member and the Exchanges shall be adjudicated in a federal or state court in Chicago, Illinois. Clearing Members consent to the jurisdiction of such court and to service of process by any means authorized by Illinois or U.S. federal law and waive the right to transfer the venue of such litigation. In addition, the rule provides that clearing members irrevocably waive any grounds of sovereign immunity in any legal action with the Exchanges.

Clearing membership in the Exchanges' Clearing House is granted by the Clearing House Oversight Committee and may be withdrawn for cause at any time.

Clearing Members in Non-U.S. Jurisdictions

Clearing members that are incorporated/domiciled in non-U.S. jurisdictions must be subject to a legal and insolvency regime acceptable to the Clearing House. Clearing members from non-U.S. jurisdictions must use approved Clearing House settlement banks for performance bond deposits and variation margin. (See http://www.cmegroup.com/clearing/financial-and-collateral-management/settlement-banks.html for a complete listing.)

Hedge Fund Clearing Members

Clearing Members which are hedge funds are subject to additional clearing membership requirements including:

- Establishing separate clearing accounts for each fund whose activity is being cleared by the Hedge Fund Clearing Member.
- Minimum assets under management of \$1 Billion for the investment manager.
- Additional reporting of risk exposures and liquidity resources of the Hedge Fund Clearing Member and all affiliated funds for which it clears.

In addition, if the Hedge Fund Clearing Member will clear activity for related funds, it must be registered as an FCM unless the related funds qualify as noncustomer or proprietary accounts as defined in CFTC Regulation 1.3 Proprietary Account.

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Clearing Membership General Requirements

Clearing Members who are Facilities Managed

A clearing member may determine that it is not cost-effective to establish a back-office operation. Clearing members may enter into "facilities management" agreements with other clearing members or service providers to reduce their costs associated with doing business on the Exchanges. Under such an agreement, the clearing member clears its trades with the Clearing House; however, another clearing member (facilitator) performs trade processing and/or manages the bookkeeping (service bureau) functions.

Typically, facilities management agreements are entered into between two clearing members for the purpose of doing some or all of the clearing member's back office/clearing operations. For example, if a clearing member's trade processing is conducted through another firm's back office, the clearing member defrays the cost of setting up a back office and hiring personnel to perform trade processing. The financial terms of the arrangement are private, but the agreement may be viewed by Exchange staff members during the application process. However, the Exchange will always look to the clearing member clearing the trades (i.e., not the firm processing the trades) in the event there is a late submission or other problems associated with the clearing member's trade processing. A clearing member may not contract out its responsibility to guarantee its trades or follow correct processing procedures.

If a clearing member enters into a facilities management agreement, it must always have a senior officer, director, or partner of the clearing member available to represent the clearing member before the Exchanges and their committees.

Clearing Members and Give Up System Agreements

Likewise, a clearing member may determine that it is not cost-effective to establish its own floor presence. The Give-Up Payment System (GPS) may be used by a clearing member that does not want to establish a floor operation. Essentially, one clearing member agrees to be responsible for the execution of another clearing member's trades on the floor and the resulting positions are then entered into GPS for transfer, acceptance, and clearing by the clearing member. (Additional information may be found at: https://www.cmegroup.com/clearing/operations-and-deliveries/payment-systems.html and the Clearing Member Agreement and Participation Form may be found at: https://www.cmegroup.com/clearing/files/gps agreement.pdf)

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Assignment Requirements

Pursuant to Rule 902 (Clearing Membership Assignment Requirements), all assigned memberships, including firm owned and independent assignments, are pledged to the Clearing House as security for a clearing member's obligations. Assigned memberships may be sold by the Clearing House in the event of insolvency of a clearing member. The proceeds of such sale will be used to fulfill the obligations of the clearing member.

CME Rule 902.A. (Assignment Requirement) requires all clearing members to have at least two CME memberships, at least two IMM memberships, at least two IOM memberships and at least one GEM membership assigned to the clearing member.

A higher division membership may be substituted for a lower division membership to satisfy the assignment requirements. That is, one CME membership may be substituted for any other membership; an IMM membership may be substituted for an IOM membership or a GEM membership; and an IOM membership may be substituted for a GEM membership.

At least one CME, one IMM, one IOM and one GEM membership required for clearing membership privileges must be owned by the clearing member or a person, including parent company, with an acceptable proprietary interest in the clearing member. An acceptable proprietary interest is defined as at least a \$500,000 interest in the clearing member and includes the person's interest in the ownership equity of the clearing member plus the person's subordinated debt to the clearing member. Voting rights are not considered when determining an owner's proprietary interest. If the memberships to be assigned are jointly owned, all owners must have an acceptable proprietary interest in the clearing member. The remaining memberships necessary for clearing membership may be independently assigned.

A CBOT Clearing FCM must have at least two Full memberships assigned to the Clearing House while all other CBOT Clearing Corporate Members must have at least one Full membership assigned to the Clearing House. Pursuant to CBOT Rule 902, at least one Full membership required for clearing membership pursuant to this Rule must be owned by the clearing member or a person, including a parent company, with an acceptable proprietary interest in such clearing member. An acceptable proprietary interest is defined as at least a \$500,000 interest in the clearing member and includes the person's interest in the ownership equity of the clearing member plus the person's subordinated debt to the clearing member. Voting rights are not considered when determining an owner's proprietary interest. If the membership or shares to be assigned are jointly owned, all owners must have an acceptable proprietary interest in the clearing member. If two Full memberships are required for clearing membership, one of those memberships may be independently assigned.

NYMEX clearing members must have two NYMEX memberships assigned to the Clearing House. NYMEX Rule 902 requires 50% of assigned memberships required for NYMEX clearing membership must be owned by the clearing member or by a person, including parent company, with an acceptable proprietary interest in the clearing member. The remaining membership may be independently assigned by any person. An acceptable proprietary interest is defined as at least a

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\$500,000 interest in the clearing member and includes the person's interest in the ownership equity of the clearing member plus the person's subordinated debt to the clearing member. Voting rights are not considered when determining an owner's proprietary interest. If the memberships to be assigned are jointly owned, all owners must have an acceptable proprietary interest in the clearing member. The remaining membership necessary for clearing membership may be independently assigned.

COMEX clearing members must have two COMEX memberships assigned to the Clearing House. 50% of assigned memberships required for COMEX clearing membership must be owned by the clearing member or by a person, including parent company, with an acceptable proprietary interest in the clearing member. The remaining membership may be independently assigned by any person. An acceptable proprietary interest is defined as at least a \$500,000 interest in the clearing member and includes the person's interest in the ownership equity of the clearing member plus the person's subordinated debt to the clearing member. Voting rights are not considered when determining an owner's proprietary interest. If the membership to be assigned is jointly owned, all owners must have an acceptable proprietary interest in the clearing member. The remaining membership necessary for clearing membership may be independently assigned.

Assignment of Memberships

Memberships may only, at any time, be assigned to a single clearing member. Owners and members may assign memberships to an applicant for clearing membership. At the time of and during assignment, the memberships must be unencumbered and may not be subject to any Exchanges' Rule 110 (Claims Against Membership, Application of Proceeds) claims. An Authorization to Sell or to Transfer or Sell - Rule 106.A.-B. Security Transaction cannot be on file for a membership which is assigned for clearing membership privileges.

A member on an assigned membership need not be qualified by the clearing member for whom the membership is assigned. Such member on an assigned membership may be qualified by any clearing member except a clearing member that is not actively clearing. To qualify traders, a clearing member must have established systems in place for trade submission, risk management, clearing and settlement/banking with the Clearing House. A qualifying clearing member should know if a member it qualifies for trading privileges has assigned their membership to another clearing member. Likewise, a clearing member should know who the qualifying clearing member is for members on memberships assigned for its clearing membership privileges.

Assigned memberships may be transferred in accordance with Exchanges' Rule 106.C. (Family Transfers) and Exchanges' Rule 106.F. (Clearing Member). Note: For an Exchange Rule 106.F. transfer of an individually owned membership, the owner transferring the membership must have an acceptable proprietary interest of \$500,000 or more in the clearing member. The \$500,000 proprietary interest requirement does not apply to firm owned memberships.

Assigned memberships may not be leased out under Exchanges' Rule 106.D. (Futures Industry Transfers). However, excess memberships owned by the clearing member which are <u>not</u> assigned may be leased out under the respective Exchange Rule 106.D.

An individual member may assign his membership without trading restrictions on his own individual trading activity.

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Memberships must be assigned on Exchange-prescribed forms. Refer to Exhibit B. Upon submitting an assignment form to the Membership Services Department, the newly assigned membership shall be posted to the Exchange membership for ten days. After all Exchange Rule 110 (Claims Against Membership, Application of Proceeds) claims have been resolved to the satisfaction of the Exchange, the membership shall be assigned to the clearing member.

A clearing member may substitute other memberships for assigned memberships provided that the clearing member continues, at all times, to meet the assignment requirements of the Exchanges.

If a membership assignment is not necessary for the clearing member to meet its assignment requirements (e.g., the clearing member maintains more than the required number of memberships necessary under Exchange rules), a request to withdraw such assignment is effective upon receipt.

Further, if an owner of memberships wishes to withdraw his assigned memberships over the objection of the clearing member to which they are pledged, the owner must request permission to do so from the Membership Services Department. The request must be in writing with a copy delivered to the clearing member to which the memberships are assigned. The Membership Services Department may grant such requests under conditions that do not jeopardize the financial integrity of the Clearing House.

In the event a clearing member has a valid claim against a member that it qualifies, and the member's membership is assigned to another clearing member, the clearing member utilizing the membership for assignment shall have 10 business days to substitute another membership to fulfill the assignment requirements of Exchange Rule 902. Such substitution shall be required to protect the financial integrity of the Clearing House.

Note: In order for a member to utilize a previously assigned membership (i.e., use the membership to trade at a new qualifying clearing member) which is currently subject to a 60-day posting period for a withdrawing clearing member, the member's new qualifying clearing member must execute an Indemnification of Transfer agreement. Such acknowledgment provides that the claims of the new qualifying clearing member to the membership are subordinate to the claims that may be placed against the previously assigned membership or the previously assigned clearing member. Refer Exhibit to C (A DocuSign version mav be located https://powerforms.docusign.net/d55e01d9-68f3-4e66-97bf-0ee9230cbb08?env=na2&acct=791512ab-28e7-4259-b378-741638926b9b&accountId=791512ab-28e7-4259-b378-741638926b9b).

Shares and Fees

With regards to trades made for the benefit of the Clearing Member itself (i.e. "proprietary trades"), CME and CBOT Clearing Members receive fees in conjunction with CME Rule 106.H. Trading Member Firm and CBOT Rule 106.H. Trading Member Firm respectively. NYMEX Clearing Members receive non-member fees. COMEX Clearing Members receive COMEX Rule 106.J. Member Firm fees. Clearing Members with shares are those clearing members that also maintain CME Group Class A Shares in accordance with CME Rule 106.J. Equity Member Firm, CBOT Rule 106.J. Equity Member Firm and/or NYMEX Rule 106.J. Member Firm requirements. In lieu of CME Group shares, the firm may choose to participate in the Equity Member Subscription Rate

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Program. See https://www.cmegroup.com/company/membership/equity-member-subscription-rate-program.html for details.

Note: In all cases in the remaining sections of this chapter, a "clearing member with shares" shall include clearing members meeting the share requirement under the Equity Member Subscription Rate Program.

Rule 106.I. Affiliate Member Firms

CME Rule 106.I. Affiliate Member Firm

A membership under CME Rule 106.I. allows all non-member firms that either own, directly or indirectly, 100% of a clearing member with shares or that have 100% ownership, direct or indirect, in common with a firm that owns, directly or indirectly, 100% of a clearing member with shares, to receive member clearing fees and performance bond rates on the proprietary trading of such firms within the division of membership held.

Under this rule, a CME, IMM or IOM membership may be owned by the clearing member with shares or any firm that either owns, directly or indirectly, 100% of the clearing member with shares or that has 100% ownership, direct or indirect, in common with a firm that owns, directly or indirectly, 100% of the clearing member with shares ("related parties"). The membership required for CME Rule 106.I. maybe owned by the clearing member with shares or any of its affiliates and is in addition to the memberships assigned for the clearing member with shares clearing membership privileges. A membership held under CME Rule 106.I. cannot be assigned for clearing membership privileges.

If the CME Rule 106.I. member elects to have an individual placed on its CME, IMM or IOM membership, the individual must be an employee or officer of the clearing member with shares or any of its 100% related parties and must be approved for individual membership by the Membership Services Department.

The proprietary positions of the clearing member with shares and its 100% related parties receiving equity member clearing fees must be carried separately from other accounts on the books of a clearing member. Organizational charts must be maintained demonstrating ownership of all related parties receiving equity member clearing fees.

The clearing member with shares or its affiliate must complete an Application for Corporate Membership CME Rule 106.I. Affiliate Member Firm Agreement for Membership and submit it to CME Group's Concierge Department for approval by the FRS Department as a CME Rule 106.I. firm. The application is located on CME Group's Web site at:

 $\underline{https://www.cmegroup.com/company/membership/files/corporate-membership-application-non-hedge-fund.pdf}$

CBOT Rule 106.I. Affiliate Member Firm – Equity

A membership under CBOT Rule 106.I. allows an entity that is not a pool or a hedge fund, but is owned by the clearing member or any firm that either owns, directly or indirectly, 100% of the

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clearing member or that has 100% ownership, direct or indirect, in common with a firm that owns, directly or indirectly, 100% of the clearing member ("related parties") to receive member clearing fees and performance bond rates on the proprietary trading of such firms within the division of membership held.

Under this rule, either one CBOT Full + 20,000 Class A shares or one Associate Membership + 8,750 Class A shares may be owned by the clearing member, a related party, or an employee or principal of the clearing member or affiliated applicant. The memberships and shares required for CBOT Rule 106.I. is per affiliate and is in addition to the memberships assigned for the clearing member's clearing membership privileges. The memberships and shares held under CBOT Rule 106.I. Affiliate Member Firm — Equity cannot also be assigned for clearing membership privileges.

If the CBOT Rule 106.I. member elects to have an individual placed on its Full or Associate Membership, the individual must be an employee or officer of the clearing member or its affiliated applicant and must be approved for individual membership by the Membership Services Department.

The proprietary positions of the clearing member and its Exchange approved CBOT Rule 106.I. Affiliate Member Firm — Equity receiving equity member clearing fees must be carried separately from other accounts on the books of a clearing member. Organizational charts must be maintained demonstrating ownership of all related parties.

The affiliate must complete the following found on CME Group's Web site:

Application for Corporate Membership Form:

https://www.cmegroup.com/company/membership/files/corporate-membership-application-non-hedge-fund.pdf

Completed forms must be submitted to CME Group's Concierge Department for approval by the FRS Department as a CBOT Rule 106.I. firm.

<u>CBOT Rule 106.I. Affiliate Member Firm – Trading</u>

A membership under CBOT Rule 106.I. allows an entity that is not a pool or a hedge fund, but is owned by the clearing member or any firm that either owns, directly or indirectly, 100% of the clearing member or that has 100% ownership, direct or indirect, in common with a firm that owns, directly or indirectly, 100% of the clearing member ("related parties") to receiving trading member clearing fees and performance bond rates on the proprietary trading of such firms within the division of membership held.

Under this rule, either: one CBOT Full, one CBOT Associate Membership, one CBOT IDEM or one CBOT COM may be owned or leased by the clearing member or any related party or an employee or principal of the clearing member or affiliated applicant. The membership required for CBOT Rule 106.I. is per affiliate and is in addition to the memberships assigned for the clearing member's clearing membership privileges. The memberships held under CBOT Rule 106.I. Affiliate Member Firm — Trading cannot also be registered for clearing membership privileges.

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If the CBOT Rule 106.I. member elects to have an individual placed on its Full, Associate, IDEM or COM Membership, the individual must be an employee or officer of the clearing member or its affiliated applicant and must be approved for individual membership by the Membership Services Department.

The proprietary positions of the CBOT Rule 106.I. Affiliate Member Firm – Trading receive trading member clearing fees and must be carried separately from other accounts on the books of a clearing member. Organizational charts must be maintained demonstrating ownership of all related parties.

The affiliate must complete the following form found on CME Group's Web site:

Application for Corporate Membership Form:

https://www.cmegroup.com/company/membership/files/corporate-membership-application-non-hedge-fund.pdf

Completed forms must be submitted to CME Group's Concierge Department for approval by the FRS Department as a CBOT Rule 106.I. firm.

CBOT Rule 106.I. Affiliate Member Firm - Umbrella

A membership under CBOT Rule 106.I. Affiliate Member Firm – Umbrella allows all firms that either own, directly or indirectly, 100% of the clearing member with shares or that has 100% ownership, direct or indirect, in common with a firm that owns, directly or indirectly, 100% of the clearing member with shares ("related parties") to receive clearing member fees and performance bond rates on the proprietary trading of such firms. Under this rule, four Full memberships, two Associate memberships and 20,000 CME Group shares or five Full memberships and 20,000 CME Group shares (Agricultural only) may be owned by the clearing member with shares or a related party. A CBOT clearing member with shares which qualifies for the CBOT membership umbrella may qualify an unlimited number of affiliates, but the qualified affiliates must apply and be registered with the Exchange. The memberships and CME Group shares required to qualify for the CBOT membership umbrella include the memberships required for the CBOT clearing member, including any independent assignments.

Each affiliate must complete the following form found on CME Group's Web site:

Application for Corporate Membership:

https://www.cmegroup.com/company/membership/files/corporate-membership-application-non-hedge-fund.pdf

Completed forms must be submitted to CME Group's Concierge Department for approval by the FRS Department as a CBOT Rule 106.I. Qualified Affiliate.

CME Rule 106.S. Family of Funds Member Firm

CME clearing members with shares that are hedge funds are generally not owned in the traditional sense by a parent company and, as such, related funds do not meet the ownership

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requirement of Rule 106.I. (Affiliate Member Firm). CME Rule 106.S. (Family of Funds Member Firm) allows a family of funds that is managed by a fund management company to receive equity member clearing fee rates without the need for each fund in the family to become a CME Member.

One fund in the family of funds or the fund management company must become a CME Clearing Member with shares. If the fund management company becomes the CME Clearing Member with shares, it must designate one fund in the family of funds to receive the equity member clearing fee rates. Under CME Rule 106.S., up to five additional funds within the family of funds are eligible for equity member clearing fee rates for each additional membership purchased. The five additional funds in a family may receive equity member clearing fee rates on the proprietary trading of the funds within the division of membership owned under Rule 106.S. The CME Clearing Member with shares will, of course, receive equity member clearing fee rates on all CME products.

To be eligible for CME Rule 106.S. membership, the following criteria must be met:

- Each fund in the family of funds must be approved by the Exchange;
- The accounts must be held by a clearing member(s) in the name of the approved fund;
- Any fund or the fund management company may hold the 106.S. membership; and,
- The fund management company must agree to submit to Exchange regulatory jurisdiction.

Only true funds in the family, not managed accounts, qualify for preferential clearing fee rates under CME Rule 106.S.

Under CME Rule 106.S., a CME, IMM or IOM membership may be owned by the clearing member with shares, any fund in the family or the fund management company. Regardless of which entity owns the membership, the fund management company is designated as the CME Rule 106.S. member. The membership required for CME Rule 106.S. is in addition to the memberships assigned for the CME Clearing Member with share's membership privileges. A membership held under CME Rule 106.S. cannot be assigned for clearing or corporate membership privileges. Class A shares are not required for CME Rule 106.S. membership.

If the CME Rule 106.S. member elects to have an individual placed on its CME, IMM or IOM membership, the individual must be an employee or officer of the CME Clearing Member with shares, the fund management company or a fund that is part of the family of funds. In addition, the member must be approved for individual membership by the Membership Services Department.

The proprietary positions of CME Clearing Member with shares and each of the approved funds within the family that receive equity member clearing fee rates must be carried separately on the books of a clearing member. Organizational charts must be maintained demonstrating ownership/organization of all entities, including feeder/master funds, the investment manager and other management companies.

The fund management company must complete a CME Application for Corporate Membership – CME Rule 106.S. Family of Funds Member Firm Hedge Fund Agreement for Membership and

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submit it to CME's Concierge Department for approval by the FRS Department. The application is located on CME's Web site at:

 $\underline{\text{https://www.cmegroup.com/company/membership/files/corporate-membership-application-hedge-fund.pdf}}$

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Capital Requirements

Clearing members are responsible for monitoring their capital and to ensure continued compliance with the Exchanges' capital requirements. Capital requirements for clearing members which are not Banks are specific to its exchange membership privileges and, if applicable, any OTC products that it will clear. For non-Bank clearing members, capital is defined as Adjusted Net Capital as computed in accordance with CFTC Regulation 1.17. For Bank clearing members, capital is defined as Tier I Capital, as defined in accordance with regulations applicable to the Bank clearing member.

For a CME Clearing Member, the exchange capital requirement is the greater of the CFTC or SEC capital requirement or:

For a non-Bank clearing member:

- \$5,000,000 if it will clear only exchange-traded futures/options; or,
- \$50,000,000 if a clearing member will clear any OTC derivative product, including, but not limited to, FX OTC, or IRS; or,
- 20% of aggregate performance bond requirement for all customer and house accounts containing CME-cleared IRS positions.

For a Bank clearing member:

- \$5,000,000,000 if it will clear exchange-traded futures/options; or,
- \$50,000,000 if it will clear only OTC derivative products, including, but not limited to, FX OTC, or IRS; or
- 20% of aggregate performance bond requirement for all proprietary and affiliate accounts containing CME-cleared IRS positions.

For a CBOT Clearing Member, the exchange capital requirement is the greater of the CFTC or SEC capital requirement or:

For a non-Bank clearing member:

- \$5,000,000 if it will clear exchange-traded futures/options or agricultural OTC derivative products; or,
- \$50,000,000 if it will clear any OTC derivative products excluding agricultural OTC derivatives.

For a Bank clearing member:

- \$5,000,000,000 if it will clear exchange-traded futures/options; or,
- \$50,000,000 if it will clear only OTC derivative products, including, but not limited to, agricultural OTC derivative products.

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For a NYMEX Clearing Member, the exchange capital requirement is the greater of the CFTC or SEC capital requirement or:

For a non-Bank clearing member:

- \$5,000,000 if it will clear only exchange-traded futures/options; or,
- \$50,000,000 if it will clear any OTC derivative products, including, but not limited to energy OTC derivative products.

For a Bank clearing member:

- \$5,000,000,000 if it will clear exchange-traded futures/options; or,
- \$50,000,000 if it will clear only OTC derivative products, including, but not limited to energy OTC derivative products.

For a COMEX Clearing Member, the exchange capital requirement is the greater of the CFTC or SEC capital requirement or:

For a non-Bank clearing member:

- \$5,000,000 if it will clear only exchange-traded futures/options; or,
- \$50,000,000 if it will clear any OTC derivative products, including, but not limited to metal OTC derivative products.

For a Bank clearing member:

- \$5,000,000,000 if it will clear exchange-traded futures/options; or
- \$50,000,000 if it will clear only OTC derivative products, including, but not limited to, metal OTC derivative products.

For reference, the following product link may be helpful:

http://www.cmegroup.com/trading/products/#pageNumber=1&sortField=oi&sortAsc=false
Refer to Chapter 5 – Cleared OTC Derivatives for additional information for clearing members trading OTC derivatives.

The Clearing House Risk Committee(s) or Clearing House Oversight Committee may prescribe additional financial and capital requirements and grant exemptions.

CFTC's Minimum Regulatory Capital Requirement

The CFTC's regulatory minimum capital requirement is computed as 8% of domestic and foreign domiciled customer plus 8% of noncustomer (excluding proprietary) risk maintenance performance bond requirements for all domestic, foreign futures and options on futures contracts and cleared swaps (see Chapter 5) excluding the risk margin associated with naked long option positions.

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The Exchanges impose a risk-based capital requirement, identical to the CFTC's regulatory minimum capital requirement, on all clearing members, including non-FCMs.

The CFTC's minimum regulatory capital requirement includes all customer and noncustomer commodity accounts posing risk to the clearing member; that is, all domestic and foreign domiciled accounts and their positions. Further, the risks of positions being carried by a firm are best quantified by Exchange determined risk performance bond requirements. For Exchange traded futures/options and various OTC products, risk maintenance performance bond requirements are generated (for all domestic futures exchanges and numerous futures exchanges worldwide) from the Standard Portfolio Analysis of Risk® performance bond system (SPAN®). The SPAN performance bond system is a risk-based, portfolio performance bond system used to compute minimum performance bond requirements for all futures and options positions. For CME IRS and FX OTC products, the Historical Value at Risk ("HVaR") methodology is applied. In HVaR, past events are used for determining possible scenarios in the future.

The CFTC's regulatory minimum capital requirement is based <u>solely on the risk component of the performance bond system requirement</u>. The risk component is the assessment for changes in the underlying portfolio's price and volatility. The equity component (the marked-to-the-market value of options) of the SPAN performance bond system requirement is included in performance bond equity and is not part of the capital requirement computation.

The risk maintenance performance bond on <u>naked</u> long option positions may be excluded from the risk maintenance performance bond requirement as the risk component on naked long option positions is an assessment of the liquidation risk and a haircut on the value of the options. Naked long option positions are defined as long options in an account which are not used to reduce the risk of other futures and/or options positions.

It is important to recognize that proprietary accounts of a clearing member are not part of this risk-based capital calculation as proprietary charges based upon risk maintenance performance bond requirements are already included in the firm's computation of adjusted net capital.

Computation of Adjusted Net Capital

Clearing members which are not Banks are responsible for computing adjusted net capital in accordance with CFTC Regulation 1.17. As a reminder:

- There are restrictions on the amount of house (noncustomer and proprietary) cash balances which may be held with affiliates and treated as current/allowable assets. Clearing applicants are encouraged to contact the Financial and Regulatory Surveillance ("FRS") Department or their designated self-regulatory organization ("DSRO") for guidance on the classification of house cash deposits with affiliates.
- There is a capital charge on open futures and options positions held in proprietary accounts. Refer to CFTC Regulation 1.17(c)(5)(x) or SEC Rule 15c3-1b(a)(3)(xiv).

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• There is a 2% capital charge on the market value of firm-owned investments in money market mutual funds. This haircut is applicable to funds invested in CME's Interest Earning Facility 2 Program ("IEF2®"). Refer to SEC Rule 15c3-1(c)(2)(vi)(D)(1).

Computation of Adjusted Net Capital - Subordinated Loan Agreements

The rules and requirements governing subordinated loan agreements are contained in Exchange Rule 970.A.5. (Financial Requirements) and CFTC Regulation 1.17(h). In general, a satisfactory subordinated loan agreement may be considered good for capital purposes provided such loan effectively subordinates any right of the lender to receive payment to the claims of all present and future general creditors. The CFTC Regulations contain very specific requirements for subordinated loan agreements and must be complied with completely.

To qualify as capital, subordinated loan agreements must be approved by a firm's DSRO. For clearing member applicants for whom CME, CBOT, NYMEX or COMEX will be the DSRO, subordinated loan agreements must be submitted to the FRS Department for approval. Such submission shall be at least ten days prior to the loan's effective date and may be included in the clearing membership application packet. For non-CME Group DSRO clearing member applicants, subordinated loan agreements should be submitted to their DSRO for approval.

Sample formats of Subordinated Debt Agreements can be located on CME Group's Web site at https://www.cmegroup.com/clearing/financial-and-regulatory-surveillance/forms.html?redirect=/clearing/audit/audit-department-forms.html .

Guaranty Fund Requirements

The guaranty fund requirements for clearing of exchange traded futures and options of the Clearing House are stated in Rule 816. (Guaranty Fund Deposit). Clearing members must deposit with the Clearing House a Base Guaranty Fund deposit for their obligations to the Clearing House. The minimum Base Guaranty Fund deposit of a clearing member shall equal the greater of (a) \$500,000 if clearing CME, CBOT, NYMEX or COMEX futures and options on futures only, (b) \$2,500,000 if clearing OTC spot, forward or swaps contracts or (c) the clearing member's proportionate share of the "Aggregate Guaranty Fund Deposit." This requirement is separate and distinct from the guaranty fund deposit requirement for IRS Products as set forth in Chapter 8G of the CME Rulebook. The Aggregate Guaranty Fund Deposit shall be an amount determined by the Clearing House.

Only U.S. Dollars or U.S. Treasury bills, floating rate notes, notes or bonds are acceptable and must be deposited by a clearing member applicant during the application approval process. All securities must be denominated in multiples of \$5,000. Stripped securities and securities dated prior to January 1, 1973, are not acceptable. TBonds may not exceed 30 years' time to maturity. Interest is not paid on U.S. Dollar deposits. If U.S. treasuries are deposited, the market value of such securities, less any applicable haircut, must be at least equal to the minimum requirement. For example, U.S. T-Bills with a par value of \$505,000, market value of \$502,000 and no applicable haircut may be used to meet the \$500,000 Base Guaranty Fund

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requirement. For a chart of Acceptable Guaranty Fund Collateral and limits see: https://www.cmegroup.com/clearing/files/acceptable-collateral-quaranty-fund.pdf

Questions on Base Guaranty Fund deposits may be directed to the Clearing House Financial Unit at 312.207.2594. (See also: http://www.cmegroup.com/clearing/risk-management/files/cme-clearing-principles-for-financial-market-infrastructures-disclosure.pdf)

A clearing member's Base Guaranty Fund amount is based on the risk that a clearing member represents to the Clearing House as measured by its performance bond requirements and trading volume. Currently, a clearing member's Base Guaranty Fund amount consists of (i) a specified percentage of the Aggregate Guaranty Fund Deposit multiplied by the clearing member's proportionate share (including the total risk performance bond requirement in respect of positions in its cross-margin accounts and any applicable short option value) of the average aggregate risk performance bond requirement (including the risk performance bond requirement in respect of positions in all cross-margin accounts and any applicable short option value) for the preceding three months; plus (ii) a specified percentage of the Aggregate Guaranty Fund Deposit multiplied by the clearing member's proportionate share of the total number of contracts executed on the Exchange and any applicable exchange or market during the preceding three months; plus (iii) a specified percentage of the Aggregate Guaranty Fund Deposit multiplied by the clearing member's proportionate share of foreign currency settlements for the preceding three months. Such percentages may be modified by the Clearing House Risk Committee as it deems Further, in determining a clearing member's Base Guaranty Fund volume component, a different weighting may be applied to a particular contract(s) if such contract(s) is deemed to represent a disproportionate amount of exposure to the Clearing House. The Base Guaranty Fund deposit is recalculated on a monthly basis (more frequently if deemed necessary) by the Clearing House.

The Base Guaranty Fund deposit must be wired into the account of the Clearing House. The Clearing House should be informed prior to any funds or securities being wired to the Clearing House.

Clearing members that clear OTC derivatives (IRS) are subject to separate guaranty fund requirements. Refer to Chapter 5 – Cleared OTC Derivatives.

Settlement Banks

All active clearing members must maintain a settlement account at one or more of the approved settlement banks. Clearing members shall establish separate accounts for customer and house (noncustomer and proprietary) activity.

For a complete listing of the approved settlement, performance bond and guaranty fund banks, please see:

http://www.cmegroup.com/clearing/financial-and-collateral-management/settlement-banks.html

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The Clearing House must have information on all settlement and custody accounts established by clearing members to clear trades. Further, the Clearing House requires debit authorization over clearing members' settlement accounts. As such, clearing members must execute and submit to the Clearing House a Settlement and Custody Account Listing and Debit Authorization form. See Exhibit D (or at: https://www.cmegroup.com/clearing/files/banking-instructions-form.pdf).

Performance Bond Requirements

The Clearing House determines prudent minimum performance bond levels for all futures and options contracts based on historical price changes, volatilities, current and anticipated market conditions and other factors deemed pertinent. The Clearing House collects performance bonds from its clearing members to guarantee the obligations associated with futures and options contracts which are carried by clearing members.

For margining of CME, CBOT, NYMEX and COMEX positions of clearing members, the Exchanges require that gross positions be used to calculate performance bond requirements for the customer origin; firms must submit customer gross margining files to ensure eligible risk offsets are applied only for the benefit of each individual customer account. Net positions may be used to calculate performance bond requirements for the house origin.

A list of acceptable forms of collateral to meet performance bond requirements is available on CME Group's website at:

https://www.cmegroup.com/clearing/financial-and-collateral-management.html and refer to Chapter "X" for additional information on Letters of Credit.

Concentration Margin

The Clearing House also applies a concentration margining program, which allows the Clearing House to assess additional performance bond requirements when a clearing firm's potential market exposure becomes large relative to the financial resources available to support those exposures. Concentration risk is measured by performing a stress test at the asset class level across a given clearing member's house and customer accounts. Stress test exposures are then compared against that clearing member's adjusted net capital and/or absolute value threshold (portfolio size), to determine the applicable tier-based percent add-on to be applied for concentration margin calculation. Collateral which is acceptable for core performance bond requirements may also be used to meet concentration margin requirements.

Customer Accounts at the Clearing House

Clearing members must maintain separate accounts for customer segregated, customer secured 30.7, cleared swap customer and house (noncustomer and proprietary) funds at the Clearing House. Exchange Rule 973 (Customer Accounts with the Clearing House) requires the Clearing House to hold all customer funds deposited with the Clearing House in accordance with the

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Commodity Exchange Act ("CEA") and CFTC Regulation 1.20 in an account identified as Customer Segregated and all customer funds deposited with the Clearing House in accordance with the CEA and CFTC Regulation 30.7 in an account identified as Customer Secured 30.7. Exchange Rule 973 also requires all customer funds deposited with the Clearing House on behalf of cleared OTC derivatives Customers shall be held in accordance with Exchange Rules 8F001 through 8F025 in an account identified as a Cleared Swaps Customer Account. As the Clearing House has adopted such a rule, CFTC Reg. 1.26(a) provides that a segregation, secured 30.7 or cleared swap acknowledgement letter need not be obtained for customer deposits held by the Clearing House.

Financial Responsibilities in the Event of a Default

In the event a clearing member fails to promptly discharge any obligation to the Clearing House and is declared in default by the Clearing House, its Base Guaranty Fund deposit, its available performance bond on deposit with the Clearing House, any of its other assets available to the Clearing House, and the proceeds of the sale of any memberships assigned to it for clearing qualification shall be applied by CME's Clearing House to discharge the obligation.

If the defaulting clearing member's commodity futures, options, commodity swaps, or OTC FX (for clearing members clearing IRS derivatives, see Chapter 5) obligation to the Clearing House remains unsatisfied, the obligation will be met by the application of funds according to the following priority:

- (1) \$100M CME Capital for Base Guaranty Fund
- (2) Non-Defaulting Clearing Members Base Guaranty Fund Contributions
- (3) Assessment against all clearing members (excluding any insolvent or defaulting clearing members) up to an amount that does not exceed:
 - (a) 275% of such clearing members' Base Guaranty Fund requirement when losses are attributable to a single defaulting clearing member during the cooling off period; and,
- (b) 550% of such clearing members' Base Guaranty Fund requirement when losses are attributed to losses ofmultiple defaulting clearing members during a cooling off period.

Note: The above are generalizations of specified formulas and procedures. The detail of the allocation of Base Guaranty Fund contributions in the event of a clearing member default should be read in its entirety in Exchange Rule 802.B. Satisfaction of Clearing House Obligations.

In connection with IRS Clearing Members, the Clearing House has established a separate guaranty fund for IRS contracts. (Refer to Chapter 5 and CME Rule 8G802)

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To minimize the possibility of clearing member defaults and to provide our customers and the market with the finest protection, CME Group has adopted and rigorously enforces an integrated package of financial surveillance and risk management procedures. These are described in CME Group's Financial Safeguards, which may be found on CME Group's Web site at: http://www.cmegroup.com/clearing/files/financialsafeguards.pdf.

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CME, CBOT, NYMEX and COMEX Clearing Members and OTC Clearing Members are eligible to clear OTC derivative products (i.e. cleared swaps and forwards) with CME's Clearing House if all requirements for the clearance of particular OTC derivative contracts are met.

If a Clearing Member will clear OTC derivatives products through the Clearing House for its customers, the firm must be registered with the CFTC as an FCM. FCMs are subject to CFTC rules and regulations including regulatory capital, financial reporting and customer protection.

A clearing member who clears customer business acts as agent for undisclosed principals (i.e., the customers) vis-a-vis the Clearing House and guarantees their customers' performance to the Clearing House. A clearing member is deemed to be the principal to the OTC contract when it clears trades for its own proprietary account and is deemed a guarantor and agent to the OTC contract when it clears trades for its affiliates or customers. The clearing member-customer agency relationship facilitates customer cleared swaps segregation protection, bankruptcy portability of customer positions and collateral, operational efficiency, and favorable capital treatment for the clearing member. This relationship is fundamental to the operation of the Clearing House and is embedded throughout the rules of Exchanges, the Commodity Exchange Act and the regulations of the CFTC.

General Requirements

In addition to the General Requirements of clearing membership contained in Chapter 2 – General Requirements, the following requirements apply to a clearing member which will clear OTC derivatives.

- A Clearing Member that will clear FX OTC or Interest Rate Swaps ("IRS") must have appropriate risk management capabilities, operational infrastructure and experience to support this activity, as prescribed by the Clearing House.
- 2. A Clearing Member shall agree to guarantee and assume responsibility for all trading activity routed through a Globex portal, or routed through any electronic trading system, if applicable, to the Clearing House for clearing of such OTC derivative transactions and which are guaranteed to the Clearing House by the clearing member via any connection, terminal, link, telecommunications hub or handheld unit provided by a clearing member to a third party as well as any applicable electronic trading systems and terminals that the clearing member provides to a third party, including an eligible customer, to enter orders.
- The Clearing Member shall agree to guarantee and assume responsibility for all OTC derivatives trading activity executed via outside means and submitted for clearing to and accepted for clearing by the Clearing House by any customer, broker or affiliate authorized by the Clearing Member.

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Capital Requirements

Capital requirements for clearing members which are not Banks are specific to its exchange membership privileges and, if applicable, any OTC products that it will clear. For non-Bank clearing members, capital is defined as Adjusted Net Capital as computed in accordance with CFTC Regulation 1.17. For Bank clearing members, capital is defined as Tier 1 Capital, as defined in accordance with regulations applicable to the bank clearing member. The following are the applicable capital requirements:

For a CME Clearing Member, the exchange capital requirement is the greater of the CFTC or SEC capital requirement or:

For a non-Bank clearing member:

- \$5,000,000 if it will clear only exchange-traded futures/options; or,
- \$50,000,000 if a clearing member will clear any OTC derivative product, including, but not limited to, FX OTC or IRS; or,
- 20% of aggregate performance bond requirement for all customer and house accounts containing CME-cleared IRS positions.

For a Bank clearing member:

- \$5,000,000,000 if it will clear exchange-traded futures/options; or,
- \$50,000,000 if it will clear only OTC derivative products, including, but not limited to, FX OTC or IRS; or
- 20% of aggregate performance bond requirement for all proprietary and affiliate accounts containing CME-cleared IRS positions.

For a CBOT Clearing Member, the exchange capital requirement is the greater of the CFTC or SEC capital requirement or:

For a non-Bank clearing member:

- \$5,000,000 if it will clear exchange-traded futures/options and agricultural OTC derivatives products; or,
- \$50,000,000 if it will clear any OTC derivative products, excluding agricultural OTC derivative products.

For a Bank clearing member:

- \$5,000,000,000 if it will clear exchange-traded futures/options; or,
- \$50,000,000 if it will clear only OTC derivative products, including, but not limited to, agricultural OTC derivative products.

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For a NYMEX Clearing Member, the exchange capital requirement is the greater of the CFTC or SEC capital requirement or:

For a non-Bank clearing member:

- \$5,000,000 if it will clear only exchange-traded futures/options; or,
- \$50,000,000 if it will clear any OTC derivative products, including, but not limited to energy OTC derivative products.

For a Bank clearing member:

- \$5,000,000,000 if it will clear exchange-traded futures/options; or,
- \$50,000,000 if it will clear only OTC derivative products, including, but not limited to energy OTC derivative products.

For a COMEX Clearing Member, the exchange capital requirement is the greater of the CFTC or SEC capital requirement or:

For a non-Bank clearing member:

- \$5,000,000 if it will clear only exchange-traded futures/options; or,
- \$50,000,000 if it will clear any OTC derivative products, including, but not limited to energy OTC derivative products.

For a Bank clearing member:

- \$5,000,000,000 if it will clear exchange-traded futures/options; or,
- \$50,000,000 if it will clear only OTC derivative products, including, but not limited to, metal OTC derivative products.

For additional information on capital requirements, refer to Rule 970 for Exchange-traded futures/options, CME Rule 8F004 for OTC derivatives and CME Rule 8G04 for IRS.

The Clearing House Oversight Committee, the Clearing House Risk Committee, the IRS Risk Committee or the Clearing House may prescribe additional capital requirements and grant exemptions.

In addition:

- If a hedge fund is the CME, CBOT, NYMEX or COMEX clearing member, the investment manager must maintain assets under management of \$1 billion for exchange-traded futures/options and OTC.
- If the investment manager of a hedge fund is the CME, CBOT, NYMEX or COMEX clearing member, its exchange minimum capital requirement for exchange-traded futures/options is \$50,000,000 (instead of \$5,000,000 per the above).

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Guaranty Fund and Membership Requirements

All clearing members must deposit with the Clearing House a guaranty fund deposit for their obligations to CME. Guaranty fund requirements are dependent upon the products cleared. Separate guaranty fund pools are maintained for Exchange-traded products and OTC derivatives excluding IRS (i.e., the "base" guaranty fund) and IRS. The minimum base guaranty fund deposit for a clearing member which will clear OTC derivative products, excluding IRS, is \$2,500,000.

The guaranty fund requirements of the Clearing House are stated in Rule 816. (Guaranty Fund Deposit) and for OTC derivatives in Rule 8F007. (Guaranty Fund Deposit) and 8G07. (IRS Financial Safeguards and Guaranty Fund Deposit).

If the Clearing Member will clear IRS products, the minimum requirement to the IRS guaranty fund is the greater of \$15,000,000 or the IRS clearing member's proportionate share consistent with CME Rule 8G07.1.(i) and (ii) (i.e., the "funded portion" of the IRS financial safeguards package). Refer to Rule 8G07. for information regarding the IRS guaranty fund.

Guaranty fund minimums may be increased from time to time, depending on the mix of OTC asset classes for which the Clearing House provides clearing services.

The Clearing House Oversight Committee, the Clearing House Risk Committee, the IRS Risk Committee or the Clearing House may prescribe additional financial, including guaranty fund deposit, requirements.

Clearing of Customer Activity

If the clearing member will clear customer accounts, it must be properly registered or authorized for such activity by its primary regulator and it must be registered as an FCM with the CFTC and NFA. FCMs are subject to CFTC rules and regulations including rules and regulations pertaining to regulatory capital, financial reporting and customer protection. Information on FCM registration can be obtained from the National Futures Association (www.nfa.futures.org or 312.781.1300). CFTC rules and regulations can be found on their Web Site at www.cftc.gov.

A clearing member must comply with the requirements of Rule 971 (Segregation, Secured and Cleared Swaps Customer Account Requirements). These requirements include:

- Maintaining at all times sufficient funds in segregated, secured 30.7 or cleared swap customer accounts:
- Computing, recording and reporting the Segregation, Secured 30.7 and Cleared Swap Amounts Statements;
- Obtaining satisfactory segregation, secured 30.7 and cleared swap acknowledgement letters; and,

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 Preparing and reporting daily Segregation, Secured 30.7 and Cleared Swap Amounts Statements.

In addition, clearing members must provide immediate written notice to CME Group's FRS Department of a failure to maintain sufficient funds in segregation, secured 30.7 or cleared swap accounts. Refer to Rule 971. (Segregation, Secured and Cleared Swaps Customer Account Requirements).

All clearing members must ensure that its customers meet any eligibility requirements established for trading certain OTC derivatives products. For example, customers who will trade interest rate swaps must meet the qualifications for Eligible Contract Participant as defined in CFTC regulations.

All OTC derivative transactions must be identified with an account number which identifies the originator of the transaction and indicate whether the transaction was executed as a proprietary or customer transaction. In addition, an OTC Clearing Member must register all "ultimate" or end customers. Refer to Rule 8F009. (Customer Registration)

All OTC clearing members are subject to risk management and monitoring practices by CME related to transactions submitted to the Clearing House. OTC Clearing Members shall promptly provide all information requested by Clearing House staff, including, without limitation, information with respect to risk, settlement, liquidity, and operational issues. OTC Clearing Members shall make information and documents regarding their risk management policies, procedures and practices available to the CFTC upon the CFTC's request. Refer to Rule 8F010. (Risk Management).

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Financial Reporting Requirements

Designated Self-Regulatory Organization (DSRO)

All clearing members will be assigned a DSRO. A clearing member's DSRO is its lead regulator for the futures industry.

DSRO assignments are decided by the Joint Audit Committee which is composed of representatives of domestic futures exchanges and National Futures Association. For the most part, a DSRO is determined based upon where a clearing member was first elected to membership and where the bulk of the clearing member's business (trading activity) is conducted.

In general, clearing member applicants who are applying to CME for their first U.S. commodity exchange membership will have CME as their DSRO, while clearing members holding other U.S. commodity exchange memberships at the time of application will continue with their current DSRO.

Financial Statement Filings - Daily

All clearing member FCMs must submit, on a daily basis, daily segregated, secured 30.7 and cleared swap customer statements ("Daily Seg 1-FR" for FCMs and "Daily Seg FOCUS II" for dually registered FCM-Broker/Dealers), as applicable, through WinJammer™ by 12:00 noon on the following business day. These statements must be signed off by the firm's Chief Executive Officer, Chief Financial Officer or their designated representatives as allowed.

Financial Statement Filings – Bi-Monthly

All clearing member FCMs must submit a report of investments as of the 15th and last business day of the month through WinJammer by the close of business on the following business day. The report will detail the dollar amount of funds held by depository and by permitted investment as outlined in CFTC Regulation 1.25(a). The investment reports must be submitted by segregated, secured 30.7 and cleared swap customer origin.

Financial Statement Filings - Monthly

All non-Bank clearing members must submit monthly Form 1-FRs (all non-Broker/Dealers) or FOCUS Reports (dually registered FCM-Broker/Dealers), including Exchange Supplemental Information, through the WinJammer system within seventeen (17) business days of month-end. Such monthly reporting includes the submission of an unaudited monthly report as of fiscal year-end.

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The Exchange Supplemental Information required in the financial filing includes:

- Capital to be withdrawn within 6 months;
- Subordinated Debt maturing within 6 months;
- Subordinated Debt due to mature within 6 months that you plan to renew; and,
- Additional capital requirement for excess margin on Reverse Repurchase Agreement. *
 Information is only applicable to broker/dealers

This additional information is required for the FRS Department to monitor a clearing member's capital level and decreases which are known and will occur within the next six months.

All monthly financial statements must be submitted through the WinJammer system, an electronic filing system. To file the statements using the WinJammer system, authorized financial statement submitters are granted access to WinJammer. To gain access and obtain approval for a submitter, you may visit the WinJammer web site at: http://winjammer.futures.org/. The information can be located under Getting Started. Should you encounter difficulty, please e-mail wigmmer@cmegroup.com or call 312-930-3230.

Financial Statement Filings – Quarterly

All Bank clearing members are required to file any and all financial statements and capital adequacy reports which are filed with its primary banking regulator. However, such financial statements and capital adequacy reports must be file on, at least, a quarterly basis, including as of the Bank clearing member's fiscal year-end, if such filing of an unaudited fiscal year-end financial statement or capital adequacy report is required by the clearing member's primary banking regulator. All Bank clearing members must submit to FRS the quarterly Form "CME Financial Forms − Banks" through the WinJammer™ system and must attach all financial statements and capital adequacy reports filed with their primary banking regulator to the WinJammer filing. Refer to above for WinJammer filing information.

Such quarterly financial statements and capital adequacy reports are due five calendar days after such statements are filed with the Bank's primary banking regulator. These capital adequacy reports must demonstrate compliance with the Exchange minimum capital requirements.

<u>Financial Statement Filings – Annually</u>

All non-Bank clearing members are required to submit certified financial statements within sixty (60) days of their fiscal year-end to the FRS Department. The requirements of certified financial reports of broker/dealers are specified in SEC Rule 17a-5 and the requirements of certified financial reports of FCMs are specified in CFTC Regulations 1.10 and 1.16.

Bank clearing members must submit an annual certified financial statement to CME Group's FRS Department. The annual certified financial statement is due five calendar days after such statements are filed with its primary banking regulator.

All annual certified financial statements must be submitted to the FRS Department via WinJammer.

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Financial Statement Filings - More Frequent Financial Reporting

Clearing Members may be placed on more frequent reporting for "just cause" at the discretion of the Exchanges, including but not limited to the Clearing House Oversight Committee, the Clearing House Risk Committee, the IRS Risk Committee or Exchange staff. Generally, more frequent reporting would be due to new clearing membership status as well as result from on-going financial difficulties or significant problems discovered during a review of the clearing member. Examples of more frequent reporting include the submission of daily or weekly capital computations.

Notification Requirements

Financial Notifications

- 1. All clearing members must provide written notice to the FRS Department whenever the clearing member:
 - Fails to maintain minimum capital requirements;
 - Fails to maintain early warning capital requirements;
 - Fails to maintain current books and records:
 - Determines the existence of a material inadequacy as specified in CFTC Regulation 1.16(d)(2);
 - Changes its fiscal year;
 - Changes its public accountant; or,
 - Fails to comply with Exchange prescribed additional accounting, reporting, financial, and/or operational requirements.

Refer to Rule 970.A.3. and Rule 970.D. (Financial Requirements).

- 2. All clearing member FCMs must provide written notice to the FRS Department if the clearing member fails to maintain sufficient funds in segregation, secured 30.7 or cleared swap customer accounts.
 - Refer to Rule 971.F. (Segregation, Secured and Cleared Swaps Customer Account Requirements).
- 3. All clearing member FCMs must provide written notice of pre-approval (by CEO, CFO or authorized representative) to the FRS Department for all disbursements not made for the benefit of a customer from a segregated, secured 30.7 or cleared swap customer account which exceed 25% of the FCM clearing member's excess segregated, secured 30.7 or cleared swap customer origin, as applicable, of the most recent calculation.
 - Refer to Rule 971.E. (Segregation, Secured and Cleared Swaps Customer Account Requirements)

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4. All non-Bank clearing members must provide written notice to the FRS Department of any reductions in net capital as reported on the Form 1-FR, or tentative net capital as reported on the FOCUS Report for broker/dealers, of 20% or more from the most recent filing of such report within two business days of the event or series of events causing the reduction.

All non-Bank clearing members must provide written notice to the FRS Department at least two business days in advance of any planned reductions to equity capital if it would cause a reduction in excess net capital of 30% or more.

Bank clearing members must provide notice if any event or series of events, including any withdrawal, advance, loan or loss would cause, on a net basis, a reduction in Tier I capital as reported on the most recent filing of a financial report, of 20% or more. Notice must be provided within five business days of the event or series of events causing the reduction.

Refer to Rule 972. (Reductions in Capital).

5. All clearing members must provide written notice to the FRS Department if a performance bond call in any account (customer, noncustomer, or omnibus) exceeds the clearing member's adjusted net capital or if a performance bond call exceeding the clearing member's excess net capital remains unanswered by the close of business the day following the issuance of the call.

Refer to CFTC Regulations 1.12(f)(3) and 1.12(f)(4).

- 6. All clearing member FCMs must provide written notice to the FRS Department whenever the clearing member:
 - Is aware that its investments of segregated, secured 30.7 or cleared swaps customer funds are in instruments which are not permitted under CFTC Regulation 1.25;
 - Fails to maintain sufficient funds to meet its targeted residual interest in segregated, secured 30.7 or cleared swaps customer accounts or its residual interest is less than the undermargined amount;
 - Experiences a material adverse impact to its creditworthiness or ability to fund its obligations;
 - Experiences a material change in its operations or risk profile; or,
 - Is notified by the Securities and Exchange Commission or another securities or futures self-regulatory organization that it is the subject of a formal investigation

Refer to CFTC Regulation 1.12.

The above list of notifications is not all inclusive.

Other Notifications

 Significant Business Transaction or Change in Operations. All clearing members are required to provide notice to the Exchanges prior to any significant business transaction. The purpose of such notification is to enable the Exchanges to better identify and monitor

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risks presented by significant business transactions. The notification requirements are contained in Rule 901.H. (General Requirements and Obligations) and are as follows:

All clearing members must notify the FRS Department prior to any significant business transaction or significant change in operations including:

- the merger, combination, or consolidation between the clearing member and another person or entity;
- the assumption or guarantee by the clearing member of all or substantially all of the liabilities of another in connection with a direct or indirect acquisition of all or substantially all of that person's or entity's assets;
- the sale of a significant part of the clearing member's business and/or assets to another person or entity;
- a change in the direct or indirect beneficial ownership of 20% or more of the clearing member;
- any change in the clearing member's system provider used to process trades; or,
- an increase in the number of members qualified by the clearing member.

Such transactions may be subject to review and approval by the Clearing House Oversight Committee with respect to corporate organization and structure changes and the Clearing House Risk Committee or Exchange staff shall be the relevant body with respect to all other changes.

In addition, a clearing member that qualifies members must provide fifteen (15) days notice to the Exchanges of any proposal to terminate such business or any material part of such business.

- 2. Ownership Changes. All clearing members must submit and maintain with the FRS Department a current list of every person or entity that is directly, or indirectly through intermediaries, the beneficial owner of 20% or more of any class of equity security of the clearing member.
 - The FRS Department requires notification as soon as any changes in ownership structure occur in accordance with Rule 901.H.4. (General Requirements and Obligations).
- Firm Contact Listings. Maintaining up-to-date personnel contact information is critical to continue communications with our clearing members during normal, as well as crisis, situations. Therefore, clearing members are required to immediately notify the Exchanges of all changes to its key personnel as well as update its information accordingly on CME's Firm Contact System.

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Other Requirements

Futures Commission Merchant Activity

Clearing members that are registered as FCMs are required to have appropriate staff, systems, procedures and controls to meet the requirements and obligations of being an FCM. This includes, but is not limited to, staff with customer futures industry experience who are conversant with CFTC customer protection, capital adequacy and compliance rules; bookkeeping systems to account for customers (as well as non-customer and proprietary) futures activity and regulatory reporting requirements; performance bond, risk management and other compliance procedures and sufficient internal accounting controls over safeguarding customer and firm assets.

Required Records and Reports

All clearing members are required to prepare, maintain and keep current those books and records required by the Exchange(s), CFTC and applicable Regulations thereunder. It is important to note that such books and records shall be open to inspection and promptly provided to the Exchange upon request.

Refer to Rule 980 (Required Records and Reports)

Anti-Money Laundering and Economic Sanctions Compliance

All clearing members are required to have a written compliance program approved by its senior management which is reasonably designed to achieve and monitor the clearing member's compliance with all applicable requirements of the Bank Secrecy Act, the International Emergency Economic Powers Act, the Trading with the Enemy Act, Executive Orders, regulations issued by the U.S. Department of Treasury and the Commodity Futures Trading Commission.

Refer to Rule 981 (Anti-Money Laundering and Economic Sanctions Compliance).

Risk Management

All clearing members must have written risk management policies and procedures in place to ensure they are able to perform certain basic risk and operational functions at all times. In addition, FCMs that accept money, securities or property to margin, guarantee or secure any trades must comply with the risk management requirements set forth in CFTC Regulation 1.11. Refer to Rule 982 (Risk Management) and CFTC Regulation 1.11

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Clearing Membership Financial Reporting, Notification and Other Requirements

Disaster Recovery and Business Continuity

All clearing members must have written disaster recovery and business continuity policies and procedures in place to ensure they are able to perform certain basic operational functions in the event of a significant internal or external interruption to their operations. Depending on the firm's size and its business and product mix, clearing members must have procedures in place to allow them to continue to operate during periods of stress or to transfer accounts to another fully operational clearing member with minimal disruption to either the Clearing House or their customers. Clearing members must perform periodic testing of disaster recovery and business continuity plans, have duplication of critical systems at back up sites and periodically back-up critical information.

Refer to Rule 983 (Disaster Recovery and Business Continuity).

Segregated, Secured 30.7 and Cleared Swaps Accounts

All clearing member FCMs must provide authorization to third party banks, clearing organizations and carrying brokers to allow these depositories to provide daily account balance information to the FRS Department for its segregated, secured 30.7 and cleared swaps customer accounts. In addition, acknowledgement letters for such customer accounts must be filed via WinJammer by the FCM within three business days after such accounts are opened and by the depository via email to FRSAcknowledgmentLetters@cmegroup.com.

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Clearing Membership Cross-Guarantee, Guarantee of Obligations and Guaranty Fund Guarantee

Cross-Guarantee Agreement

Rule 901.G. (General Requirements and Obligations) states that if any person directly or indirectly controls, owns 10% or more of, or has the right to 10% or more of the profits of two or more clearing members, then each clearing member shall guarantee the obligations of the other clearing members to the Exchanges. If a cross guarantee affiliation exists, absent an exemption, only one entity may trade in a given OTC clearing class within the house origin (i.e., only one entity may clear IRS activity).

Each clearing member shall execute a written guarantee to the Exchanges on an approved form. Refer to Exhibit E. The cross-guarantee shall be signed by an authorized officer for a corporation, an authorized member or manager for a limited liability company, or a general partner of a partnership. In addition, each clearing member shall submit a Board of Director's resolution or similar written documentation stating the clearing member's decision to execute such Cross-Guarantee Agreement and granting such officer, member, manager or partner authority to sign the guarantee.

A cross-guarantee shall guarantee all obligations of the clearing member to the Clearing House arising out of customer, noncustomer and proprietary accounts cleared by the clearing member.

Such customer, noncustomer and proprietary obligations covered under the cross-guarantee include performance bond and settlement for customer, noncustomer and proprietary positions held and cleared; customer, noncustomer and proprietary trades executed by traders qualified by the clearing member until accepted for clearing by another clearing firm; and, customer noncustomer and proprietary trades executed and processed through the Give Up System ("GUS") by the clearing member until accepted for clearing by another clearing firm.

A cross-guarantee shall also apply to any obligations of the clearing member to pay an assessment to the Clearing House pursuant to Rule 802.B. (Protection of Clearing House - Satisfaction of Clearing House Obligations). Note: Rule 802.B. sets forth a clearing member's financial responsibilities in the event of a default of another clearing member.

Exchange Staff may grant exemptions from the cross-guarantee requirements.

Guarantee of Obligations to the Clearing House

A guarantee of obligations to the Clearing House must be obtained whenever:

- 1. A clearing member reorganizes into a different legal entity, such as a corporation reorganizing to a limited liability company; or
- 2. A clearing member is replaced by a different company within the same corporate structure and the new clearing member wishes to utilize the membership assignments of the withdrawing clearing member during the 60-day posting period.

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Clearing Membership Cross-Guarantee, Guarantee of Obligations and Guaranty Fund Guarantee

A guarantee of obligations to the Clearing House must be executed on an Exchange-approved form. The guarantee of obligations is between the new clearing member and the existing clearing member. It must be accepted and signed by both parties. Refer to Exhibit F.

The guarantee of obligations shall be signed by an authorized officer for a corporation, an authorized member or manager for a limited liability company, or a general partner of a partnership. In addition, the clearing member shall submit a Board of Director's resolution or similar written documentation stating the clearing member's decision to reorganize or replace an affiliated company (as applicable) and granting such officer, member, manager or partner authority to sign the guarantee.

Within the guarantee, the new clearing member unconditionally guarantees and assumes all obligations of the current clearing member to the Clearing House. Examples of such obligations include, but are not limited to, out-trades, open complaints, clearing fee liabilities arising from past transactions, delivery obligations, valid Exchange claims, and outstanding bid guarantees.

In addition, the new clearing member assumes responsibility for all agreements entered into by the existing clearing member with the Exchanges. Examples of such agreements include, but are not limited to, membership assignments, trader qualification agreements, authorized signatures, transfers pursuant to Rules 106.D. and 106.F., trading authorizations and consents to qualified members and lessees to have accounts at clearing members other than their qualifying clearing member.

There is no time restriction on the guarantee.

Guaranty Fund Guarantee of Obligations

Under limited conditions, such as a clearing membership replacement or merger with an affiliated company, the new or surviving clearing member may assume the existing guaranty fund deposit of the withdrawing clearing member during the 60-day posting period of the withdrawing clearing member. This eliminates the affiliates having to maintain two guaranty fund deposits with the Clearing House during the 60-day posting period.

By executing the Guaranty Fund Guarantee of Obligations, the new or surviving clearing member agrees to pay all valid claims filed pursuant to Rules 110 and 913 against the withdrawing clearing member. The guarantee is limited to the amount of guaranty fund assumed by the new or surviving clearing member. The guarantee remains in effect until all claims have been resolved.

To utilize a Guaranty Fund Guarantee of Obligations, a written request must be directed to FRS Department staff. FRS Department staff will consider how the replacement or reorganization is structured and the relationship of the parties. If approved, a Guaranty Fund Guarantee of Obligations must be executed on an Exchange approved form. Refer to Exhibit G. The Guaranty Fund Guarantee of Obligations must be signed by an authorized officer for a corporation, an authorized member or manager for a limited liability company, or a general partner of a partnership.

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Clearing Membership Letters of Credit

The Clearing House allows limited use of letters of credit in meeting performance bond requirements on positions at the clearing house level. The Clearing House accepts letters of credit in accordance with Rule 820. (Performance Bonds).

Clearing members may accept letters of credit from their customers for performance bond in accordance with Rule 930.C. (Account Holder Performance Bond Requirements: Acceptable Performance Bond Deposits).

All letters of credit must be irrevocable and drawable in the continental United States.

Clearing House Letters of Credit

Letters of credit deposited with the Clearing House must be in Clearing House approved formats from a Clearing House approved bank. For approved formats and approved banks, refer to CME Group's Website at:

https://www.cmegroup.com/clearing/financial-and-collateral-management.html.

In addition, the Clearing House accepts pass-through letters of credit for margining of CME, CBOT, NYMEX and COMEX positions; that is, letters of credit deposited by a clearing member's customers/noncustomers and passed through to the Clearing House. Both the clearing member and the Clearing House are beneficiaries of such pass-through letters of credit.

A clearing member (a bank or other organization) is not allowed to post with the Clearing House a letter of credit issued by itself or any of its affiliates.

Letters of Credit are acceptable only for Base products and are capped at the lesser of 25% of core requirement or \$1 billion per clearing member firm. For a complete list of acceptable collateral and product class restrictions, refer to CME Group's website at:

https://www.cmegroup.com/clearing/financial-and-collateral-management.html and https://www.cmegroup.com/clearing/financial-and-collateral-management/acceptable-collateral-for-letters-of-credit.html

Clearing Firm Letters of Credit

Letters of credit accepted by clearing firms from their customers/noncustomers to meet performance bond requirements on CME, CBOT, NYMEX and COMEX positions must be in Exchange-approved formats. For approved formats refer to CME Group's Web site at: http://www.cmegroup.com/clearing/audit/audit-department-forms.html.

A clearing member may not accept a letter of credit from a customer/noncustomer which is issued by the customer/noncustomer, an affiliate of the customer/noncustomer, the clearing member, or an affiliate of the clearing member.

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Clearing Fees

Clearing, Exchange and Globex® fees are assessed per side (the buy and the sell side) on all Exchanges futures and options contracts according to the published schedules then in effect. Clearing members are invoiced on a monthly basis for all fees. The fee schedules of CME, CBOT, NYMEX and COMEX are located on CME Group's Web site at: https://www.cmegroup.com/company/clearing-fees.html.

Proprietary trading activity of clearing members with shares/Equity Member Subscription Rate Program Participant and related Rule 106.I. members must conform to CME Group member fee policies. Refer to Exhibit H. A Proprietary Trading Attestation indicating if proprietary trading activity is conducted by the clearing member and, if so, that it conforms to CME Group fee policies, must be executed and submitted with the clearing membership application. Refer to Exhibit I. A Proprietary Trading Attestation is included in the Application for Clearing Membership.

The Exchange Fee System (EFS) provides the clearing member with online transactional viewing and an adjustment facility for clearing fees. Clearing firms have the ability to reallocate current month trades, exercises, assignments, and deliveries by account on a daily basis and resubmit the transactions through the Exchange Fee Systems. Clearing firms are able to make intra-month and inter-month adjustments that will automatically be reprocessed. Only inter-month transactions appear separately on the clearing firm's month-end statement. A clearing firm may make adjustments to its calculated fees up to two months after the fee month ends.

Clearing members are required to complete, sign and submit an Authorization Agreement for Pre-Authorized Payments for clearing and non-clearing charges (i.e. telecom, floor space fees, etc.) to Accounts Receivable. Kwaw Kwakyi may be contacted at Kwaw.Kwakyi@cmegroup.com. (A voided check may also be required.) Refer to Exhibit J (One form for futures and options and one form for OTC). The agreement must be signed by an authorized senior officer of the clearing member.

For more information on clearing fees or Exchange Fee Systems, contact EFSAdmin@cmegroup.com or the Fee Hotline at (312) 648-5470 or the FRS Department at (312) 930-3230.

Give-Up Payment System ("GPS")

The Give-Up Payment System ("GPS") is a billing system for give-up business that automatically transfers funds on a monthly basis between executing and carrying firms using the BMO Harris Bank ACH System. Use of GPS at the Clearing House is <u>mandatory for those</u> entities conducting give-up business.

Clearing members who will clear CME, CBOT, NYMEX or COMEX products are required to complete, sign and submit a Clearing Member Agreement and Participation Form (including a voided check), along with an IRS W-9 Form (or W-8BEN for non-U.S. entities), to the Clearing House before executing trades. Refer to Exhibit K.

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In addition, an Online System Access Request Form must be completed, signed, and submitted online to EASE (Enterprise Application & System Entitlements). Additional information may be obtained by contacting: EASE@cmegroup.com. The Online System Access Request Form must be completed for each individual that will maintain the system at the clearing member. (See http://www.cmegroup.com/clearing/files/member-firm-online-access-form.pdf)

These forms allow the users the ability to set rates, change accounts, and add new agreements online as well as transmit and receive data.

For further information concerning GPS, please contact: CME Group Clearing Services at (312) 207-2525 or email ccs@cmegroup.com.

Brokerage Payment System ("BPS")

CME Group's Brokerage Payment System ("BPS") is a web-based application that facilitates brokerage payments to filling brokers by member firms by automatically debiting the member firms' bank accounts and crediting the brokers' bank accounts. This system eliminates the costly labor-intensive task of preparing and distributing checks to brokers each month and assures timely brokerage payments. Use of BPS at CME, CBOT, NYMEX and COMEX is mandatory if the firm has floor brokers/traders.

Clearing members who will clear CME, CBOT, NYMEX or COMEX products are required to complete, sign and submit a Brokerage Payment System Clearing Member Participation Form (including voided check), along with an IRS W-9 Form (or W-8BEN for non-U.S. entities), to the Clearing House. Refer to https://www.cmegroup.com/company/membership/files/BPSCMParticipationForm.pdf and Exhibit M. The agreement and applicable IRS Form must be signed by an authorized senior officer of the clearing member.

Finally, to utilize BPS, all brokers that fill orders for a clearing member must have a Brokerage Payment System Broker Agreement for NYMEX and COMEX brokers (including a voided check) or a Brokerage Payment System Floor Broker Agreement for CME and CBOT brokers, along with an IRS W-9 Form (or W-8BEN for non-U.S. entities), on file with the Membership Services Department.

If the clearing member firm conducts 100% of its trading through Globex-API, this form is not required (i.e., this includes if the firm is solely an OTC Clearing Member applicant). However, if the clearing member conducts trading through ClearPort and its brokers have elected to be compensated through BPS, this form is required. For further information concerning BPS, please contact:

- CME Clearing Services and Operations: (312) 207-2525 e-mail: ccs@cmegroup.com
- Jule Mondschein, Supervisor, Membership Services,
 Phone: (312) 435-3485 e-mail: Jule.Mondschein@cmegroup.com

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Other Membership Services Department Forms

Clearing members who will clear CME, CBOT, NYMEX or COMEX products are required to execute a Secretary's Certificate (Refer to Exhibit N), a Designated Spokesperson Acknowledgement (Refer to Exhibit O) and IRS W-9 Form (or W-8BEN for non-U.S. entities) (in addition to the IRS Form executed in conjunction with the GPS and BPS agreements).

The Certificate with Respect to Corporate Resolutions designates an individual who is authorized to execute documents on behalf of the clearing member for membership purchases, sales, transfers, and assignments as well as other documents that may be required by the Membership Services Department.

The Designated Spokesperson Acknowledgement designates an individual at the clearing member who the Membership Services Department may contact if it has questions pertaining to the clearing member's memberships, shares or qualified traders.

An original IRS W-9 Form (or W-8BEN for non-U.S. entities) (Refer to Exhibit P) is required from all clearing members with shares by ComputerShare, the transfer agent for all CME Group Class A shares.

CME Globex®

In 1992, CME launched CME Globex® ("Globex"), an innovative electronic trading platform for after-hours trading of CME products. The CME Globex platform was the first - and remains among the fastest - global electronic trading systems for futures and options. Through its advanced functionality, high reliability and global connectivity, it is now the world's premier marketplace for derivatives. CME Group's technology facilitates all electronic trading, providing users across the globe with virtually 24-hour access to global markets. Globex provides fast, flexible, and reliable access to market information, order entry and order management.

Clearing members are required to utilize CME Globex credit controls for their own trades as well as any customers/firms that they clear. In addition, all clearing members are required to maintain trading records for five years in accordance with CME Rule 536. For customers for whom the clearing member has authorized access, the clearing member must:

- Guarantee and assume full responsibility for all activity through the terminal;
- Assist the Exchange in any investigation into potential violations of Exchange rules or the Commodity Exchange Act ("CEA"); and,
- Suspend or terminate the customer's Globex access if the Exchange determines that the actions of the customer threaten the integrity or liquidity of any contract or violate any rules of the Exchange or the CEA, or if a customer fails to cooperate in an investigation.

Access to Globex is available through order routing software designed by independent software vendors (ISVs) and market participants and certified to CME Group requirements. CME Globex is also available via CME Direct, an Exchange provided front-end system.

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FCMs, Introducing Brokers and ISVs also offer customers trading applications that are enabled for trading Globex products and provide connectivity through a number of different means, including the Internet, through the vendor's private network or data center, or via direct connections from the customer to the Exchange.

Additional information on accessing Globex is available on the Web site at https://www.cmegroup.com/globex.html.

For further information on Globex, please contact Global Account Management:

United States: +1 312-634-8700

Europe: +44 800 898 013 Asia: +65 6593 5505

globalaccountmanagement@cmegroup.com

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Clearing Membership Contact Listing and Resource Guide

Contact Listing

Suzanne Sprague Debbie Kokal	Sr MD, Global Head of Clearing Executive Director, FRS Dept	(312) 930-3260 (312) 930-3235	Suzanne.Sprague@cmegroup.com Debbie.Kokal@cmegroup.com
FRS Department			
Cathy Downs	Senior Director, FRS Dept	(312) 648-3802	Cathleen.Downs@cmegroup.com
Laurie Egan	Senior Director, FRS Dept	(312) 338-2405	Laurie.Egan@cmegroup.com
Kristen Klein	Director, FRS Dept	(312) 930-3236	Kristen.Klein@cmegroup.com
Clearing House			
Lee Betsill	Managing Director, CRO	(312) 338-2779	Lee.Betsill@cmegroup.com
Terry Ruppe	Senior Director, Banking + Collateral	(312) 930-3223	Terry.Ruppe@cmegroup.com
Michael Kobida	Executive Director, Collateral Services	(312) 454-8961	Michael Kobida @cmegroup.com
Membership Services Department			
Robert Krewer	Director, Membership Services	(312) 435-3473	Robert.Krewer@cmegroup.com
Jule Mondschein	Supervisor, Membership Services	(312) 435-3485	Jule.Mondschein@cmegroup.com

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Clearing Membership Contact Listing and Resource Guide

Resource Guide

Rule Books and Exchange Manuals

- CFTC Regulations
 https://www.ecfr.gov/cgi-bin/text-idx?SID=e8419eb63d5d1968fa5b740969ee59d8&c=ecfr&tpl=/ecfrbrowse/Title17/17cfrv1 02.tpl
- CME Clearing House Manuals of Operations
 http://www.cmegroup.com/clearing/operations-and-deliveries/system-manuals.html
- CME, CBOT, NYMEX and COMEX Rule Books http://www.cmegroup.com/market-regulation/rulebook/
- NFA Rule Book www.nfa.futures.org

Commodity Manuals

CFTC 1-FR Instruction Manual

CFTC Financial & Segregation Interpretations 1-14

• CFTC Advisories and Interpretative Letters

• Joint Audit Committee (JAC) Margins Handbook

http://www.jacfutures.com/jac/Documents.aspx

www.cftc.gov/opa/opaletters.htm

http://www.jacfutures.com/jac/Documents.aspx

Publications

CME Group

- CME Group Inc.'s Annual Report http://investor.cmegroup.com/investor-relations/financials.cfm
- The Financial Safeguard System CME Clearing
 http://www.cmegroup.com/clearing/cme-clearing-overview/safeguards.html

Membership

- CME, CBOT, NYMEX and COMEX Clearing Fee Schedules http://www.cmegroup.com/company/clearing-fees/index.html
- Equity Member Rate Subscription Program http://www.cmegroup.com/company/clearing-fees/index.html
- Clearing Membership Handbook http://www.cmegroup.com/company/membership/files/cme-group-clearing-membership-handbook.pdf

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Clearing Membership Contact Listing and Resource Guide

Regulatory

- Financial and Regulatory Bulletins (FRBs) (Located under "Clearing Advisories") "Audit Advisories") http://www.cmegroup.com/tools-information/advisorySearch.html#cat=advisorynotices%3AAdvisory%20Notices&pageNumber=4
- CME Clearing House Advisories http://www.cmegroup.com/tools-information/subscriptions/advisory-subscribe.html
- JAC Regulatory Alerts http://www.jacfutures.com/jac/RegAlerts.aspx
- WinJammer™ Quick Start Guide www.nfa.futures.org/NFA-electronic-filings/winJammer.HTML

Forms and Formats

Membership

- Clearing Membership Applications
 See Chapter 1 for links to applicable documents.
- Clearing Member Membership and Class B Share Assignment Application http://www.cmegroup.com/company/membership/files/ClassBShareAssignmentApplication.pdf

Corporate and Fund Membership Applications https://www.cmegroup.com/company/membership/corporate.html

- Individual Membership Application (Short Form and Long Form) https://www.cmegroup.com/company/membership/individual.html
- Shareholder Relations and Membership Services Various Forms http://www.cmegroup.com/company/membership/membership-resources.html

Regulatory

 Subordinated Loan Agreements - Sample Formats http://www.cmegroup.com/clearing/audit/audit-department-forms.html

Other CME Group Information

Membership Prices
 http://www.cmegroup.com/company/membership/membership-pricing.html

Any questions and/or requests for materials can be directed to the Financial and Regulatory Surveillance Department at (312) 930-3230.

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Exhibit A



AGENCY AGREEMENT

	WHEREAS,	("Member") with offices located at
		is a
("CBO"	T"), New York Mercantile Exchange, Inc. ("I	Inc. ("CME"), Chicago Board of Trade, Inc. NYMEX"), and/or Commodity Exchange, Inc. e, and such other exchange as may become
	WHEREAS, the Member hereby appoints	other communications in connection with the
	nt") as its agent for service of process and referenced business; and	other communications in connection with the
and oth	WHEREAS, the Agent accepts such appoir ner communications;	ntment to act as agent for service of process
	NOW THEREFORE, the parties agree as follows:	ows:
1.	communications in connection with its acti Agent shall accept service of process and ot	as its agent for service of process and other vities related to clearing membership. The her communications on behalf of the Member the Member . Such communications shall be by electronic or telephonic means.
2.	agreement of the parties provided that the	reement ("Agreement") may be terminated by Member first provides to the Exchanges an ice of process that is acceptable to the
3.	No Assignment. This Agreement shall not be consent of Exchange staff.	e assigned by either party without the written
4.		overned by and construed in accordance with linois or New York), United States of America.
5.	Choice of Forum and Consent to Jurisdic jurisdiction of the courts (check one):	tion. Each party consents to the personal
	any action at law, suit in equity, or jud arise out of the Member activities a agrees not to contest venue for any Illinois. The Member agrees that a	ct Court for the Northern District of Illinois over icial proceeding under or which may otherwise is a clearing member or this Agreement and or such proceeding in Cook County, State of any action at law, suit in equity, or judicial twise arise out of the Member 's activities as a

Courts of the State of Illinois or the United States District Court for the Northern District of Illinois.
New York and the United States District Court for the Southern District of New York over any action at law, suit in equity, or judicial proceeding under or which may otherwise arise out of the Member 's activities as a clearing member or this Agreement and agrees not to contest venue for any such proceeding in Kings County, State of New York. The Member agrees that any action at law, suit ir equity, or judicial proceeding under or which may otherwise arise out of the Member 's activities as a clearing member or this Agreement shall be instituted by the Member only in the Courts of the State of New York or the United States District Court for the Southern District of New York
<u>Severability</u> . If any provision of this Agreement is held by any Court of competen jurisdiction to be invalid, illegal or unenforceable for any reason, the remaining provisions of this Agreement shall not be affected and this Agreement shall be construed and enforced as if this Agreement did not contain the provision which is held to be invalid, illegal, of unenforceable.
Heirs, Successors, and Assigns. This Agreement shall be binding on and shall inure to the benefit of the heirs, executors, administrators, successors, and assigns of the parties Nothing in this paragraph shall be construed as a consent by either party to any assignment of this Agreement except as provided in Paragraph 3 of this Agreement.
Notices. Except as provided in Paragraph 1, all notices or communications required by o given under this Agreement shall be deemed given as of the date of receipt or, if earlier, as of the date five days after such notices or communications are deposited in the United States mail, airmail postage prepaid, or in the mails of any other country, airmail postage prepaid, or delivered to any generally recognized international air carrier.
All notices to the Agent shall be addressed as follows:

6.

7.

8.

Executed on	, 20, at		
(City)	(State, Province, etc.)	(Country)	
(Signature)			
(Printed Name)			
(Title)			
Approved and acce	epted by the Agent on	, 20	.,
(City)	(State, Province, etc.)		(Country)
AGENT			
By: (Signature)			
(Printed Name)			
(Title)			

Exhibit B



Date

Clearing Member Firm – Membership Assignment Form

90	The clearing membership assignment form is required pursuant to CME, CBOT, NYMEX and COMEX Rule 902 (as applicable) where certain qualified entities or individuals assign their membership(s) for the clearing member firm's membership status.				
1.	Clearing Member Firm I	Name (Assignee):			
2.	Seat Owner Name (Assi	gnor):			
	Clearing Member Firm Parent company with Individual owner with Independent assignm	n acceptable proprietary ir acceptable proprietary ir ent	ing member firm (please nterest in Clearing Membe nterest in Clearing Membe	r Firm r Firm	
	Indicate the Exchange, clearing membership st		ip Number for each mem	bership that will be assigned for	
	Exchange	Division	Membership Number		
				_	
902 Upo Cor Gro sha rule fede its s Ass	2. The Assignor and Assigne on default of Assignee in me mmittee's determination that up Inc. may direct the sale of the used to satisfy Rule 110 as including, but not limited eral or state court in Chicag subsidiaries arising from this ignee and Assignor agree the on default of the same subsidiaries.	e hereby acknowledge they eting its obligations to CME at the Assignee's financial poof any or all of the Assignee's obligations and any obligat to, Exchange Rule 913. Assigo, Illinois with respect to any s Assignment Agreement and	have read and understand all Group Inc. or its subsidiaries osition jeopardizes the finance is Membership(s). The proceetions resulting from the Assig gnee and Assignor consent to vaction between Assignee, Astid hereby waive any right to t	e Assignee pursuant to Exchange Rule provisions within Exchange Rule 902. or upon the Clearing House Risk ial integrity of the Exchange, CME ds from the sale of the Membership(s) nee's default as provided in Exchange the exclusive jurisdiction of any ssignor and/or CME Group Inc. or ransfer the venue of such litigation. In all respects by the laws of the State of	
Sig	ned (on behalf of the Ass	signor – Seat Owner)	Signed (on behalf of	the Assignee – Clearing Member Firm	
Nai	me (printed)		Name (printed)		

Date



Member Firm – Share Assignment Form

The share assignment form is required pursuant to CME, CBOT and NYMEX 106.J. and 106.S. Rules (as

me ass	membership status. A separate assignment form must be completed by each shareholder who wishes to assign such shares for a member firm. Please note only shares that are maintained an account with the Exchange's transfer agent may be assigned for a firm's membership status.						
1.	Member Firm Name (Assignee):						
2.	Share Owner Name (Assignor):						
3.	Please indicate Assignor's relationship to member fit Member firm Eligible affiliated corporate entity Individual owner with acceptable proprietary interest Eligible principal or employee of member firm Independent assignment						
4.	Number of CME Group shares being assigned.						
Sig	ned (on behalf of the Assignor – Share Owner)	Signed (on behalf of the Assignee – Member Firm)					
Naı	me (printed)	Name (printed)					
Dat	re	Date					

Exhibit C



Acknowledgement of Rule 110 and Indemnification of Transfer

ndemnific	ation of T	ransfer	
Clearing Member Na	me ("Clearing Memb	per")	
Transferee			
Transferor			
Seat Holder Name (a	s applicable) ("Hold	ler")	
Please indicate Excha	ange, Division and M	lembership Number of the le	eased seat.
Exchange	Division	Membership Numbe	er
ale 106 ("Transfers, Secule 110 ("Claims Against embership interest beir alifying Clearing Memb the value of this memb achange from any claims	urity Transactions, ar Member, Application of transferred. Furthe er of the Transferor, (ership interest on the s, demands, actions,	nd Authorizations to Transfer on of Proceeds") claims that have ermore, in addition to any clair Clearing Member agrees to page date of this transfer and to in liabilities or losses, including c	r Sell") does not extinguish any ve been or may be filed against the ms which may arise from being the yall such valid Rule 110 claims up ademnify and hold harmless the osts and attorney fees, arising or
gned (on behalf of the A	Authorized Represent	ative of Clearing Member)	
ame (printed)			
ate			
	Transferee Transferor Seat Holder Name (a Please indicate Excha Exchange earing Member hereby ansferor to Transferee a alle 106 ("Transfers, Sec alle 110 ("Claims Against embership interest beir ralifying Clearing Memb the value of this memb change from any claims sulting from or incurred gned (on behalf of the Agame (printed)	Transferee Transferor Seat Holder Name (as applicable) ("Hold Please indicate Exchange, Division and N Exchange Division Exchange Exchange Division Exchange Exchange Division Exchange Exchange Division Exchange Exchange Exchange Division Exchange Exchange	Transferor Seat Holder Name (as applicable) ("Holder") Please indicate Exchange, Division and Membership Number of the le Exchange Division Membership Number earing Member hereby agrees that the transfer of the membership interess ansferor to Transferee and, as applicable, Holder pursuant to Rule 105 ("Applied 106 ("Transfers, Security Transactions, and Authorizations to Transferentel 110 ("Claims Against Member, Application of Proceeds") claims that have membership interest being transferred. Furthermore, in addition to any claim alifying Clearing Member of the Transferor, Clearing Member agrees to pay the value of this membership interest on the date of this transfer and to inchange from any claims, demands, actions, liabilities or losses, including consulting from or incurred as a result of the waiver of the posting period for the sum of the posting period for the posting period for the posting period for the posting period for the posting the property of the posting period for the period period period period period period period peri

Exhibit D



CLEARING MEMBER SETTLEMENT ACCOUNTS AND DEBIT AUTHORIZATION

CLEARING MEMBER FIRMS MUST CONTACT THE DESIGNATED SETTLEMENT BANK(s) AND EXECUTE ALL DEBIT AUTHORITY DOCUMENTATION THAT ALLOWS CME TO DEBIT THE APPROPRIATE BANK ACCOUNT(s) FOR SETTLEMENT PURPOSES.

Clearing Member F	irm #		_	
Asset Account(s) #			_	
USD Settlement Ban	k Account Number	(s):		
	CLICTONAED	HOUSE /	CLICTORALD	

SETTLEMENT BANK	CUSTOMER SEGREGATED ACCOUNT	HOUSE/ NON-SEGREGATED ACCOUNT	CUSTOMER CLEARED SWAPS ACCOUNT	GUARANTY FUND DEPOSIT	ENABLE CCF*
Bank of America N.A.			N/A		□ Pays□ Collects□ Both
Bank of China Ltd, NY Branch					□ Pays□ Collects□ Both
Bank of New York Mellon					☐ Pays ☐ Collects ☐ Both
Barclays Bank PLC, NY Branch					☐ Pays ☐ Collects ☐ Both
Brown Brothers Harriman & Co.					☐ Pays ☐ Collects ☐ Both
BMO Harris Bank, N.A.					☐ Pays ☐ Collects ☐ Both
Citibank N.A., NY					☐ Pays ☐ Collects ☐ Both
JP Morgan Chase, NY					☐ Pays ☐ Collects ☐ Both
Lakeside Bank			N/A		□ Pays □ Collects □ Both

^{*}By electing to enable CCF (combined cash flow) the clearing member elects to have variation collects remain at CME rather than wired back to the settlement bank. The cash on deposit can be used to meet IM requirements or fulfill a variation obligation in a future settlement cycle. Contact ClearingHouseFinancial@cmegroup.com for more information.



Non-USD Settlement Bank Account Number(s):

Please refer to the list of acceptable banks $\frac{http://www.cmegroup.com/clearing/financial-and-collateral-management/settlement-banks.html}{}$

Currency	Settlement Bank	Account Number	Segregation Class (NSEG, CSEG, COTC)	Enable CCF
			,	□ Pays
				□ Collects
				□ Both
				□ Pays
				☐ Collects
				□ Both
				□ Pays
				□ Collects
				□ Both
				□ Pays
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				□ Both



By signing below, you are authorizing CME to unilaterally debit any of the account(s) listed above in accordance with CME rules, policies and procedures and in amounts solely determined by CME. In addition, you represent that you are an authorized signatory at the bank(s) on the account(s) provided on this form, and that the account(s) are owned by the Clearing Member Firm.

(Printed Name)	
(Title)	

Operational Contact Information:

Please provide an operational contact or set of contacts at your firm which CME Clearing Banking & Collateral Team may reach out to regarding coordination of debit authority testing and system setup for the account(s) listed on this form.

First Name	Last Name	Title	Phone	Email Address

Exhibit E



A CME/Chicago Board of Trade/NYMEX Company

CROSS-GUARANTEE AGREEMENT

In consideration of Chicago Mercantile Exchange Inc. ("CME"), Board of Trade of the
City of Chicago, Inc. ("CBOT"), New York Mercantile Exchange, Inc. ("NYMEX"), and
Commodity Exchange Inc. ("COMEX") (collectively, "Exchanges"), accepting/retaining as
Clearing Members
and (each
hereinafter referred to individually as a "Guaranteeing Member" and collectively as
"Guaranteeing Members"), which share common ownership, control or profits as set forth in the
Exchanges' Rule 901.G., each Guaranteeing Member hereby:

- 1. Unconditionally guarantees and promises payment of any and all indebtedness or other obligations which the other Guaranteeing Member may now or hereafter owe to the Exchanges. The Exchanges will attempt to notify the Guaranteeing Member by telephone of any default by the other Guaranteeing Member and will thereafter confirm such notice in writing; however, the liability of the Guaranteeing Member to the Exchanges for such default pursuant to this Cross-Guarantee Agreement shall become due and payable immediately upon such default;
- 2. Agrees that such Guaranteeing Member's liability hereunder may be enforced without notice to it and without first proceeding against the defaulting Guaranteeing Member or resorting to any collateral, security or other guarantors or obligors, if any, or pursuing any other remedy. Any collateral, security or obligations of any other guarantors or obligors, if any, may be sold, released, surrendered, exchanged, settled, compromised, waived, subordinated or modified, in each case without consideration and on any terms and conditions, without notice to or further assent from either Guaranteeing Member. Each Guaranteeing Member's liability is several and independent of any other guarantees in effect with respect to any part of the above obligations and may be enforced regardless of the existence of any other guarantees;
- 3. Agrees that notwithstanding any other provision in this Cross-Guarantee Agreement, this guarantee shall continue in effect or shall be reinstated if any time, payment or other performance, or any part thereof, by either Guaranteeing Member to the Exchanges with respect to any of the above obligations is rescinded, or must otherwise be repaid by the Exchanges as result of bankruptcy or reorganization of either Guaranteeing Member;
- 4. Agrees that no payment or other performance by either Guaranteeing Member shall entitle it, by subrogation or otherwise, to any right against the defaulting Guaranteeing Member, including any payment by the defaulting Guaranteeing Member or out of property of the defaulting Guaranteeing Member, except after the full performance, payment and discharge of all of the above obligations. All

remedies, rights, powers and privileges granted to the Exchanges pursuant to this Cross-Guarantee Agreement are cumulative and not alternative. The exercise of any or all such rights by the Exchanges shall not reduce, limit, impair, discharge, terminate or otherwise affect the liability of either Guaranteeing Member. No failure or delay by the Exchanges in exercising any remedy, right, power or privilege pursuant to this Cross Guarantee Agreement shall operate as waiver thereof and any such remedy, right, power or privilege may be exercised by the Exchanges at any time. No partial exercise of any such rights shall preclude further exercise or the exercise of any other remedy, right, power or privilege by the Exchanges;

- 5. Agrees that no modification of this Cross-Guarantee Agreement or waiver of any portion hereof shall be valid unless in writing and signed by the Exchanges and then only to the extent specifically set forth in such writing. No notice or demand by the Exchanges upon either Guaranteeing Member or any other guarantor of the above obligations shall preclude the Exchanges from taking further action without notice or demand;
- 6. Agrees that this Cross-Guarantee Agreement is binding upon its respective heirs, personal representatives, successors and assigns, and shall inure to the benefit of and be enforceable by the Exchanges and its transferees, successors and assigns. Each Guaranteeing Member hereby waives notice of any such assignment by the Exchanges;
- 7. Agrees that this Cross-Guarantee Agreement and all rights, obligations and liabilities arising hereunder shall be governed by the laws of the State of Illinois in all respects, including but not limited to matters of construction, validity and performance;
- 8. Agrees that any action or litigation of any kind whatsoever initiated by the Guaranteeing Members or the Exchanges in connection with this Cross-Guarantee Agreement, shall be adjudicated in a court of competent jurisdiction located in Chicago, Illinois. The Guaranteeing Members and the Exchanges hereby consent to the jurisdiction of such courts and to service of process by any means authorized by Illinois or Federal law and hereby waive the right to transfer the venue of any such litigation or action; and
- 9. Agrees that if (1) one of the Guaranteeing Members ceases to be a clearing member of the Exchanges or (2) the Guaranteeing Members provide the Exchanges with written notice that they no longer share common ownership, control or profits as set forth in Rule 901.G., this Cross-Guarantee Agreement shall remain in effect until the Clearing House Risk Committee of the CME Clearing House determines that any and all indebtedness and other obligations owing to the Exchanges from each Guaranteeing Member have been satisfied in full.

(Guaranteeing Member)	(Guaranteeing Member)
By:	By:
(Signature of General Partner or Authorized Officer)	(Signature of General Partner or Authorized Officer)

(Printed Name / Title)	(Printed Name / Title)
(Date)	(Date)

Exhibit F



(Printed Name / Title)

(Date)

Guarantee	of Obligations		Please Check the Appropriat [] Reorganization [] Replacement	е Вох:
		will be replaci	ng(Current Clearing Member)	as a
(New	Clearing Member)		(Current Clearing Member)	
Chicago Board of New Yo	nber of (each an "Exchange" Mercantile Exchange Inc. f Trade of the City of Chicago ork Mercantile Exchange, Inc dity Exchange, Inc.	o, Inc.	ipply):	
effective	(Date)			
	Clearing Member) ent Clearing Member)		nditionally guarantee and assuinge.	ume all obligations
	ent Clearing Member) s, but is not limited to, the foll			
1. 2. 3. 4. 5. 6. 7.	Unresolved trades (outtraduncesolved complaints, Clearing fee liabilities arist Delivery obligations, Payment obligations, Valid claims in accordance Any other outstanding obligations.	ing from past tran	8G913 and 913; and,	
(Now	also agrees	that it will assum	e responsibility for all agreeme	ents entered into
by	ent Clearing Member)	ith each Exchang	je. This includes, but is not	
limited to, the 1. 2. 3. 4. 5. 6.		uant to Rule 106.F reement: and,	₹.,	
ncluding cost the posting p	ts and attorney fees, arising	or resulting from ber change indic	nnify and hold harmless each I laims, demands, actions, liab or incurred as a result of the cated above and for the share ve.	waiver, if any, of
Signed and e	xecuted by a duly authorized	representative of	:	
(Current Clearin	ng Member)	(N	ew Clearing Member)	
By:(Signature of C	General Partner or Authorized Offi	By	r:	uthorized Officer)

(Printed Name / Title)

(Date)

Exhibit G



Guaranty Fund Guarantee of Obligations to Chicago Mercantile Exchange Inc.

In conjunction with the withdrawal of	, a Clearing Member of
,	(Current Clearing Member)
	("Exchange(s)"), and the approval of
	as a Clearing Member of the Exchange(s),
(New Clearing Member)	
(New Clearing Member)	agrees to the following:
	agrees to pay any valid claims filed pursuant to Rule 110, 8G913,
(New Clearing Member)	rawal of as a
and one, in conjunction that are mana-	(Current Clearing Member)
Clearing Member of the Exchange(s).	Such guarantee is limited to the amount of
's guarantee t	fund with CME in the amount of \$
(Current Clearing Member)	(Guaranty Fund Requirement at Withdrawal Date)
This agreement is effective on	, the date of
<u> </u>	(Withdrawal date)
	's withdrawal and will remain in effect until the
(Current Clearing Member)	
disposition of all claims filed upon purs	suant to Rules 110, 8G913 and 913.
This agreement is binding upon	and its successors.
(New	Clearing Member) and its successors.
Signed and executed by a duly authorize	zed representative of :
, ,	zed representative of: (New Clearing Member)
(Ourse at a sing Classing Marshar)	
(Guaranteeing Clearing Member)	
By: (Signature of General Partner or Authorized Office	
(Signature of General Partner or Authorized Offi	cer)
(Printed Name / Title)	
(Date)	

Exhibit H



Memorandum

FEE POLICY BULLETIN

TO: Chief Financial Officers #09-01

Chief Compliance Officers

Corporate Members

New Firm Approval Contacts

Firm EFS Contacts

FROM: Audit Department, Clearing House Division

DATE: June 16, 2009

SUBJECT: Clearing and Globex® Fees for Member Firm Accounts

CME Group Inc. ("CME Group") sets the fee policies for its four subsidiary exchanges - Chicago Mercantile Exchange Inc. ("CME"), Chicago Board of Trade, Inc. ("CBOT"), New York Mercantile Exchange, Inc. ("NYMEX") and Commodity Exchange, Inc. ("COMEX").

In December 2008, CME Group issued Fee Policy Bulletin ("FPB") #08-02 concerning Clearing and Globex Fees. In response to market participant feedback and concerns, CME Group is issuing this FPB to enunciate CME, CBOT, NYMEX and COMEX member fee eligibility policies and to update and clarify them as needed. These policies, where different from those in effect today, are effective July 1, 2009. This FPB supersedes all previous bulletins discussing fee policy issues for member firm accounts.

The trading activity of member firms must adhere to our policies in order to be granted member fees – equity member or preferential fees as applicable. CME Group has established member firm trading policies to ensure that the trading activity conducted for the member firm account is for the sole benefit of the member firm itself and not the trading activity of individual customers/traders conducted in the name of the firm; i.e. to prevent arcade type trading under the guise of member firm trading and the "selling" of member firm rates. To that end, the financial benefit and risk of the trading activity must be solely of the member firm. Further the member firm may only profit/benefit from the member firm trading activity through the performance of the trade and not from any other source such as a commission or charge for trade execution.

The trading environment and the customer base has evolved and expanded over the years. We have seen a tremendous growth in both clearing and corporate membership for trading groups. These trading groups have their own unique capitalization, ownership structures, trader compensation and trading styles.

This FPB presents both Requirements (Absolutes) and Best Practices for defining when member firm trading activity will be granted member fees. In recognition of the varying trading operations, Best Practices were established to allow member firms to utilize certain business practices (most not allowed in the past) which are generally prohibited. In order to do so, the member firm must clearly demonstrate to CME Group their application of these non-compliant practices is not inconsistent with CME Group's goal of providing member fees for trading activity for the account and sole benefit of the member firm.

1. **REQUIREMENTS**

1.1 Member Firm Trading Account

In order to obtain member clearing fees, CME Group rules require that the member firm trading account of CME, CBOT, NYMEX and COMEX clearing members¹, CME and CBOT Rule 106.H. trading members, CBOT Rule 106.J. equity members, NYMEX and COMEX Rule 106.J. members², CME and CBOT Rule 106.I. affiliated members, CME and CBOT Rule 106.R. electronic corporate members and CME and CBOT Rule 106.S. family of funds members must be 100% owned by the firm.³

- For CME clearing members the CME trading activity conducted for the account of 100% owned subsidiaries is entitled to equity member clearing fees.
- For CBOT clearing members the CBOT trading activity of 100% owned subsidiaries is <u>not</u> entitled to member clearing fees unless the subsidiary itself qualifies as an Affiliate Member Firm/Affiliate Umbrella Member Firm under CBOT Rule 106.I. That is, CBOT clearing membership fee benefits do not flow down to 100% owned subsidiaries.
- For NYMEX and COMEX clearing members the NYMEX and COMEX trading activity of 100% owned subsidiaries is <u>not</u> entitled to member clearing fees. That is, NYMEX and COMEX clearing membership fee benefits do not flow down to 100% owned subsidiaries. Furthermore, affiliates and subsidiaries of NYMEX and COMEX clearing members must become member firms themselves in order to receive membership benefits.
- For CME and CBOT Rule 106.H./I./S. and CBOT Rule 106.J./R. corporate members to receive member fees, all member firm trading must be conducted within the division of membership held. Member firm trading activity of such corporate members outside the division of membership held will receive non-member customer fees.

¹ For clarity, clearing member includes CME corporate equity member (formerly known as inactive clearing member).

² For clarity, NYMEX and COMEX Rule 106.J. members were previously known as NYMEX and COMEX non-clearing members.

³ For purposes of this FPB, clearing members referenced without a preceding CME, CBOT, NYMEX or COMEX designation, include CME, CBOT, NYMEX and COMEX clearing members.

- For CME Rule 106.R. corporate members to receive member fees, all member firm trading must be conducted in accordance with the Questions & Answers Guide for Electronic Corporate Members under CME Rule 106.R. which may be found on CME's Web site at http://www.cmegroup.com/company/membership/files/ECMQA.pdf.
- Affiliates and subsidiaries of CME and CBOT Rule 106.H./R. and CBOT Rule 106.J. corporate members are not entitled to the membership benefits of the corporate member.
- Affiliates and subsidiaries of NYMEX and COMEX Rule 106.J. members are <u>not</u> entitled to the membership benefits of the member. Note: A COMEX Option Only Rule 106.J. member is only entitled to member clearing fees on COMEX option contracts.

A member firm trading account is evidenced through:

- The financial benefit and risk shall be solely of the member firm only firm capital is at risk
 of loss.
- No non-owner traders may make any contributions, loans (including subordinated loans) or payments to the member firm or member firm trading account nor have any capital at risk except for holdbacks as permitted in connection with their trading of the member firm account.
- All contributions by owners of the member firm are subject to risk of loss from any and all trading and business activities of the firm.
- All profits and losses of the member firm account are written off to the income of the member firm and are taxed to the member firm in accordance with IRS regulations.

These accounts must be registered in CME's Exchange Fee System ("EFS") and CBOT's and NYMEX's Combined Fee System ("CFS")⁴ as member firm accounts of the clearing, CME and CBOT Rule 106.H./I./R./S. or CBOT, NYMEX and COMEX Rule 106.J. member as appropriate.

1.1.1 Joint Accounts with Individual Equity/Lessee⁵ Members

A clearing, CME and CBOT Rule 106.H./I./R./S. or CBOT, NYMEX and COMEX Rule 106.J. member may have a joint account with an equity or lessee member and receive preferential fees on contracts under the lowest division of membership held. These accounts must be registered in the Fee System under the joint account owner with the lowest division of membership held. Further the account title field in the Fee System must identify all owners of the joint account.

⁴ For purposes of this FPB, the term "Fee System" will include CME's fee system referred to as EFS and the combined fee system of CBOT and NYMEX referred to as CFS.

⁵ For clarity, lessee includes delegate; CBOT previously defined individuals leasing a membership (lessees) as delegates.

1.2 Member Firm Traders⁶ for Globex Activity

The member firm trading activity must be conducted by traders including operators/administrators of Automated Trading Systems ("ATS") that are:

- Bona-fide IRS Form W-2 ('W-2") employees (or equivalent W-2 of a foreign jurisdiction) of the member firm; or
- Independent contractors and other self-employed individuals of the member firm whose total compensation (that is, all compensation) is reported on an IRS Form 1099-MISC ("1099-MISC") (or equivalent document of a foreign jurisdiction); or
- Independent contractors and other self-employed individuals of clearing, CME and CBOT Rule 106.I. and CBOT, NYMEX and COMEX Rule 106.J. members who maintain at least \$250,000 in holdbacks whose total compensation (that is, all compensation) is reported on a 1099-MISC (or equivalent document of a foreign jurisdiction) and/or on a IRS Form 1099-B ("1099-B"); or
- Owners who maintain at least \$250,000 in bona-fide capital and holdbacks for clearing, CME and CBOT Rule 106.I. and CBOT, NYMEX and COMEX Rule 106.J. members⁷; or
- Bona-fide owners of the firm for CME and CBOT Rule 106.H./R. members; or
- Individual equity members⁸ of CME, CBOT, NYMEX and COMEX trading within their respective exchange and division of membership except for CME Rule 106.R. members. Traders of CME Rule 106.R. members may not own, hold, or have owned or held a membership in any of CME's divisions within the past two years; or
- CME, CBOT, NYMEX and COMEX Rule 106.F. Clearing Member Transfer and CME and CBOT Rule 106.I. Related Party Transfer members; or

⁶ For CBOT clearing members and CBOT Rule 106.I./J. members, the memberships status of the individual entering the trade will impact the level of member fee charged. Please refer to the current CBOT Clearing Fee Schedule at http://www.cmegroup.com/company/clearing-fees/index.html.

⁷ The acceptable bona-fide capital level for owners has been reduced from \$500,000 to \$250,000 effective July 1, 2009. In addition holdbacks will be considered along with any capital investment in maintaining the \$250,000 level. Prior to January 1, 2009, the acceptable bona-fide capital level for owners of CBOT clearing members and CBOT Rule 106.I./J. members was \$200,000. All owners of such CBOT member firms with a bona-fide interest of at least \$200,000 as of December 31, 2008 were grandfathered in at the \$200,000 level. Note that the grandfathering is specific to the individual owners and the particular CBOT member firm and cannot be transferred.

⁸ For clarity, individual members participating in the Clerk for Member Program may not utilize their clerks to enter orders for member firm trading. That is, the Clerk for Member Program does not apply to member firm trading; it is only applicable to the trading of individual members. Such clerks themselves must be qualified traders for member firm trading.

 Registered Commodity Trading Advisors ("CTAs"), exempt CTAs under CFTC Regulations 4.14(a)(4), 4.14(a)(5), 4.14(a)(8)(i)(D) or 4.14(a)(10), and Investment Managers authorized by the Financial Services Authority ("FSA").

All member firm traders must be assigned unique trader IDs, those IDs and the associated member firm trader must be appropriately registered in the Fee System, and all Globex trades (orders) must be identified with the registered ID of the trader executing the trade.

- Clearing, CME and CBOT Rule 106.I./S., CBOT Rule 106.H./J./R. and NYMEX and COMEX Rule 106.J. member firm traders must be further defined as "W-2 Employee", "Commodity Trading Advisor", "Independent Contractor 1099-MISC", "Rule 106.F. Trader", "Owner w/ Acceptable Interest", or for clearing, CME and CBOT Rule 106.I. and CBOT, NYMEX and COMEX Rule 106.J. members as "Trader w/ Acceptable Holdback", or for CBOT clearing and CBOT Rule 106.I./J. as "Member" as applicable.
- Clearing, CME and CBOT Rule 106.I./S., CBOT Rule 106.H./J./R. and NYMEX and COMEX Rule 106.J. member firm traders which are compensated through a W-2 or 1099-MISC for their trading profitability must be registered in EFS as "W-2 Employee" or "Independent Contractor 1099-MISC", as appropriate, even if they are an owner of the firm with less than an acceptable proprietary interest.
- For operators/administrators of an ATS and for the ID under which an ATS submits orders, the "ATS" box on the Fee System registration screen must be checked.

1.2.1 Bona-fide Employees

Bona-fide employees of the member firm are evidenced through:

- Issuance of an W-2, or foreign equivalent, for <u>all</u> compensation (i.e. salary and bonus) to the trader by the member firm;
- Inclusion in the firm's payroll tax records; and
- The trader has no income until the firm pays the trader.

1.2.2 Independent Contractors

1099-MISC independent contractors/self-employed individuals of a member firm may receive member fees when trading a member firm's account.

Except as provided in the following paragraph, the member firm trading activity of independent contractors and other self-employed individuals whose compensation is reported on an IRS Form 1099 which is <u>not</u> a 1099-MISC (e.g. 1099-B) or equivalent document of a foreign jurisdiction will be assessed fees based on the lowest division of membership held by both the firm and the independent contractor/self-employed individual.⁹

⁹ Traders receiving compensation reported on a 1099-B are regarded as "holders" of the positions and, as such, the account would not qualify as a member firm account.

For clearing, CME and CBOT Rule 106.I. and CBOT, NYMEX and COMEX Rule 106.J. members, independent contractors and other self-employed individuals who maintain a holdback of at least \$250,000 may receive their compensation in any manner including a 1099-MISC, 1099-B, or K-1 (if they are an owner as well) for their (not of a team/division) trading activity of the member firm account. Holdbacks are defined to be a trader's share of profits which have not been distributed to the trader and which are held back in an account of the firm. Holdbacks are not a contribution to the firm in the form of a capital contribution, loan, security deposit or other payment. Holdbacks may not exceed the trader's share of net profit/loss in the previous 24 month period. In addition, holdbacks may not be held by the firm for greater than 2 years without being converted to equity capital; that is the trader would need to become an equity owner of the firm for their interest held back greater than 2 years.

If the 1099-B independent contractor/self-employed individual is not an equity, lessee or Rule 106.F. member or does not maintain a holdback of at least \$250,000 as permitted with the member firm and is trading a member firm account, non-member customer fees will apply on trades executed by the individual. These accounts should not be registered in the Fee System as member firm accounts and are not eligible for firm-based incentives or discounts.

1.2.3 Bona-fide Owners

Individual owners are considered to have an acceptable proprietary interest in the member firm as follows:

- Clearing, CME and CBOT Rule 106.I. and CBOT, NYMEX and COMEX Rule 106.J. members \$250,000 in bona-fide capital.
- CME and CBOT Rule 106.H./R. members no specific dollar level; only bona-fide capital interest.

For individual owners, the bona-fide capital interest must be in the form of an equity investment; it cannot take the form of a loan including a subordinated loan. In addition, for clearing, CME and CBOT Rule 106.I. and CBOT, NYMEX and COMEX Rule 106.J. members an individual owner's capital interest as well as any holdbacks may be added together for purposes of meeting the \$250,000 proprietary interest.

Individual owners of member firms who maintain an acceptable proprietary interest in the firm may receive member fees on <u>their</u> trading activity of the member firm's account. Further, individual owners with acceptable proprietary interests who share in the profit split of a team of traders must share in the profits/losses of the overall firm (e.g. customer business and other proprietary trading activities) in order to be considered a bona-fide owner. If such individual owners do not share in the overall firm profits/losses, their share of the profit split from the team of traders must be reported on a W-2 or 1099 MISC in order to receive member fees on the trading activity of the trader team.

Individual owners of member firms who do not maintain an acceptable proprietary interest in the firm are not entitled to receive member fees on their trading activity of the member firm's account unless their trading profitability is reported to them on a W-2 or 1099-MISC or they are on one of the clearing member firm's Rule 106.F. memberships.

Individual owners of member firms with less than an acceptable proprietary interest who trade the member firm account and whose trading profitability is reported on a form other than a W-2

or 1099 MISC (e.g. an IRS Form K-1) are assessed fees based on the lowest division of membership held by the owner and the firm. If such owners are not equity, lessee or Rule 106.F members themselves, non-member customer fees will apply and these accounts should not be registered in the Fee System and are not eligible for firm-based incentives or discounts.

An investing LLC is prohibited from trading and/or having a specific interest in a member firm account eligible for equity member rates unless (1) the investing LLC maintains an investment of an acceptable proprietary interest of bona-fide capital in the member firm for each owner (that is owner, member and/or equity participation member) of the investing LLC and (2) the trading is conducted by and only by individual owners of the investing LLC.¹⁰

1.2.4 Individual Equity/Lessee Members

A member firm account traded by an equity/lessee member who is not a W-2 employee, 1099-MISC independent contractor/self-employed individual, 1099-B independent contractor/self-employed individual of a clearing, CME and CBOT Rule 106.I. or CBOT, NYMEX and COMEX Rule 106.J. member who maintains at least \$250,000 in holdbacks, or Rule 106.F. member is assessed fees based on the lowest membership status of the firm and the equity/lessee member. These accounts must be registered in the Fee System under the party with the lowest division of membership held. Further the account title field in the Fee System must identify the member firm as the account owner.

1.2.5 Rule 106.F. Clearing Member Transfers

Traders on a clearing member's Rule 106.F. membership may receive their compensation in any manner including a W-2, 1099-MISC, 1099-B, or K-1 for <u>their</u> (not of a team/division) trading activity of the clearing member firm account. All other requirements for member firm trading must be met.

1.3 Member Firm Traders for Open Outcry Activity

1.3.1. CME Open Outcry

The member firm trading of a CME clearing member or CME Rule 106.H./I./S. member is entitled to member clearing fees when an individual owning and holding a membership or the firm's CME Rule 106.F. or CME Rule 106.H./I./S. member executes it on the floor of the exchange in open outcry.

The member firm trading of a CME clearing member or CME Rule 106.H./I./S. member conducted with discretion by a CME Rule 106.D. lessee member on the floor of the Exchange in open outcry will be charged fees based on the lowest membership status of the firm and the CME Rule 106.D. lessee member regardless if the lessee member is a firm W-2 employee or 1099-MISC independent contractor/self-employed individual. The CME Rule 106.D. lessee

¹⁰ There are no restrictions on passive investing LLCs of members firms. Passive investing LLCs do not trade or have a specific interest in a trading account(s) and their return is based on the overall firm's profitability.

member must be registered as an account controller for the clearing or CME Rule 106.H./I./S. member firm account in the Fee System.

1.3.2. CBOT Open Outcry

The member firm trading of a CBOT clearing member or CBOT Rule 106.H./I./J./S. member is entitled to member clearing fees when an equity member or lessee or the firm's CBOT Rule 106.F. or CBOT Rule 106.H./I./J./S. member executes it on the floor of the exchange in open outcry.

1.3.3. NYMEX and COMEX Open Outcry

The member firm trading of a NYMEX and COMEX clearing member or Rule 106.J. member is entitled to member clearing fees when an equity member or lessee executes it on the floor of the exchange in open outcry.

1.4 Member Firm Trader Compensation and Profit Splits

Member firm trading and trader compensation must meet the following requirements:

- Traders cannot be responsible for losses beyond their share of profits earned and maintained in the account which have not yet been distributed to the trader.
- The firm must be allocated both a portion of the profits and losses of the member firm account.
- The profit split on agreements with any trader, including owners acting as traders, may not exceed 80/20 (i.e. 80% to the trader/20% to the firm).
 - For member firm trading conducted by a team of traders, the profit split to the team in total may not exceed 80/20 (i.e. 80% to the trader team/20% to the firm).
 - Further the 80% limit on profit splits to a trader or team of traders includes any individual who has a specific interest in its profitability including those involved in the supervision/training of the account(s) and/or trader(s).
- Non-owner traders cannot leave their share of profits in the firm for greater than two years without becoming an equity owner.
 - Non-owner trader's share of capital in an account may not exceed the trader's share of net profit/loss in the previous 24 month period.
 - If a trader leaves their share of any profits in the account for greater than two years, they must become an equity owner.

- The firm is prohibited from:
 - Setting minimum account balances for its traders.
 - Charging margin on positions to traders.
 - Charging fees on draws taken by traders.
 - Requiring or accepting security deposits from its traders.

2. BEST PRACTICES

2.1 Description of Best Practices

CME Group recognizes that certain business practices may be utilized when conducting customer business as well as member firm trading activities. The Best Practices were established to allow member firms to utilize certain business practices (most not allowed in the past) which are generally prohibited. In order to do so, the member firm must clearly demonstrate to CME Group their application of these non-compliant practices is not inconsistent with CME Group's goal of providing member fees only for member firm trading activity. Such practices will be reviewed individually and in the aggregate in relation to the firm's entire trading activities and operation.

Review of such non-compliant practices will reflect the following key principles of CME Group's member firm trading policies. First and foremost, the trading activity eligible for member fees must be conducted for the account and sole benefit of the member firm itself. The trading activity of individual customers/traders conducted in the name of the firm is not eligible for discounted member firm fees in order to prevent arcade type trading under the guise of member firm trading and to prevent the "selling" of member firm rates. Further, a member firm may only profit/benefit from the member firm trading activity through the performance of the trade and not from any other source such as a commission or charge for trade execution.

Non-compliance with the Best Practices below is generally prohibited as it is indicative of arcade type trading, the selling of rates, and/or profiting from sources other than the performance of the member firm trade. As such, while the Best Practices are not absolutes as the Requirements are, any non-compliance of the Best Practices will be carefully reviewed with the burden of responsibility on the member firm to clearly support and demonstrate to CME Group's satisfaction that the trading is of the member firm itself. Under limited circumstances in reviewing the totality of the member firm's trading operations and the violative practice(s), CME Group may deem the member firm's trading activities in accordance with our policies for member firm trading activity that is eligible for member firm fees.

2.1.1 Interest

The firm may not charge interest on debit balances to traders nor may it pay interest on credit balances to traders except where an options trading strategy is utilized in which interest on the premium is a key component of the overall profitability of the strategy.

The firm may not pay interest on holdbacks where holdbacks are permitted.

The firm may not pay interest on capital contributions.

2.1.2 Allocated Expenses

A firm may not allocate expenses to trades or traders in excess of actual direct and indirect expenses of the individual member firm trades or traders. Only actual expenses incurred may be allocated – a mark up on expenses is not permitted. Further, opportunity costs may not be allocated.

Expense allocations may be made on a per trade/contract basis and/or monthly, quarterly, yearly, or other time period basis.

Direct expenses may include items such as clearing and Globex fees, brokerage commissions (those charged by member firm's clearing firm), software, connection/line charges, licensing fees, and market subscriptions. Indirect expenses may include items such as rent, utilities, membership/share costs, and firm costs for accounting, legal, back-office, compliance, strategy development, programming, and human resource services.

For all expenses allocated the firm must maintain records of actual costs incurred. All rebates of expenses incurred must also be reflected in the allocated costs. Further total costs incurred may not be allocated only to traders but must be allocated to all areas of the member firm's operations which benefit; for example rent should be allocated across all areas of the firm utilizing office space. If an expense is otherwise allocated directly to a trader (for example a line charge) such expense may not be included in the allocated costs.

The total amount of expenses allocated must be reasonable to the actual costs incurred. Allocated expenses must be reviewed, and if necessary adjusted, routinely to ensure they continue to be reasonable in relation to actual expenses. Member firms must maintain and provide adequate supporting calculations and documentation of such allocated expenses and their reasonableness.

2.1.3 Capital Usage Fee

A firm may not charge a fee for capital usage to individual traders of the member firm's accounts.

2.1.4 Cost of Capital Fee

A firm may not charge a fee for the cost of capitalizing the firm (and thus the member firm's trading accounts) to individual traders.

2.1.5 Owners Interest in Member Firm Accounts

Individual owners and investing LLCs (as permitted) of a member firm may not have a specific interest in the profitability of a member firm account or group of accounts other than a member

firm account that the individual owners or owners of the investing LLC trade or provide direct supervision/training to. Thus, an individual owner/investing LLC may not be entitled to a direct percentage of the profits of a member firm account traded by a specific "independent" employee(s) or contractor(s) of the member firm.

2.2 Application of Best Practices

As previously stated non-compliance with the Best Practices is indicative of profiting from sources other than the performance of the member firm trade and is generally indicative of a customer relationship versus a member firm trader relationship. Non-compliance with the above practices will be carefully reviewed with the burden of responsibility on the member firm to clearly support and demonstrate the trading as of the member firm itself. Upon review of the practice, CME Group will in its sole judgment determine whether the member firm's practices are consistent with CME Group's policies for member firm trading activity that is eligible for member firm fees.

If a member firm has any questions concerning the acceptability of its current or potential business practices that may appear inconsistent with the Best Practices, please contact the Audit Department at (312) 930-3230 for forwarding to the Fee Policy Team for discussion and review.

3. PENALTIES

The policies set forth herein will be strictly enforced by CME Group. A member, clearing member, or corporate member found to have engaged in fraudulent or dishonest conduct or to have acted in bad faith will be subject to a charge of a major rule violation. Major rule violations are punishable by a fine up to \$1,000,000 plus the monetary value of any benefit received as a result of the violative activity.

If you have any questions, please call the Audit Department at (312) 930-3230.

Exhibit I



Clearing Member Firm Member Firm Trading Authorization

(Clearing	(Member)	

The trades of a CME, CBOT, NYMEX, COMEX or OTC (as applicable and hereafter referred to as "Applicable Exchange(s)") approved clearing member maintaining the required number of memberships/seats and CME Group Inc. shares in accordance with Applicable Exchange rules, may receive member fee rates – less than charged to non-member customers.

In order for clearing members to receive member fees on Applicable Exchange trades, all member firm trading must be conducted in accordance with CME Group Inc.'s Fee Policy Bulletins on CME Group Inc.'s website at http://www.cmegroup.com/tools-information/fee-policy-bulletins.html for Member Firm Trading Policies.

Requirements (Absolutes)

A member firm trading account is evidenced through:

- The financial benefit and risk shall be solely of the member firm only firm capital is at risk of loss.
- No non-owner traders may make any contributions or payments to the member firm or member firm trading account nor have any capital at risk in connection with their trading of the member firm account.
- All contributions by owners of the member firm are subject to risk of loss from any and all trading and business activities of the firm.
- All profits and losses of the member firm account are written off to the income of the member firm and are taxed to the member firm in accordance with IRS regulations.
- All trading must be done in member firm trading accounts held in the name of the clearing member.

Further, clearing member trading activity must be conducted by traders including operators/administrators of Automated Trading Systems ("ATS") that are:

- Bona-fide W-2 employees (or equivalent W-2 of a foreign jurisdiction) of the clearing member; or
- Independent contractors and other self-employed individuals who maintain at least \$250,000 in holdbacks whose total compensation (that is, all compensation) is reported on a IRS Form 1099-MISC ("1099-MISC") (or equivalent document of a foreign jurisdiction) and/or on an IRS Form 1099-B ("1099-B") of the clearing member; or
- Owners who maintain at least \$250,000 in bona-fide capital and holdbacks; or
- Individual equity members of Applicable Exchange trading within their division of membership; or
- Rule 106.F. Clearing Member Transfer members; or
- Registered Commodity Trading Advisors ("CTAs"), exempt CTAs under CFTC Regulations 4.14(a)(4), 4.14(a)(8)(i)(D) or 4.14(a)(10), and Investment Managers authorized by the Financial Conduct Authority ("FCA").

September 2018



All clearing member traders must be assigned unique trader IDs, those IDs and the associated clearing member trader must be appropriately registered in CME Group Inc.'s Exchange Fee

System and all Globex trades (orders) must be identified with the registered ID of the trader executing the trade.

In addition, member firm trading must meet the following requirements:

- Traders cannot be responsible for losses beyond their share of profits earned and maintained in the account which have not yet been distributed to the trader.
- The firm must be allocated both a portion of the profits and losses of the member firm account.
- The profit split on agreements with any trader, including owners acting as traders, may not exceed 80/20 (i.e. 80% to the trader/20% to the firm).
 - For member firm trading conducted by a team of traders, the profit split to the team in total may not exceed 80/20 (i.e. 80% to the trader team/20% to the firm).
 - Further the 80% limit on profit splits to a trader or team of traders includes any individual who has a specific interest in its profitability including those involved in the training/supervision of the account(s) and/or trader(s).
- Non-owner traders cannot leave their share of profits in the firm for greater than 24 months without becoming an equity owner.
 - Non-owner trader's share of capital in an account may not exceed the trader's share of net profit/loss in the previous 24 month period.
 - If a trader leaves their share of any profits in the account for greater than 24 months, they
 must become an equity owner.
- The firm is prohibited from:
 - Setting minimum account balances for its traders.
 - Charging margin on positions to traders.
 - Charging fees on draws taken by traders.
 - Requiring or accepting security deposits from its traders.

Best Practices

CME Group Inc. recognizes that certain business practices may be utilized when conducting customer business as well as member firm trading activities. The Best Practices were established to allow member firms to utilize certain business practices (most not allowed in the past) which are

generally prohibited. In order to do so, the member firm must clearly demonstrate to CME Group Inc. their application of these non-compliant practices is not inconsistent with CME Group Inc.'s goal of providing member fees only for member firm trading activity. Such practices will be reviewed individually and in the aggregate in relation to the firm's entire trading activities and operation.

Review of such non-compliant practices will reflect the following key principles of CME Group Inc.'s member firm trading policies. First and foremost, the trading activity eligible for member fees must be conducted for the account and sole benefit of the member firm itself. The trading activity of individual customers/traders conducted in the name of the firm is not eligible for discounted member firm fees in



order to prevent arcade type trading under the guise of member firm trading and to prevent the "selling" of member firm rates. Further, a member firm may only profit/benefit from the member firm trading activity through the performance of the trade and not from any other source such as a commission or charge for trade execution.

Non-compliance with the Best Practices below is generally prohibited as it is indicative of arcade type trading, the selling of rates, and/or profiting from sources other than the performance of the member firm trade. As such, while the Best Practices are not absolutes as the Requirements are, any non-compliance of the Best Practices will be carefully reviewed with the burden of responsibility on the clearing member to clearly support and demonstrate to CME Group Inc.'s satisfaction that the trading is of the clearing member itself. Under limited circumstances in reviewing the totality of the clearing member's trading operations and the violative practice(s), CME Group Inc. may deem the clearing member's trading activities in accordance with CME Group Inc.'s policies for clearing member trading activity that is eligible for equity member fees. Please check the box next to each practice which you do not comply with regarding your member firm trading:

	The firm may not charge interest on debit balances to traders nor may it pay interest on credit balances to traders except where an options trading strategy is utilized in which interest on the premium is a key component of the overall profitability of the strategy.
	The firm may not pay interest on holdbacks where holdbacks are permitted.
	The firm may not pay interest on capital contributions.
	The firm may not allocate expenses to trades or traders in excess of actual direct and indirect expenses of the individual member firm trades or traders. Only actual expenses incurred may be
	allocated – a markup on expenses is not permitted. Further, opportunity costs may not be allocated. Clearing members must maintain and provide adequate supporting calculations and
	documentation of such allocated expenses and their reasonableness.
	A firm may not charge a fee for capital usage to individual traders of the member firm's accounts.
L	A firm may not charge a fee for the cost of capitalizing the firm (and thus the member firm's trading accounts) to individual traders.
	Individual owners and investing LLCs (as permitted) of a clearing member may not have a specific interest in the profitability of a clearing member account or group of accounts other than a
	clearing member account that the individual owners or owners of the investing LLC trade or provide direct supervision/training to.

I represent that all current and future member firm trading activity of clearing member receiving member fee rates will conform to the requirements for such trading activity established by CME Group Inc.

I attest that the above information is true and correct. I further acknowledge that confirming incorrect information may subject me to CME Group Inc. disciplinary action and/or penalties.



Signed and accepted by a corporate officer and a duly authorized human resource or legal representative of my organization.

	Corporate Officer	HR or Legal Representative
Signature:		·
Printed Name:		
Title:		
Date:		

* Acceptable Signor: CFO, CEO, COO, or equivalent officer.

Completed applications along with all supporting documentation should be submitted to:

CME Group Inc. Financial and Regulatory Surveillance Department 20 S. Wacker Drive Chicago, IL 60606

CME Group Inc. policies require all directors, officers, employees, consultants and agents ("Representatives") to treat as confidential and to use a reasonable degree of care to maintain the confidential nature of all information received from an applicant in conjunction with an application for member firm status on a CME Group Exchange (i.e., CME, CBOT, NYMEX and COMEX). Such confidential information may only be disclosed to CME Group representatives who have a need to know such information and who are bound by these policies or who agree to protect the confidential information from unauthorized use and disclosure. CME Group Inc. acknowledges that such confidential information may not be disclosed to any third party person or entity (except pursuant to administrative or judicial process) without the prior written consent of the applicant providing such confidential information.

Exhibit J

AUTHORIZATION AGREEMENT FOR PRE-AUTHORIZED PAYMENTS (DEBITS AUTHORIZATION IS NOT TRANSFERABLE OR NEGOTIABLE)

I hereby authorize CME Group Inc. to initiate debit entries to the checking account indicated below and the institution named below for the payment of amounts owed by this company to CME Group Inc., including its subsidiaries, Chicago Mercantile Exchange, Inc., The Board of Trade of the City of Chicago, Inc. and The New York Mercantile Exchange.

I agree to instruct my bank to honor all such transfers. In the event a transfer is returned to CME Group Inc. dishonored and uncollected, the amount indicated on the transfer will be immediately due and payable, and further participation in this service may be terminated at the option of CME Group Inc. In the event I choose to discontinue this service, I agree to honor any transfers covering amounts due and owing to CME Group Inc. which have been drawn on my account prior to receipt by CME Group Inc. of written notice of such discontinuance.

I understand that CME Group Inc. reserves the right to cancel this service at any time upon written notice to my company. I also reserve the right to cancel my company's participation in this service by written notice.

I understand CME Group Inc. will debit Firm's bank account on the 7th business day for Clearing/Exchange Fees and Non-Clearing Charges on the 25th day of the month.

I. BANK INFORMATION

CITY:STATE:							
TRANSIT/A	ABA NUMBER:						
ACCOUNT	NUMBER:						
This authorization is to remain in effect until cancelled by either CME Group Inc. or the under							
II. ACCOU	NTINFORMATION						
Firm Name:							
	er:						
	TE/ZIPCODE:						
PHONE NU	MBER:						
This auth	norization is to remain in effect unti	l cancelled by either CME Group Inc	c. or the undersigned.				
	AUTHOR	ZIZEDSIGNATURES					
IE	SIGNATURE	TITLE	DAT				
		TITLE					

OTC Clearing Firms Only

AUTHORIZATION FOR PRE-AUTHORIZED PAYMENTS (DEBITS AUTHORIZATION IS NOT TRANSFERABLE OR NEGOTIABLE)

CME Clearing Firm identified below ("<u>Clearing Firm</u>") hereby authorizes Chicago Mercantile Exchange Inc. (and/or any of its affiliates, including without limitation The Board of Trade of the City of Chicago, Inc. and New York Mercantile Exchange, Inc.) (collectively, "<u>CME</u>") to initiate debit entries from each of the respective checking account(s) listed below, held at each of the bank(s) named below (each, an "<u>Authorized Bank</u>"), for the payment of amounts owed by Clearing Firm to CME (and/or its subsidiaries) (each, a "<u>Transfer</u>").

Clearing Firm agrees to instruct each respective Authorized Bank to honor all such Transfers. In the event that any initiated Transfer is returned to CME by the applicable Bank dishonored and uncollected, the amount indicated on the Transfer will be immediately due and payable by Clearing Member, and further participation in this service may be terminated in CME's sole discretion.

Clearing Firm understands that CME reserves the right to cancel this service at any time upon written notice to Clearing Firm. Clearing Firm also reserves the right to cancel its participation in this service by prior written notice. In the event Clearing Firm chooses to discontinue this service, Clearing Firm agrees to honor any Transfers covering amounts due and owing to CME which have been drawn on any of its account identified below prior to receipt by CME of written notice of such discontinuance.

Clearing Firm understands CME will debit Clearing Firm's bank account *in the currency billed* on the 7th business day of the month for Clearing/Exchange Fees and Non-Clearing Charges on the 25th day of the month.

I. AUTHORIZED BANK INFORMATION (Please note "DNA" for any currency that does not apply)

	BANK		STATE/	ACCOUNT		SWIFT CODE/ABA
CURRENCY	NAME	CITY	COUNTRY	Number	IBAN Number	Number
USD						
AUD						
CAD						
CHF						
GBP						
JPY						
EUR						
SEK						
DKK						
NOK						
HKD						
NZD						
SGD						
HUF						
ZAR						
PLN						
CZK						
MXN						
BRL						

II. CLEARING FIRM INFORMATION Firm Name: Firm No: Address: City/State/ZIP Code: _____ Phone Number: Accounts Payable/Accounting Contact & Phone Number: II. CLEARING FIRM AUTHORIZED SIGNATURES **CLEARING FIRM** By: _____ By: _____ Name: _____ Name: _____ Title: _____ Title: _____ Date: _____ Date: _____

Exhibit K

GIVE-UP PAYMENT SYSTEM™ CLEARING MEMBER AGREEMENT AND PARTICIPATION FORM

nis Give-Up Payment System ("GPS") Clearing Member Agreement is between the nicago Mercantile Exchange Inc. ("CME") and
ME, via the GPS, will calculate the net amount of give-up fees owed by or due the learing Member based on Clearing Member's total give-up transactions as a carrying m and/or executing firm during the calendar month. Clearing Member agrees to athorize the financial institution identified below to pay CME the amount of give-up es owed by Clearing Member as a carrying firm to other members, less the amount of ve-up fees owed by other members to Clearing Member in its capacity as an executing firm. If the amount of give-up fees owed to Clearing Member as an executing m exceed the amount owed by Clearing Member as a carrying firm, then CME will itiate a credit entry to Clearing Member in the amount of such excess.
ne account identified below is the deposit account maintained by Clearing Member r participation in the GPS:
nancial Institution
ranch Name
pecific Address of Branch
ank Contact Person Telephone
xact Account Name
Check one: Savings Checking Money Market
count Number Bank Routing Number
axpayer I.D. Number
ame of customer or division to be billed (Clearing Member divisions to be associated ith this firm for payment purposes):
learing Member Contact Person Telephone

FOR CHECKING AND MONEY MARKET ACCOUNTS, ATTACH A VOIDED CHECK OR COPY THEREOF BELOW:
-VOIDED CHECK OR COPY THEREOF-
Clearing member authorizes CME to act on its behalf by instructing the Bank designated above, to accept and act upon all credit and debit entries to the Account that are indicated by CME thereunder, including, but not limited to entries made under the following circumstances: (i) in the event of a mistake, error or omission by CME relating to the above debit and/or credit entries; (ii) in order to return or deduct give-up fees as is indicated based on a recalculation of net give-up fees, pursuant to the GPS.
Clearing Member understands and agrees that CME Rule 578— LIMITATION OF LIABILITY, NO WARRANTIES, applies to Clearing Member's use of the GPS. IN ADDITION TO THOSE LIMITATIONS SET FORTH IN RULE 578, CME SHALL NOT BE LIABLE TO CLEARING MEMBER OR ANY OTHER PERSON FOR ANY DAMAGES RESULTING FROM CME'S FAILURE TO NOTIFY THE DESIGNATED BANK, OR AS A RESULT OF PROVIDING AN INCORRECT OR PARTIAL NOTIFICATION TO THE BANK, OF ANY MATTER RELATING TO OBLIGATIONS AND PAYMENTS INVOLVING THE GPS. Clearing Member agrees to pay a monthly service fee to CME for GPS processing.
Clearing Member
By (please print) Title
Signature Date
Please complete the attached W-9 form and submit with this clearing member participation form. GPS™ is a trademark of the Chicago Mercantile Exchange Inc.

Exhibit L



Member Firm Online System Access Request Form

Member Firms must keep this form up to date at all times

Request Type	Add	Modify	Delete
Cleaning March and	ium Information		
Clearing Member F	-irm information		
Firm	#:		
Firm Nam	e:		
End User Informati	on		
First Nam	e:		
Last Nam	e:		
*CME Group Login I	D:		
Back Office Manag	ger Information		
Full Nam	e:		
CME Group Login I	D:		
Authorizing Signatur	re:		
Signature Dat	re:		
Environments Need (Must choose at least o			
Production	New Release	Certificati	on
All personal information pro	vided under this force will	l be used distribute	d and maintains

If completing this form on behalf of another individual, you will ensure that you have the required consent from those individuals to whom the personal information relates, or you satisfy an applicable legal basis for doing so, in compliance with all applicable laws, to enable CME Group to process such

For inquiries regarding passwords and entitlements please contact the EASE Team at:

US: +1 312 456 1560, option 2

Europe: 011 44 203 379 3802

Asia: 011 65 6593 5536

Please allow a minimum of 48 hours for processing your security request

personal information.



Clearing Application Access*	Select Only One Access Type		Please provide Firm number (ex. 123) in space below						
Request Systems	Update Access	Read-Only Access	Clearing Firm #	CBT Firm #	CME Firm #	COMEX Firm #	DME Firm #	NYMEX Firm #	FEX Firm #
Asset Management Firm**									
Broker Payment System (BPS)									
Deliveries Plus**									
Deliveries Clearing Agent (optional)									
Exchange Fee System Portal (EFS)***									
EFS Globex Registration									
Front End Clearing (FEC+)									
Positions – FEC+									
Give-Up Payment System (GPS)									
Settlements Firm**	N/A								

NOTE: Some Clearing Firm Applications only require the Clearing Firm # to secure access. Other Clearing Firm Applications are more granular and require the Firm #s which are specific to the individual Product Exchanges (ex. CBT, CME, COMEX and NYMEX) to secure access.

Deal Management System (DMS) Access* Select Per Ap		ne Access Type on	Please provide Firm number (ex. 123) in space below			
Request Systems			FX Firm #	IRS Firm #		
IRS DMS						
IRS DMS Swaptions E&A						
FX DMS						
IRS DMS Operations (No Limit Access)		N/A				

NOTE: You may ONLY have access to ONE of the following above: IRS DMS or IRS DMS Operations (No Limit Access) – (NOT BOTH)

EREP Report Access*	Please provide Firm number (ex. 123) in space below						
Request Systems	Read-Only Access	CBT Firm #	CME Firm #	COMEX Firm #	DME Firm #	NYMEX Firm #	FEX Firm #
EREP - Operations Reports							
EREP - Risk Reports							
EREP - Financial Reports							
EREP – Delivery Reports							
EREP – OTC Operations Reports							

^{*} Access Requires a CME Group Login ID (Need a CME Group Login ID? Go to: https://login.cmegroup.com/sso/register/)

Privacy Policy: http://www.cmegroup.com/privacy-policy.html

Special Instructions:

For inquiries regarding passwords and entitlements please contact the EASE Team at:

US: +1 312 456 1560, option 2 Europe: 011 44 203 379 3802 Asia: 011 65 6593 5536

Please allow a minimum of 48 hours for processing your security request

^{**} For CBT, CME, NYMEX and COMEX access only, this application is available in the User Administration application for firm selfservice. Access to the User Administration application requires Firms to complete the CME Group Self-Service Agreement (SSA). http://www.cmegroup.com/tools-information/self-service.html

^{***} Select for Account Maintenance, Reports, Allocation and Transaction Viewer access. Note: EFS access for Globex Registration requires separate permissioning.

Exhibit M



BROKERAGE PAYMENT SYSTEM CLEARING MEMBER PARTICIPATION FORM

The account identified below is the deposit account maintained by Clearing Member for participation in the Brokerage Payment System™:

Financial Institution:
Branch Name:
Specific Name of Branch:
Bank Contact Person:Telephone Number:
Exact Account Name:
Check One: Savings Checking
Account Number: Bank Routing Number:
Taxpayer I.D. Number:
Name of customer or division to be billed (clearing member divisions to be associated with this firm for payment purposes):
Clearing Member Contact Person:Telephone: TEFRA EXEMPT? YES NO Bill Major Firm? YES NO
FOR CHECKING AND MONEY MARKET ACCOUNTS, ATTACH A VOIDED CHECK OR COPY THEREOF BELOW:
-VOIDED CHECK OR COPY THEREOF-
Clearing Member authorizes CME to act on its behalf by instructing the Bank designed above, to accept and act upon all credit and debit entries to the Account that are indicated by CME hereunder.
Clearing Member:
By: (please print) Title:
Signature: Date:

Form W-9 (Rev. November 2005) Department of the Treasury Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Give form to the requester. Do not send to the IRS.

0 95					
Print or type	Business name, if different from above		NACHARA CANARA CANA		
r type	Check appropriate box: ☐ Individual/ ☐ Corporation ☐ Partnership ☐ Other ►		Exempt from backup withholding		
Print or type	Address (number, street, and apt. or suite no.) Requester's name and		address (optional)		
jjiood	City, state, and ZIP code				
900	List account number(s) here (optional)	•			
Pá	Taxpayer Identification Number (TIN)				
bac alie you No	Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see <i>How to get a TIN</i> on page 3. Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.				
Pa	art II Certification				
Und	der penalties of perjury, I certify that:				
1.	1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and				
2.	2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and				
3.	3. I am a U.S. person (including a U.S. resident alien).				
with For arra	Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. (See the instructions on page 4.)				

Purpose of Form

Signature of

U.S. person ▶

Sign

Here

A person who is required to file an information return with the IRS, must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

- **U.S. person.** Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:
- 1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- 2. Certify that you are not subject to backup withholding, or
- 3. Claim exemption from backup withholding if you are a U.S. exempt payee.

In 3 above, if applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

For federal tax purposes, you are considered a person if you are:

 An individual who is a citizen or resident of the United States,

Date ▶

- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States, or
- Any estate (other than a foreign estate) or trust. See Regulations sections 301.7701-6(a) and 7(a) for additional information.

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

• The U.S. owner of a disregarded entity and not the entity,

Exhibit N

SECRETARY'S CERTIFICATE

The undersigned hereby certifies, solely in [his/her] capacity as Corporate Secretary of [Company], as of [DATE], that [NAME OF SIGNATORY] is authorized to sign the Clearing Membership Agreement, dated as of [DATE], for clearing membership at one or more of the following exchanges: Chicago Mercantile Exchange Inc., Board of Trade of the City of Chicago, Inc., New York Mercantile Exchange, Inc. and/or Commodity Exchange, Inc. The undersigned further certifies that the signature appearing below is true and correct.

[NAME OF SIGNATORY]	
	Signature of Agreement Signatory
	Signature of Secretary:
	Name of Secretary:
	Title: [Corporate Secretary]
	Date:
ACKNOWLEDGMENT	
STATE OF)	
) ss	
COUNTY OF)	
certify thatof [Con	n and for and residing in the aforesaid state do hereby npany], personally known to me to be the same persons Certificate appeared before me this day in person and vered the above Certificate.
GIVEN under my hand	and notarial seal this day of,20
	Notary Public
(Notary Seal)	My Commission Expires:

Exhibit O



Firm Name:

Designated Spokesperson and Authorized Person Form

CME Group Inc. requires firms to designate a Designated Spokesperson(s) and Authorized Person(s) who shall be authorized to deal with the Exchanges with respect to memberships owned or leased by the firm, as applicable, and who shall be authorized to represent the firm before the Exchanges. Such authorized representatives shall be responsible to the Exchanges as if such person was a member as defined by Rule 400.

CME Group may only discuss the application and information provided pursuant thereto with those individuals designated by the firm as a Designated Spokesperson and/or an Authorized Person. Please provide a complete listing of the firm's Designated Spokesperson(s) and Authorized Person(s) below. Changes to the list of Designated Spokesperson(s) or Authorized Person(s) may only be made in writing by completing and emailing an updated Designated Spokesperson and Authorized Person Form located at www.cmegroup.com/memberships to CME Group's Concierge Team at conciergeteam@cmegroup.com. CME Group collects and uses personal information for the purposes for which it was obtained. For further information please reference CME Group's Privacy Policy or contact the Privacy Office at privacy@cmegroup.com.

Name	Job Title	Phone Number	Email Address	Authorized Person ¹	Designated Spokesperson ²

¹ An Authorized Person shall be defined as an authorized representative who shall have the authority to make membership and/ or incentive program related decisions on behalf of the firm including, but not limited to, applying, changing, or withdrawing membership and/or incentive program status, request to deposit or withdraw required seats and/or shares and the buying, selling, releasing or transferring of seats and shares. In addition, an Authorized Person shall have the same authority as the Designated Spokesperson noted below.

I attest that the information provided above is accurate and complete. This form shall supersede any previously submitted Designated Spokesperson and Authorized Person Form.

Signed: *		
Name (printed)		
Position		
Date		

² A Designated Spokesperson(s) shall be defined as an authorized representative whereby CME Group, at its sole discretion, may provide or discuss any membership and/or incentive program related information specific to the firm.

^{*} Authorized Officer, Managing Member of an LLC or Partner. Signor should also be designated as an Authorized Person above.

Exhibit P



Request for Taxpayer Identification Number and Certification

▶ Go to www.irs.gov/FormW9 for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
Print or type. Specific Instructions on page 3.	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of t following seven boxes.	certain entities, not individuals; see instructions on page 3):
	☐ Individual/sole proprietor or ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estatisingle-member LLC	Exempt payee code (if any)
충	☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ►	
Print or type. c Instruction	Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not che LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC is in the last of the	is code (if any)
ij	is disregarded from the owner should check the appropriate box for the tax classification of its owner.	(Applies to accounts maintained outside the U.S.)
be	Other (see instructions) ► 5 Address (number, street, and apt. or suite no.) See instructions. Requester's na	me and address (optional)
See S	Address (number, street, and apt. or suite no.) See instructions.	ne and address (optional)
ŏ	6 City, state, and ZIP code	
	7 List account number(s) here (optional)	
Par	Taxpayer Identification Number (TIN)	
	your fire in the appropriate box. The fire provided materiale fire family given on line is a void	security number
	p withholding. For individuals, this is generally your social security number (SSN). However, for a nt alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other	
	s, it is your employer identification number (EIN). If you do not have a number, see <i>How to get a</i>	
TIN, la		
Note:	If the account is in more than one name, see the instructions for line 1. Also see What Name and	yer identification number
Numb	er To Give the Requester for guidelines on whose number to enter.	
		-
Par	Certification	
Unde	penalties of perjury, I certify that:	
1. The	number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be	e issued to me); and
Ser	n not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not bed vice (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, o onger subject to backup withholding; and	
3. I ar	n a U.S. citizen or other U.S. person (defined below); and	

4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because

Sign Here	Signature of U.S. person ▶	Date▶				
acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.						
you have falled to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid,						

General Instructions

Section references are to the Internal Revenue Code unless otherwise

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

• Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding,

By signing the filled-out form, you:

- 1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
 - 2. Certify that you are not subject to backup withholding, or
- 3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
- 4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- · An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

- 1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
 - 2. The treaty article addressing the income.
- 3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
- 4. The type and amount of income that qualifies for the exemption from tax.
- 5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

- 1. You do not furnish your TIN to the requester,
- 2. You do not certify your TIN when required (see the instructions for Part II for details),
 - 3. The IRS tells the requester that you furnished an incorrect TIN,
- 4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
- 5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see Special rules for partnerships, earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

- b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.
- c. Partnership, LLC that is not a single-member LLC, C corporation, or S corporation. Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.
- d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.
- e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n)	THEN check the box for
Corporation	Corporation
Individual Sole proprietorship, or Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single- member LLC
LLC treated as a partnership for U.S. federal tax purposes, LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
Partnership	Partnership
Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2-The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5-A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8-A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10-A common trust fund operated by a bank under section 584(a)
- 11-A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for	THEN the payment is exempt for
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G-A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I-A common trust fund as defined in section 584(a)

J-A bank as defined in section 581

K-A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester,* later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.SSA.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/Businesses and clicking on Employer Identification Number (EIN) under Starting a Business. Go to www.irs.gov/Forms to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to www.irs.gov/OrderForms to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

- 1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.
- 2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.
- **3. Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.
- **4. Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).
- 5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
Custodial account of a minor (Uniform Gift to Minors Act)	The minor ²
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee ¹
b. So-called trust account that is not a legal or valid trust under state law	The actual owner ¹
Sole proprietorship or disregarded entity owned by an individual	The owner ³
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i) (A))	The grantor*
For this type of account:	Give name and EIN of:
Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity ⁴
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
Association, club, religious, charitable, educational, or other tax- exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
A broker or registered nominee	The broker or nominee

	1		
For this type of account:	Give name and EIN of:		
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity		
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust		

- ¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.
- ² Circle the minor's name and furnish the minor's SSN.
- ³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.
- ⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

*Note: The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN.
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to <code>phishing@irs.gov</code>. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at <code>spam@uce.gov</code> or report them at <code>www.ftc.gov/complaint</code>. You can contact the FTC at <code>www.ftc.gov/idtheft</code> or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see <code>www.ldentityTheft.gov</code> and Pub. 5027.

Visit www.irs.gov/IdentityTheft to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

Page 6

Form W-8BEN

(Rev. October 2021)

Department of the Treasury Internal Revenue Service

Certificate of Foreign Status of Beneficial Owner for United States Tax Withholding and Reporting (Individuals)

► For use by individuals. Entities must use Form W-8BEN-E.

- Go to www.irs.gov/FormW8BEN for instructions and the latest information.
- ▶ Give this form to the withholding agent or payer. Do not send to the IRS.

OMB No. 1545-1621

Do No	OT use this f	form if:			Instead, use Form:
• You	are NOT an i	individual			W-8BEN-E
• You	are a U.S. ci	tizen or other U.S. person, including a resident alie	n individual		W-9
		cial owner claiming that income is effectively conne onal services)			within the United States W-8ECI
• You	are a benefic	cial owner who is receiving compensation for perso	nal services performed	in the United States	s 8233 or W-4
• You	are a person	acting as an intermediary			W-8IMY
		sident in a FATCA partner jurisdiction (that is, a Nurisdiction of residence.	1odel 1 IGA jurisdiction	with reciprocity), c	ertain tax account information may be
Par	t I Idei	ntification of Beneficial Owner (see inst	tructions)		
1	Name of in	dividual who is the beneficial owner	,	2 Country of o	citizenship
3	Permanent	residence address (street, apt. or suite no., or rura	l route). Do not use a P	.O. box or in-care	-of address.
	City or tow	n, state or province. Include postal code where app	oropriate.		Country
4	Mailing add	dress (if different from above)			
	City or tow	n, state or province. Include postal code where app	propriate.		Country
5	U.S. taxpa	yer identification number (SSN or ITIN), if required ((see instructions)		
6a	Foreign tax	didentifying number (see instructions)	6b Check if FTIN no	t legally required .	
7	Reference	number(s) (see instructions)	8 Date of birth (MI	M-DD-YYYY) (see i	nstructions)
Par	t II Cla	im of Tax Treaty Benefits (for chapter 3	purposes only) (se	e instructions)	
9	I certify that	at the beneficial owner is a resident of			_ within the meaning of the income tax
10	•	veen the United States and that country. tes and conditions (if applicable—see instructions of the treaty identified on line	,	• .	visions of Article and paragraph Iding on (specify type of income):
		of the treaty identified of fine	above to claim a	_ % rate of within	iding on (specify type of income).
	Explain the	e additional conditions in the Article and paragraph	the beneficial owner me	ets to be eligible fo	or the rate of withholding:
Part	III Cer	tification			
Under p	enalties of perjury	, I declare that I have examined the information on this form and to the	e best of my knowledge and belie	of it is true, correct, and co	emplete. I further certify under penalties of perjury that:
relat	es or am using	that is the beneficial owner (or am authorized to sign for th this form to document myself for chapter 4 purposes; on line 1 of this form is not a U.S. person;	e individual that is the bene	ficial owner) of all the	income or proceeds to which this form
	form relates to	·			
		 ctively connected with the conduct of a trade or business i	in the United States;		
(b) ir	ncome effective	ely connected with the conduct of a trade or business in the	e United States but is not s	ubject to tax under ar	n applicable income tax treaty;
(c) th	ne partner's sha	are of a partnership's effectively connected taxable income	e; or		
(d) th	ne partner's am	nount realized from the transfer of a partnership interest su	bject to withholding under	section 1446(f);	
• The p	person named on	line 1 of this form is a resident of the treaty country listed on line 9 o	f the form (if any) within the mea	ning of the income tax tre	eaty between the United States and that country; and
• For l	broker transact	tions or barter exchanges, the beneficial owner is an exem	pt foreign person as defined	d in the instructions.	
		this form to be provided to any withholding agent that has controunts of the income of which I am the beneficial owner. I agree that			
Sign	Here	I certify that I have the capacity to sign for the person	on identified on line 1 of this	form.	
		Signature of beneficial owner (or individual aut	horized to sign for beneficia	l owner)	Date (MM-DD-YYYY)
		Print name of signer			
F D		duction Act Notice and concrete instructions	6 : 1:	050477	F W ODEN (D 10 0001)