

provisions in its Rules as are reasonably necessary to implement the provisions of this Agreement. Without limiting the generality of the foregoing, such Rules shall provide that Cross-Margining Participants of the Clearing Organization shall be bound by the provisions of this Agreement and that the Clearing Organization may use its Security Deposit Fund or Default Fund, including any rights of assessments against its Clearing Members, to make payment under any Guaranty given by such Clearing Organization pursuant to Section 8A or 8B of this Agreement.

12. Representations and Warranties. (a) Each Party represents and warrants to the others, as of the date hereof and as of the Effective Date as follows:

(i) Good Standing. It is a company duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation, has the power and authority to own its assets and to transact the business in which it is now engaged or proposed to be engaged and is duly qualified and authorized to do business as a foreign corporation and is in good standing under the laws of each jurisdiction in which failure to so qualify could have a material adverse effect on its financial condition, business or operations.

(ii) Corporate Power and Authority. It has all requisite corporate power and authority to enter into this Agreement and the agreements referenced in this Agreement, as applicable, and full power and authority to take all actions required of it pursuant to such agreements. This Agreement will constitute, when executed and delivered, valid and binding obligations of such party, and the execution, delivery and performance of all of its obligations under this Agreement have been duly authorized by all necessary corporate action on the part of such Party.

(iii) No Violation. Except for provisions as to which waivers have been obtained, and except to the extent representations made hereunder as of the date hereof may be subject to the regulatory approvals referred to in paragraph (b) hereof, the execution and delivery of this Agreement by the Clearing Organization and the performance of its obligations under this Agreement: (i) do not result in a violation or breach of, do not conflict with or constitute a default under, and will not accelerate or permit the acceleration of performance required by, any of the terms and provisions of its certificate or articles of incorporation, by-laws, rules or other governing documents, any note, debt instrument, or any other agreement to which it is a party or to which any of its assets or properties is subject, and will not be an event which after notice or lapse of time or both will result in any such violation, breach, conflict, default or acceleration; and (ii) do not result in a violation or breach of any law, judgment, decree, order, rule or regulation of any governmental authority or court, whether federal, state or local, at law or in equity, applicable to it or any of its assets or properties.

(b) Each party represents and warrants to the others, as of the Effective Date that all authorizations, permits, approvals or consents required to be obtained from, and all notifications and filings required to be made with, all governmental authorities and regulatory bodies and third parties to permit such party to place into effect this Agreement and to perform its obligations under this Agreement have been obtained.

13. Termination. (a) Each party may terminate this Agreement without cause by delivering written notice of termination to the other parties specifying a termination date not less than 30 days following the date on which such notice is sent.

(b) In the event that any party fails to perform any material obligation under this Agreement and such failure is not promptly rectified after written notice thereof is sent to such party, the non-defaulting parties may terminate this Agreement by delivering written notice of such termination to the other party specifying a termination date not less than five Business Days following the date on which such notice of termination is sent.

(c) In the event that a termination date is established under paragraphs (a), or (b) above, each party shall promptly notify all of its Cross-Margining Participants. Each party shall cooperate fully in exchanging all necessary data, records, computer files and other information, and in executing documents and taking other action necessary or appropriate to effect transfers, releases, etc. in order to effect termination of the Cross-Margining Arrangement as to the terminating parties. In the event that a liquidation of a Cross-Margining Participant is pending on the termination date, the provisions of this Agreement pertaining to such liquidation shall survive the termination until such liquidation has been completed and any Guaranty Amount due from one Clearing Organization to the other in respect of such liquidation has been paid.

(d) All obligations arising under this Agreement prior to the termination thereof that remain unsatisfied shall survive the termination of this Agreement. In addition, the provisions of Section 9 shall survive the termination of this Agreement to the extent that they apply to Confidential Information received by a party prior to the termination of this Agreement, and the provisions of Section 10 shall survive the termination of this Agreement to the extent that the event giving rise to an obligation of indemnification occurs prior to the termination of this Agreement.

14. Information Sharing. (a) CME and LCH hereby agree to provide one another with the following information regarding their respective Cross-Margining Participants:

(i) If either Clearing Organization applies any special surveillance procedures to a Cross-Margining Participant, such Clearing Organization will inform the other Clearing Organization of that fact.

(ii) If either Clearing Organization requires more frequent reporting of financial information by a Cross-Margining Participant, that Clearing Organization will inform the other Clearing Organization of that fact and the period of reporting. LCH, rather than LIFFE, shall be primarily responsible for the financial surveillance and the reporting of financial information regarding Cross-Margining Participants.

(iii) If either Clearing Organization increases the capital requirement for any Cross-Margining Participant, that Clearing Organization will notify the other Clearing Organization of that fact, the amount of the additional capital required and the deadline for meeting the requirement.

(iv) If either Clearing Organization imposes higher Margin requirements with respect to a particular Cross-Margining Participant, or issues a special intra-day call for Margin or settlement variation in respect of a Cross-Margining Participant, that Clearing Organization shall notify the other Clearing Organization of that fact and the amount of the additional Margin required.

(v) Each Clearing Organization shall, upon request by the other Clearing Organization, furnish to such other Clearing Organization the following information with respect to each account carried by a Cross-Margining Participant with the Clearing Organization from whom the information is requested: (A) Margin required and on deposit in respect of such account, and (B) the currency amount of any current settlement obligations owed to or by the Cross-Margining Participant that have been determined for such account in respect of variation margin, premiums, option exercises and any other settlements.

(vi) Each Clearing Organization shall notify the other Clearing Organization of any disciplinary action (other than an appeal from an administrative fine) taken by its governing board, or committee or subcommittee thereof against a Cross-Margining Participant involving non-compliance with financial or financial reporting requirements, or violation of its Rules.

(vii) Each Clearing Organization shall notify the other in the event that the notifying Clearing Organization learns of any major processing difficulties (including, but not limited to, back-office computer problems) or operational errors of a Cross-Margining Participant.

(viii) Each Clearing Organization agrees to notify each other Clearing Organization immediately in the event that a Cross-Margining Participant defaults materially in any settlement obligation (other than routine delays of not more than forty-eight hours in the physical delivery of underlying interests).

(ix) In the case of any notice given pursuant to paragraphs (i), (ii), (iii), (iv), (vii), or (viii) above, the Clearing Organization giving such notice shall also notify the recipient when the condition giving rise to such notice is terminated.

(b) CME agrees to inform LCH, and LCH agrees to inform CME, as requested, of the total size of, and aggregate amount of required contributions to, such Clearing Organization's Default Fund or Security Deposit Fund.

(c) Each Clearing Organization shall notify the other Clearing Organization of any material fine, penalty, disciplinary action, regulatory surveillance or other action taken against a Cross-Margining Participant by its Designated Self-Regulatory Organization or any other agency or body that has regulatory oversight over such Cross-Margining Participant. LIFFE will notify CME of any actions which it takes against a Cross-Margining Participant and a copy of such notice shall also be sent to LCH.

(d) Any notice required to be given pursuant to this Section shall be given by telephone or fax promptly upon the occurrence of the event giving rise to the requirement of

notification, and any such notice given by telephone shall be promptly confirmed in writing. Each such notice shall be directed by fax or phone as follows:

If to LCH:

Mr. Andrew Lamb  
Managing Director, Risk & Deputy Chief Executive Officer  
Telephone: 44 171 426-7055  
Fax: 44 171 667-7351

and

Mr. Paul Jones  
Director, Risk  
Telephone: 44 171 426-7024  
Fax: 44 171 667-7351

If to LIFFE:

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Market Secretary  
Telephone: 44 20 7379 2104  
Fax: 44 20 7379 2546

and

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General Counsel  
Telephone: 44 20 7379 2816  
Fax: 44 20 7626 5940

If to CME:

Mr. Phupinder Gill  
President, Clearing House Division  
Chicago Mercantile Exchange  
Telephone: (312) 930-3088  
Fax: (312) 634-1553

and

Mr. Craig Donohue  
Senior Vice President and General Counsel  
Chicago Mercantile Exchange  
Telephone: (312) 930-8275  
Fax: (312) 930-3323

Either Clearing Organization may amend or supplement the notice information set forth above by fax notice to the other Clearing Organization containing the name and telephone number of any different or additional individual designated by such Clearing Organization pursuant to the preceding sentence.

(d) In the event that notification is given by a Clearing Organization pursuant to this Section, such Clearing Organization shall furnish to the other upon request such additional information or documents relating to the circumstances leading to the notification as may reasonably be requested by it.

15. General Provisions.

(a) Further Assurances. Each party agrees, without additional consideration, to execute and deliver such instruments and take such other actions as shall be reasonably required or as shall be reasonably requested by the other party in order to carry out the transactions, agreements and covenants contemplated by this Agreement.

(b) Amendment, Modification and Waiver. Unless otherwise expressly provided herein, this Agreement may be permanently modified, amended or supplemented only by mutual written agreement of the parties. A party may temporarily waive or modify any condition intended to be for its benefit provided such waiver shall be in writing signed by the party or parties to be charged. Any delay or failure of a party hereto at any time to require performance by the other party of any provision of this Agreement shall in no way affect the right of such party to require future performance of that or any other provision of this Agreement and shall not be construed as a waiver of any subsequent breach of any provision, a waiver of this provision itself or a waiver of any other right under this Agreement.

(c) Governing Law. This Agreement shall be governed by and construed in accordance with the laws (without regard to principles of conflicts of laws) of the State of New York.

(d) Notices. Unless otherwise expressly provided in this Agreement, all notices to be given by any party under this Agreement shall be in writing and shall be given by hand delivery, recognized courier delivery service, or by confirmed telecopy, to the other parties at the following addresses (or such other addresses as any party may furnish to the others in writing for such purpose):

If to LCH:	The London Clearing House Limited Aldgate House, 33 Aldgate High Street London EC3N 1EA, United Kingdom Attention: Managing Director, Risk
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Copy to: The London Clearing House Limited  
Aldgate House, 33 Aldgate High Street  
London EC3N 1EA, United Kingdom  
Attention: Director, Risk

If to CME: Chicago Mercantile Exchange  
30 South Wacker Drive, 6 South  
Chicago, IL 60606  
Attention: President, Clearing House Division

Copy to: Chicago Mercantile Exchange  
30 South Wacker Drive, 7 North  
Chicago, IL 60606  
Attention: General Counsel

If to LIFFE: London International Financial Futures Exchange  
Cannon Bridge, Dowgate Hill  
London EC4R 3XX, United Kingdom  
Attention: Market Secretary

Copy to: London International Financial Futures Exchange  
Cannon Bridge, Dowgate Hill  
London EC4R 3XX, United Kingdom  
Attention: General Counsel

(e) Assignment. This Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns, but neither this Agreement nor any of the rights, interests or obligations hereunder shall be assigned by either party hereto without the prior written consent of the other party, nor is this Agreement intended to confer any rights or remedies upon any person except the parties hereto.

(f) Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

(g) Headings. The section and paragraph headings contained in this Agreement are solely for the purpose of reference, are not part of the agreement of the parties and shall not affect in any way the meaning or interpretation of this Agreement.

(h) Entire Agreement. Except as set forth expressly herein or in another instrument in writing signed by the party to be bound thereby which makes reference to this Agreement, this Agreement, including the exhibits hereto, embodies the entire agreement and understanding of the parties hereto in respect of the subject matter contained herein, and no other restrictions, promises, representations, warranties, covenants, or undertakings in relation thereto exist

among the parties. This Agreement supersedes all prior agreements and understandings between the parties with respect to such subject matter.

(i) Invalid Provision. In the event that any provision, or any portion of any provision, of this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision, or any other portion of any provision, of this Agreement, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

(j) Effective Date. This Agreement shall become effective on a date mutually agreed to by CME and LCH and LIFFE, which date shall be not earlier than the date on which all necessary regulatory approvals have been received by CME and LCH and LIFFE, if any.

(k) Force Majeure. Notwithstanding any other provision of this Agreement, no party hereto shall be liable for any failure to perform or delay in performing its obligations hereunder if such failure or delay is caused by fire, strike, power failure, riot or other civil commotion, acts of nature, acts of international, federal, state or municipal public authorities, governmentally ordered business or banking moratoria or orders to refrain from using power (whether or not such moratoria or orders are legally authorized), equipment failure or any other condition or event beyond the reasonable control of the party whose performance is prevented or delayed. Each party agrees to notify the other promptly upon learning that any such condition or event has occurred and shall cooperate with the other, upon request, in arranging alternative procedures and in otherwise taking reasonable steps to mitigate the effects of any inability to perform or any delay in performing.

16. Arbitration. (a) Any controversy or claim arising out of or relating to this Agreement, as it may be amended or modified from time to time, including any claim or controversy arising out of or relating to the alleged breach, termination or invalidity thereof and any claim based on federal or state statute, shall be settled by arbitration in accordance with the then current Commercial Arbitration Rules of the American Arbitration Association (the "AAA") to the extent that such Rules do not conflict with any provisions of this section. The parties do not, however, appoint the AAA as administrator of the arbitration.

(b) The arbitration shall be held at a mutually agreed place or at the offices of AAA in New York City if no agreement is reached. It shall be held before a panel of three arbitrators: one appointed by each Clearing Organization and one neutral arbitrator to be appointed by agreement of the party-appointed arbitrators. Each neutral arbitrator shall be an attorney with not less than an aggregate of 12 years of experience in legal practice, legal teaching or adjudication. The neutral arbitrator shall act as chairman.

(c) A party (the "Claimant") may initiate arbitration under this Agreement by sending to the other party or parties ("Respondents"), by overnight courier, a written demand for arbitration containing a description in reasonable detail of (i) the nature of the claim, dispute or controversy it desires to arbitrate, and (ii) the remedy or remedies sought including Claimant's best current information as to the amount of money, if any, sought to be recovered. The arbitration shall be deemed commenced on the date Respondent receives the demand (the "Commencement Date").

(d) Within seven days after the Commencement Date, Respondent may send to Claimant any written responsive statement to the demand it wishes. Within that time period, Respondent shall send to Claimant or Claimant's counsel, by overnight courier, return receipt requested, a written demand for arbitration of any claims Respondent then wishes to arbitrate against Claimant, containing the same information as in an initial demand.

(e) Claimants and Respondents may freely amend, restate, clarify or supplement their claims in writing until a reasonable time, not less than 21 days, prior to the first arbitration hearing, except that no wholly new claim may be submitted after selection of the arbitrator without the arbitrator's consent.

(f) Any award, order or judgment pursuant to such arbitration shall be deemed final and may be entered and enforced in any state or federal court of competent jurisdiction located in the State of New York. Each party agrees to submit to the jurisdiction of any such court for purposes of the enforcement of any such award, order or judgment.

(g) Any award of damages pursuant to such arbitration shall be included in a written decision which shall state the reasons upon which the award was based, including all the elements involved in the calculation of any award of damages.

(h) Any arbitration proceeding hereunder shall be conducted on a confidential basis.

(i) Notwithstanding any other provision of this Agreement, each party shall have the right to apply to any court of competent jurisdiction for temporary injunctive or other preliminary relief.

(j) (1) There shall be no pre-hearing written interrogatories, written requests for admission, or discovery depositions. The arbitrator may require the parties to respond to limited and reasonable requests for production of documents from the opposing party.

(2) In considering the extent of pre-hearing document discovery to be permitted, the arbitrator shall consider that reduced time, expense and burden are principal reasons the parties have chosen to resolve their disputes through arbitration rather than court proceedings, and shall require pre-hearing document production only where necessary to avoid injustice. The arbitrator shall require that a party requesting pre-hearing production of documents shall reimburse the producing party for the costs of copying and for the time and fees of the producing party's employees and attorneys in locating, reviewing, organizing and copying requested documents.

(3) With the approval of the arbitrator, evidence depositions may be taken of witnesses who cannot be subpoenaed to testify at the hearing. The arbitrator may require advance disclosure by the parties of evidence to be offered at the hearing in order to avoid unfair surprise.



(k) No arbitration arising out of or relating to this Agreement shall include, by consolidation, joinder or in any other manner, any additional person not a party to this Agreement except by written consent containing a specific reference to this Agreement and signed by the Clearing Organizations. Any such written consent to arbitration involving an additional person or persons shall not constitute consent to arbitration of any dispute not described therein or with any person not named or described therein.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and delivered as of the date first above written.

CHICAGO MERCANTILE EXCHANGE

By: \_\_\_\_\_  
M. Scott Gordon  
Chairman

THE LONDON CLEARING HOUSE LIMITED

By: \_\_\_\_\_  
Sir Michael Jenkins  
Chairman

LIFFE ADMINISTRATION AND MANAGEMENT

By: \_\_\_\_\_  
Brian Williamson  
Chairman

**APPENDIX A**

**ELIGIBLE PRODUCTS**

**CME**

Eurodollar

**LCH/LIFFE**

Euro Euribor  
Euro Libor

**APPENDIX B**

**CHICAGO MERCANTILE EXCHANGE/  
LONDON CLEARING HOUSE/  
LONDON INTERNATIONAL FINANCIAL FUTURES  
AND OPTIONS EXCHANGE  
CROSS-MARGINING PARTICIPANT AGREEMENT  
(COMMON MEMBER)**

The undersigned ("Member") is a Member of the London Clearing House ("LCH"), a Clearing Member of the London International Financial Futures and Options Exchange ("LIFFE") and a Clearing Member of the Chicago Mercantile Exchange ("CME"). Member hereby elects to become a Cross-Margining Participant in the Cross-Margining Arrangement between LCH, LIFFE and CME. Member agrees to be bound by the LCH Rules and the CME Rules applicable to Cross-Margining Participants and by the provisions of the Cross-Margining Agreement between LCH, LIFFE and CME (the "Cross-Margining Agreement"), as any of the foregoing may be in effect from time to time, a copy of each of which Member has reviewed. Without limiting the generality of the foregoing, Member agrees that all of its positions, margin deposits and other property in the possession or subject to the control of LCH or CME ("Member's Margin") and its right to and interest therein may be applied to satisfy any obligation or indebtedness that that Member may at any time and from time to time have to LCH or CME pursuant to the Cross-Margining Agreement (or the LCH Rules or the CME Rules (as the case may be)), including but not limited to any Reimbursement Obligation that may arise because of a guaranty payment that LCH or CME may make to the other pursuant to Section 7 of the Cross-Margining Agreement (or contemplated by the LCH Rules or the CME Rules (as the case may be)). After any such obligation or indebtedness is satisfied by such application of Member's Margin, and subject to any other claim that LCH or CME may have against Member, Member shall be entitled only to a payment of the value remaining in Member's Margin after such satisfaction. LCH or CME may also exercise any right of recoupment or setoff that they or any one of them may have against the Member's Margin. To the extent that the Member has any rights in Member's Margin, Member's Margin shall also be subject to the security interest of each clearing organization as set forth in the LCH Rules or CME Rules, as the case may be, and in the Cross-Margining Agreement. This agreement may be terminated in accordance with the provisions of the Cross-Margining Agreement. Terms used in this agreement that are defined in the Cross-Margining Agreement shall have the same meaning in this agreement.

**LCH/CME/LIFFE MEMBER**

Name: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

**Accepted By:**

**London Clearing House**

**By:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Accepted By:**

**Chicago Mercantile Exchange**

**By:** \_\_\_\_\_

**Title:** \_\_\_\_\_

SMS/db:1743.AGR

## APPENDIX C

### CHICAGO MERCANTILE EXCHANGE/ LONDON CLEARING HOUSE/ LONDON INTERNATIONAL FINANCIAL FUTURES AND OPTIONS EXCHANGE CROSS-MARGINING PARTICIPANT AGREEMENT (AFFILIATED MEMBERS)

The undersigned "LCH Member" is a Member of the London Clearing House ("LCH") and a Clearing Member of the London International Financial Futures and Options Exchange ("LIFFE"). The undersigned "CME Member" is a Clearing Member of the Chicago Mercantile Exchange ("CME"). LCH Member hereby elects to become a Cross-Margining Participant of LCH, and CME Clearing Member hereby elects to become a Cross-Margining Participant of CME, for purposes of the Cross-Margining Arrangement between LCH, LIFFE and CME. LCH Member agrees to be bound by the LCH Rules applicable to Cross-Margining Participants, CME Clearing Member agrees to be bound by the CME Rules applicable to Cross-Margining Participants, and LCH Member and CME Clearing Member both agree to be bound by the provisions of the Cross-Margining Agreement between LCH, LIFFE and CME (the "Cross-Margining Agreement"), as any of the foregoing may be in effect from time to time, a copy of each of which Member has reviewed. Without limiting the generality of the foregoing:

1. LCH Member agrees that all of its positions, margin deposits and other property in the possession or subject to the control of LCH ("LCH Member's Margin") shall be applied to satisfy any obligation or indebtedness that Member shall have to LCH pursuant to the Cross-Margining Agreement, including but not limited to any Reimbursement Obligation that may arise from a guaranty payment that LCH may make to the CME pursuant to Section 7 of the Cross-Margining Agreement. After such obligation or indebtedness is satisfied by application of LCH Member's Margin, and subject to any other claim that LCH may have against LCH Member, LCH Member shall be entitled only to a payment of the value remaining in LCH Member's Margin after such satisfaction. LCH may also exercise any right of recoupment or setoff that it may have against the LCH Member's Margin. To the extent that the LCH Member has any rights in LCH Member's Margin, LCH Member's Margin shall also be subject to the security interest of LCH as set forth in the LCH Rules and in the Cross-Margining Agreement.
2. CME Member agrees that all of its positions, margin deposits and other property in the possession or subject to the control of CME ("CME Member's Margin") shall be applied to satisfy any obligation or indebtedness that Member shall have to CME pursuant to the Cross-Margining Agreement, including but not limited to any Reimbursement Obligation that may arise from a guaranty payment that CME may make to the LCH pursuant to Section 7 of the Cross-Margining Agreement. After such obligation or indebtedness is satisfied by application of CME Member's Margin, and subject to any other claim that CME may have against CME Member, CME

Member shall be entitled only to a payment of the value remaining in CME Member's Margin after such satisfaction. CME may also exercise any right of recoupment or setoff that it may have against the CME Member's Margin. To the extent that the CME Member has any rights in CME Member's Margin, CME Member's Margin shall also be subject to the security interest of the CME as set forth in the CME Rules and in the Cross-Margining Agreement.

This agreement may be terminated in accordance with the provisions of the Cross-Margining Agreement. Terms used in this agreement that are defined in the Cross-Margining Agreement shall have the same meaning in this agreement.

LCH Member and CME Clearing Member each represent and warrant to LCH and each CME that they are Affiliates of one another as defined in the Cross-Margining Agreement. LCH Member and CME Clearing Member acknowledge and agree that they will be treated as Cross-Margining Affiliates for purposes of the Cross-Margining Arrangement and that, as a result, a default by LCH Member to LCH may result in a loss to CME Clearing Member, and a default by CME Clearing Member to CME may result in a loss to LCH Member.

**LCH MEMBER/LIFFE CLEARING MEMBER**

Name: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

**CME CLEARING MEMBER**

Name: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

## APPENDIX D

### CME Clearing Firm XYZ

#### Without Cross-Margining:

Eurodollar risk requirement	\$25,000,000
Libor risk requirement	\$5,000,000
Spread Credit	\$4,000,000
Total Requirement	\$26,000,000

Total Eurodollar requirement (Eurodollar – Credit)	\$23,000,000
Total Libor requirement (Libor – Credit)	\$3,000,000

#### With Cross-Margining:

Eurodollar risk requirement	\$25,000,000
Libor risk requirement	\$5,000,000
Spread Credit	\$10,000,000
Total Requirement	\$20,000,000

Total Eurodollar requirement (Eurodollar – Credit)	\$15,000,000
Total Libor requirement (Libor – Credit)	\$5,000,000

Cross-Margin Savings            \$6,000,000

### LCH Clearing Firm XYZ

#### Without Cross-Margining:

Euribor risk requirement	\$20,000,000
Eurosterling risk requirement	\$6,000,000
Spread Credit	\$2,000,000
Total Requirement	\$24,000,000

Total Euribor requirement (Euribor – Credit)	\$19,000,000
Total Eurosterling req. (Libor – Credit)	\$5,000,000

#### With Cross-Margining:

Euribor risk requirement	\$20,000,000
Eurosterling risk requirement	\$6,000,000
Spread Credit	\$9,000,000
Total Requirement	\$17,000,000

Total Euribor requirement (Euribor – Credit)	\$11,000,000
Total Eurosterling req. (Libor – Credit)	\$6,000,000

Cross-Margin Savings            \$7,000,000

## APPENDIX E

On normal business days, the CME will transfer data following its ITD cycle and RTH cycle to the LCH. The normal time for the file transfer will be 1:00 p.m. Chicago time for the ITD file and 11:00 p.m. for the RTH file. The LCH will also transfer its RTH cycle data to the CME. The normal time for that file transfer is 9:00 p.m. London time. The following information will be contained in that file:

The firm #  
Commodity  
Net Positions  
Allocated Positions  
Credit Savings  
Spreads formed



## APPENDIX F

CME ITD settlement bank notification - 12:40 p.m. Chicago time  
CME RTH settlement bank notification - 11:30 p.m. Chicago time  
LCH RTH settlement bank notification - 9:00 a.m. London time

In addition to the settlement times set forth above, either Clearing Organization may run additional Margin cycles as needed based upon market volatility. In the event that a Clearing Organization runs an additional Margin cycle, it shall provide reasonable notification to the other Clearing Organization.

## APPENDIX G

### CME Holidays

Dr. Martin Luther King Jr. Day  
Good Friday  
Columbus Day  
Veterans' Day

### LCH Holidays

New Year's Day  
Good Friday  
Easter Monday  
Christmas Day  
Boxing Day

## CROSS-MARGINING AGREEMENT

This Cross-Margining Agreement (the "Agreement") is entered into this \_\_\_\_ day of \_\_\_\_\_, 1999, by the Chicago Mercantile Exchange ("CME"), an Illinois not-for-profit corporation located in the United States ("US"), the London Clearing House Limited ("LCH"), a Recognized Clearing House located in the United Kingdom ("UK"), and LIFFE Administration and Management ("LIFFE A&M"), a Recognized Investment Exchange located in the UK.

### RECITALS

A. CME acts as the clearing organization for certain futures contracts and options on futures contracts that are traded on one or more markets that have been designated as contract markets for such contracts by the Commodity Futures Trading Commission (the "CFTC") pursuant to the Commodity Exchange Act, as amended (the "CEA").

B. LCH is a Recognized Clearing House under the Financial Services Act 1986 (the "Act") and acts, *inter alia*, as a clearing organization for certain futures contracts and options on futures contracts traded on more than one exchange and which is supervised by the Financial Services Authority (the "FSA").

C. LIFFE A&M is a Recognized Investment Exchange under the Act, and administers a futures and options market known as the London International Financial Futures and Options Exchange ("LIFFE"). As such, it is supervised by the FSA, and is one of the exchanges whose futures contracts and options on futures contracts are cleared by LCH.

D. CME, LCH (CME and LCH are referred to herein individually as a "Clearing Organization" and collectively as "Clearing Organizations") and LIFFE desire to enter into this Agreement whereby (i) entities that are Clearing Members of both CME and LCH and LIFFE (as defined in Clause 1 of this Agreement), and (ii) Clearing Members of one Clearing Organization that have an Affiliate (as defined in Clause 1 of this Agreement) that is a Clearing Member of the other such Clearing Organization, may elect to become Cross-Margining Participants and to have their margin obligations in respect of positions in futures contracts and options on futures contracts in Eligible Products in their proprietary accounts at CME offset against their margin obligations in respect of positions in futures contracts and options on futures contracts in Eligible Products in their proprietary accounts at LCH, and vice versa, to the extent permitted under this Agreement.

E. In order to facilitate such a Cross-Margining Arrangement, CME and LCH desire to establish procedures whereby CME will guarantee certain obligations of a Cross-Margining Participant to LCH, and LCH will guarantee certain obligations of a Cross-Margining Participant to CME, such guaranties to be collateralized by the positions and Margin of such Cross-Margining Participant held by the guarantor.

F. It is understood that CME is currently a party to other cross-margining agreements and may enter into additional cross-margining agreements in the future which may include Eligible Products and that LIFFE and LCH while not currently party to any such other agreements, may wish to enter into one or more cross-margining agreements in the future. Such other agreements shall not affect the obligations of the parties to this Agreement. Except as otherwise required under this Agreement, any deficiency of Margin attributable to any such agreement or other agreements shall not remove payment obligations under this Agreement nor trigger payment obligations under this Agreement. It is understood that, in making a request for payment under the terms of this Agreement, either Clearing Organization shall demonstrate the impact of any other agreement or agreements in respect of the Eligible Products on its Net Loss.

### AGREEMENTS

In consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. Definitions. In addition to the terms defined above, certain other terms used in this Agreement shall be defined as follows:

"Affiliate" means, when used in respect of a particular Clearing Member, a Clearing Member of the other Clearing Organization who directly or indirectly controls such particular Clearing Member, or who is directly or indirectly controlled by or under common control with such particular Clearing Member. Ownership of 10% or more of the common stock of the relevant entity will be deemed control of that entity for purposes of this definition.

"Available Margin" means that amount of margin deposits which support Eligible Positions. In the case of either of CME or LCH, "Available Margin" shall not include funds or property to the extent that such funds or property may not lawfully be applied by such Clearing Organization to reduce a Net Loss or increase a Net Surplus (as such terms are defined in Section 7 below) without violating any law, regulation or agreement by which such Clearing Organization is legally bound.

"Business Day" means, a day on which trading in an Eligible Product is conducted and on which CME or LCH conduct money settlements or any other day as may be agreed upon from time to time by the parties.

"Clearing Member" means any firm which is both a clearing member of LIFFE and a member of LCH or any clearing member firm of CME.

"Clearing Organization" means either CME or LCH.

"Cross-Margining Affiliate," as used in respect of a Cross-Margining Participant of a particular Clearing Organization, means an Affiliate of such Cross-Margining Participant that is a Cross-Margining Participant of another Clearing Organization.

"Cross-Margining Arrangement" means the arrangement between CME and LCH and LIFFE as set forth in this Agreement.

"Cross-Margining Participant" means a Clearing Member that has become a participant in the Cross-Margining Arrangement as between CME and LCH and LIFFE under the terms of this Agreement. The term "Cross-Margining Participant" shall, where the context requires, refer collectively to the Cross-Margining Participant and its Cross-Margining Affiliate, if any.

"Cross-Margining Reduction" means the amount by which a Cross-Margining Participant's margin requirement at one Clearing Organization may be reduced as a result of the Cross-Margining Arrangement. The phrase "Combined Cross-Margining Reduction" means the sum of the Cross-Margining Reductions for a Cross-Margining Participant at and CME and LCH.

"Default Fund" means a fund maintained by LCH consisting of required contributions by Clearing Members that is maintained for the purpose of securing the obligations of the depositing Clearing Member to LCH (in relation to the Default Fund) and ensuring the financial integrity of the LCH. The term "Default Fund" shall include any right or recourse of LCH to any insurance cover or analogous arrangement for such purposes.

"Effective Date" shall mean the date established pursuant to Section 15(j) of this Agreement.

"Eligible Contract" means the minimum trading unit of an Eligible Product.

"Eligible Position" means an amount of a particular Eligible Product held by a Cross-Margining Participant in net long or short futures and options on futures contracts.

"Eligible Product" means certain CME futures contracts or options on futures contracts traded on and cleared by CME, and certain LIFFE futures contracts or options on futures contracts traded on LIFFE and cleared by LCH, as identified on Appendix A hereto and any other products mutually agreed to in the future between the parties.

"Guaranty" means the obligation of CME to LCH, or of LCH to CME, as in effect at a particular time with respect to a particular Cross-Margining Participant as set forth in Sections 8A and 8B of this Agreement. The term "Cross-Guaranties" refers to both the Guaranty of CME to LCH and the Guaranty of LCH to CME.

"Margin" means initial or original Margin ("Performance Bond") or other collateral, whether in the form of cash, securities, letters of credit or other assets, required to be held or actually held by either Clearing Organization to secure the obligations of a Cross-Margining Participant.

"Mark-to-Market Payment" as used in respect of an Eligible Position means a "variation" payment or other payment made by a Clearing Member to a Clearing Organization or vice versa representing the difference between (i) either the current market price of such Eligible Position or, if the Eligible Position has been closed out, the price(s) at which it was closed out, and (ii) either

the price of the Eligible Position upon which the most recent Market-to-Market Payment was based or, if there was none, the price at which the Eligible Position was entered into.

"Maximization Payment" means a payment that will occur after loss-sharing at the Offsetting Position level across all limited and unlimited loss-sharing cross-margining agreements and any return of a Guaranty Payment occurs as described in Section 7(g).

"Net Liquidating Value" means the sum of an account's ledger balance, open trade equity and net option value.

"Net Loss" means any loss incurred in the liquidation of a Cross-Margining Participant's Offsetting Positions and application of Available Margin as determined in accordance with Section 7 of this Agreement.

"Net Surplus" means any surplus realized after the liquidation of a Cross-Margining Participant's Offsetting Positions and application of Available Margin as determined in accordance with Section 7 of this Agreement.

"Offsetting Position" means an amount of Eligible Product held by a Cross-Margining Participant in net long or short futures and options on futures contracts that forms an intermarket spread between CME and LCH.

"Proprietary Account Deficit" means any deficit realized in the liquidation of all of a Cross-Margining Participant's proprietary positions, both cross-margined and non-cross-margined, after the application of Margin and any deficit realized from other cross-margining agreements.

"Proprietary Account Surplus" means any surplus realized in the liquidation of all of a Cross-Margining Participant's proprietary positions both cross-margined and non-cross-margined and after the application of Margin and any surplus received from other cross-margining agreements (to the extent such surplus may be applied without violating any law, regulation or agreement by which such Clearing Organization is legally bound).

"Proprietary Portfolio" means all of a Cross-Margining Participant's proprietary positions both cross-margined and non-cross-margined.

"Reimbursement Obligation" means the obligation, as set forth in Section 7(e), of a Cross-Margining Participant to a Clearing Organization that is obligated to make a payment on behalf of such Cross-Margining Participant or its Cross-Margining Affiliate pursuant to a Guaranty.

"Rules" means the By-Laws, Policies, Procedures and Rules of CME ("CME Rules"), the Regulations, Rules and Procedures of LCH ("LCH Regulations") and the By-Laws, Rules, Regulations and Procedures of LIFFE ("LIFFE Rules") as they may be in effect from time to time.

"Security Deposit Fund" means a fund maintained by CME consisting of required contributions by Clearing Members and other funds that is maintained for the purpose of securing the obligations of the depositing Clearing Member to CME (in relation to the Security Deposit Fund) and ensuring the financial integrity of the CME. The term "Security Deposit Fund" shall include any right of the CME to assess Clearing Members for such purposes.

2. Participation. (a) CME, LCH and LIFFE shall determine which of its Clearing Members is eligible to become a Cross-Margining Participant; provided that in order to become a Cross-Margining Participant, a Clearing Member of either CME or LCH must be, or have an Affiliate that is, a Clearing Member of the other Clearing Organization that such other Clearing Organization has determined to be eligible to be a Cross-Margining Participant. A common member of CME and LCH shall become a Cross-Margining Participant upon acceptance by CME and LCH of an agreement in the form of Appendix B hereto. A member of CME and its Affiliate that is a member of LCH shall become Cross-Margining Participants and Cross-Margining Affiliates of one another upon acceptance by CME and LCH of an agreement in the form of Appendix C hereto. Either CME or LCH may require a Cross-Margining Participant to provide an opinion of counsel as to the enforceability of the provisions of this Agreement and the Rules of the applicable Clearing Organization with respect to such Cross-Margining Participant and its Cross-Margining Affiliate, if any, and where such opinion is provided it shall be shared with the other Clearing Organization.

(b) CME, LCH or LIFFE may terminate the participation under this Cross-Margining Agreement of a particular Cross-Margining Participant (and its Cross-Margining Affiliate, if any) upon two Business Days' prior written notice to the other parties and such Cross-Margining Participant (and its Cross-Margining Affiliate, if any). A Cross-Margining Participant may terminate its participation under this Cross-Margining Agreement (and that of its Cross-Margining Affiliate, if any) upon two Business Days' prior written notice to CME and LCH and LIFFE, if applicable; provided, however, that no such termination shall be effective so long as any Guaranty with respect to that Cross-Margining Participant or its Cross-Margining Affiliate is outstanding between and CME and LCH.

3. Positions Subject to Cross-Margining. All positions in Eligible Products maintained by a Cross-Margining Participant in its proprietary account(s) at CME and all positions in Eligible Products maintained by a Cross-Margining Participant in its proprietary account(s) at LCH shall be deemed to be Eligible Positions for purposes of this Agreement as soon as all necessary regulatory approvals have been obtained.

4. Inter-Commodity Credit. For purposes of calculating the Cross-Margining Reduction for Eligible Positions at CME and LCH in accordance with Section 5 of this Agreement, CME and LCH shall jointly agree to the inter-commodity spread credit applicable to Eligible Products and shall apply that credit in their margining of Cross-Margining Participants. A review of the currently applicable spread credit shall take place not less than each quarter at the request of either Clearing Organization. In the event of conflict concerning the spread credit, the lower of the two rates shall be applied.

5. Calculation of the Cross-Margining Reduction. (a) On each Business Day, CME and LCH shall each run one or more margin cycles as each Clearing Organization's business needs require. Such margin cycles need not occur simultaneously. At the conclusion of each margin cycle, the processing Clearing Organization shall transmit to the other Clearing Organization information on the Eligible Positions allocated to it for use in its next margin cycle, the margin savings (Guaranty amount) output of the processing Clearing Organization's current margin cycle and the total net unspread position in Eligible Products for each Cross-Margining Participant. When a Clearing Organization runs a margin cycle, it will first calculate the Margin requirement for the Cross-Margining Participant's account by only including internal positions. The processing Clearing Organization will then recalculate the Margin requirement for the Cross-Margining Participant's account including both internal positions and positions previously allocated to it from the other Clearing Organization, per Eligible Product per calculation. The total Cross-Margining Reduction will be the difference between the calculations stated in the previous two sentences. The calculations described above will be performed using the spread rates and spread priorities described in Section 4 of the Agreement. Modifications to the rates and priorities contained in Section 4 will be discussed and agreed to by the Clearing Organizations and notification sent to Cross-Margining Participants. The CME shall use its SPAN<sup>®</sup> margining program and LCH shall use its London SPAN<sup>®</sup> margining program to make such calculations. If an Eligible Product is cross-marginable with more than one other contract across more than one other Clearing Organization (or clearing organization), a particular Eligible Position may only be allocated to a single Clearing Organization (or clearing organization) and Eligible Positions will be allocated first to available positions coming in from each of the other Clearing Organizations (or clearing organizations). Allocation of Eligible Positions shall, where possible, be accomplished in a manner that maximizes the cross-margin benefits for Cross-Margining Participants. CME shall inform LCH, and LCH shall inform CME, of the exact method used to calculate its margin amounts and if any subsequent changes in such method of calculation no less than 30 days prior to implementation of such change.

(b) The Cross-Margining Reduction for each of CME and LCH shall be the actual reduction in the Margin requirement of the Cross-Margining Participant(s) it margins. The CME and LCH agree to jointly monitor the relative size of the Cross-Margining Reductions and agree to work together in good faith to modify the calculation in the event of any significant disparity between the Clearing Organizations Cross-Margining Reductions. (See Appendix D)

(c) Notwithstanding any other provision of this Agreement, each Clearing Organization may unilaterally determine its Margin requirements in respect of a Cross-Margining Participant's Eligible Positions taking into consideration market conditions, the financial condition of a Cross-Margining Participant (or its Cross-Margining Affiliate), the size of positions carried by a Cross-Margining Participant (or its Cross-Margining Affiliate) or any other factor or circumstance deemed by it to be relevant. CME and LCH shall each determine to its own satisfaction that the Margin it requires in respect of a Cross-Margining Participant's Eligible Positions, together with the Guaranty of the other Clearing Organization, is adequate to protect itself. However, any such unilateral determination of a Clearing Organization's Margin requirements, which is not in accordance with Sections 5(a) and 5(b) above, may only result in an increase to a Cross-Margining Participant's Margin requirement. In the event that a Margin requirement is unilaterally modified by a Clearing Organization, such Clearing Organization shall provide notice of the change to the other Clearing



Organization. The Guaranty amount that a Clearing Organization is required to pay to the other Clearing Organization pursuant to this Agreement shall be reduced to the extent that any or all of a Margin Reduction is not passed on to a Cross-Margining Participant. Neither Clearing Organization shall have liability to the other Clearing Organization or to any other person based solely upon an allegation that any Margin calculation made by such Clearing Organization was inaccurate or inadequate.

6. Daily Procedures for Exchange of Cross-Margining Data. (a) All daily settlements of funds and securities, including margin payments, with respect to Eligible Positions and transactions relating to Eligible Positions shall be conducted on each Business Day in accordance with the ordinary settlement procedures of each Clearing Organization; provided, however, that CME and LCH shall establish procedures, including time frames, to exchange on each Business Day such information as may reasonably be required in order to calculate the Cross-Margining Reduction for each Cross-Margining Participant and to ensure that both CME and LCH are informed of the amount of such Cross-Margining Reduction. CME and LCH agree that each will include in such exchange of information such other settlement information as the other Clearing Organization may reasonably request in relation to the Cross-Margining Arrangement. The initial procedures and time frames for such exchange of information are set forth on Appendix E to this Agreement. In addition to the time frames set forth in Appendix E, the Clearing Organizations may release excess Margin or security deposit collateral to participating Clearing Members in accordance with such Clearing Organization's normal procedures. In the event that a Clearing Organization is unable to exchange the information necessary for the other Clearing Organization to calculate the Cross-Margining Reduction due to systems or operational malfunctions, the Clearing Organizations shall agree to either use the prior day's information to calculate the Cross-Margin Reduction or have no Cross-Margin Reduction for such day. If the parties are unable to agree on one of the choices stated above, the Clearing Organization(s) shall use the prior day's information to calculate the Cross-Margin Reduction. However, to the extent that using the prior day's information to calculate the Cross-Margining Reduction will create a financial hardship on a Clearing Organization, such Clearing Organization shall have the discretion to not effectuate a Cross-Margining Reduction for such day. Notwithstanding the foregoing, neither CME nor LCH shall make payment to a Cross-Margining Participant with respect to any Mark-to-Market payment, original margin, initial margin, Security Deposit or Default Fund payment or other margin or settlement payment due to such Cross-Margining Participant with respect to Eligible Positions prior to the times specified therefor in Appendix F on any Business Day. Notwithstanding any other provision of this Agreement, the CME shall not be prevented from conducting its intraday settlement variation cycles. In the event that either CME or LCH is notified prior to such time on any Business Day that the Cross-Margining Participant or its Cross-Margining Affiliate has failed to make any margin or settlement payment due to the other Clearing Organization, then the Clearing Organization receiving such notice shall withhold any such margin or settlement payment otherwise due to its Cross-Margining Participant until such time as the Clearing Organization receiving the notice has determined whether or not to suspend its Cross-Margining Participant or liquidate such Cross-Margining Participant's positions.

(b) On any day that is a Business Day for CME and not for LCH or vice versa, the Cross-Margining Reduction and the Cross-Guaranties as determined on the immediately preceding Business Day shall remain in effect, and it shall be the responsibility of the Clearing

Organization that is open for business on such day to adjust its Margin requirements with respect to Cross-Margining Participants to cover such Cross-Margining Participants' obligations to the open Clearing Organization, including its Reimbursement Obligations to the open Clearing Organization as a result of any payment which may be made by the open Clearing Organization under its Guaranty.

Days that are holidays and therefore not Business Days for CME and for LCH are set forth on Appendix G. The parties may mutually agree to modify these terms in order to adequately satisfy their business needs.

7. Suspension and Liquidation of a Cross-Margining Participant. (a) Either CME or LCH may at any time exercise any rights under its Rules to terminate, suspend or otherwise cease to act for a Cross-Margining Participant (a "Defaulting Member") and to liquidate the positions and Margin of such Cross-Margining Participant. Upon such event, the terminating or suspending Clearing Organization shall immediately by telephone or in person, and thereafter in writing, notify the other Clearing Organization of such event and the other Clearing Organization shall exercise any rights under its Rules to terminate, suspend or otherwise cease to act for the Defaulting Member.

Both such Clearing Organizations shall promptly liquidate (through market transactions or other commercially reasonable means) the Eligible Positions and Available Margin of such Defaulting Member (or its Cross-Margining Affiliate, as the case may be) at such Clearing Organizations except to the extent that CME and LCH mutually agree to delay liquidation of some or all of such Eligible Positions and Related Margin or except to the extent that either determines unilaterally not to do so as provided below. CME and LCH shall use reasonable efforts to coordinate the liquidation of Eligible Positions so that offsetting or hedged positions at CME and LCH can be closed out simultaneously. Either Clearing Organization may have reason not to liquidate Eligible Positions and Available Margin of a Cross-Margining Affiliate of a Defaulting Member of the other Clearing Organization. In such circumstances, the Cross-Margining arrangements in relation to that Affiliate will automatically terminate and the Clearing Organization of which the Affiliate is a member shall meet in full all obligations to the terminating or suspending Clearing Organization in accordance with this Agreement. Any funds received by a Clearing Organization as a result of the liquidation of the Eligible Positions and Available Margin of a Cross-Margining Participant pursuant to this Section 7 shall be applied in accordance with the following paragraphs of this Section.

(b) In order to establish whether a Guaranty Payment must be made by one Clearing Organization to the other, the Clearing Organizations shall determine if a Net Surplus or Net Loss on Offsetting Positions exists. The Clearing Organizations shall first determine if a net surplus or net loss exists with respect to Eligible Positions by liquidating the positions and Margin of the Defaulting Member. In liquidating positions and Margin of the Defaulting Member, CME and LCH shall net the following amounts with respect to Eligible Positions: (i) any undistributed Mark-to-Market payments of the Defaulting Member's Eligible Positions, plus the change in Net Liquidating Value in the period between the last "paid" margin cycle and the close-out the Defaulting Member's Eligible Positions (included in such calculation are new option premiums and variation margin associated with new business; excluded from such calculation are all payments in respect of cross-margining programs with other clearing organizations, the deduction of administrative fees and costs associated with the default, the addition of interest payment, rebates and delivery payment); (ii) proceeds from the liquidation of Margin collateral associated with Eligible Positions, including the asset value of long option value, if applicable; and (iii) the allocation of Margin collateral excess or deficit to an Eligible

Position based on such Eligible Position's contribution to the total Margin requirement of the Defaulting Member. Such net amount of clauses 7(b)(i), (ii) and (iii) shall be apportioned to the Offsetting Positions in proportion to such Offsetting Positions contribution to the total delta equivalent position in the Eligible Positions at the most recent margin cycle prior to the event of default. In the event that the net of clauses 7(b)(i), (ii) and (iii) is a positive number, a Net Surplus will result. In the event that the net of clauses 7(b)(i), (ii) and (iii) is a negative number, a Net Loss will result.

(c) A Guaranty Payment between the Clearing Organizations shall be "triggered" in the circumstances set forth in section 7(d) below only if a Net Loss on Offsetting Positions of a Defaulting Member occurs. If each Clearing Organization cross-margins more than one Eligible Product with the other Clearing Organization, Offsetting Positions between such Eligible Products shall be separately calculated to determine if a Guaranty Payment is required with respect to such Offsetting Positions. If applicable, the Clearing Organizations shall net Guaranty Payments among Offsetting Positions. In liquidating positions and Margin of their respective Cross-Margining Participant(s), CME and LCH shall each determine as soon as practicable but in any event within seven (7) Business Days following a suspension or termination, the Net Loss or Net Surplus on Offsetting Positions at that Clearing Organization. The calculation of the Net Loss or Net Surplus on Offsetting Positions by CME and LCH shall be independent of, and not include, any other cross-margining programs either Clearing Organization is currently participating in or may in the future participate in. CME shall notify LCH and LCH shall notify CME of the amount of its own Net Loss or Net Surplus on Offsetting Positions and, in such detail as may reasonably be requested, the means by which such Net Loss or Net Surplus on Offsetting Positions was calculated.

(d) If neither CME nor LCH has a Net Loss on Offsetting Positions, no Guaranty Payment will be due to either Clearing Organization in respect of the Guarantees between CME and LCH referred to in Sections 8A and 8B below. If CME and LCH each has a Net Loss on Offsetting Positions, the Guaranty Payments between the Clearing Organizations shall be netted. The Clearing Organization with the smaller Net Loss on Offsetting Positions, if any, shall then make a Guaranty Payment to the other Clearing Organization that will equalize the Net Loss on Offsetting Positions between the Clearing Organizations. If such Guaranty Payment made by the paying Clearing Organization ("Guarantor") would result in the receiving Clearing Organization ("Beneficiary") obtaining a surplus in the liquidation of the Offsetting Positions, such Guaranty Payment shall be capped at the amount of the Beneficiary's Net Loss on Offsetting Positions. If either the CME or LCH has a Net Loss on Offsetting Positions, and the other Clearing Organization has a Net Surplus equal to or exceeding such Net Loss, the Guarantor shall pay the Beneficiary an amount equal to the sum of the Beneficiary's Cross-Margining Reduction and the Guarantor's remaining Net Surplus on Offsetting Positions. If either the CME or LCH has a Net Loss on Offsetting Positions and the other Clearing Organization has a Net Surplus on Offsetting Positions that is less than such Net Loss, the Clearing Organization with such Net Surplus shall pay the Beneficiary an amount equal to the lesser of the following: (i) the Beneficiary's Net Loss on Offsetting Positions, or (ii) the Beneficiary's Cross-Margining Reduction. If LCH is obligated to make a payment to CME, or CME is obligated to make a payment to LCH, in respect of a Guaranty, the Clearing Organization obligated to make such payment shall do so promptly and in any event not later than the fifth Business Day next following such determination. If at any time within six months following the default of a Cross-

Margining Participant, either Clearing Organization determines that any amount paid to the other Clearing Organization in respect of a Guaranty was incorrect either because of errors in calculation at the time or because new information relevant to the determination of such amount was discovered after the determination of such amount, the Clearing Organizations shall cooperate with one another to recalculate the appropriate amount of any Guaranty payments to be made and shall make any necessary payments to one another to correct the error within five Business Days following completion of such recalculation.

(e) In the event that a Guarantor becomes obligated to make a Guaranty Payment to the Beneficiary in respect of the obligation of a Defaulting Member or its Cross-Margining Affiliate to the Beneficiary, the Defaulting Member shall thereupon immediately be obligated, whether or not the Guarantor has then made the Guaranty payment to the Beneficiary, to reimburse the Guarantor for the amount of the Guaranty payment as determined by the Guarantor, and the Guarantor shall be subrogated to the rights of the Beneficiary against the Defaulting Member or its Cross-Margining Affiliate. Such obligation (the "Reimbursement Obligation") shall be due immediately upon a demand by the Guarantor to the Defaulting Member specifying the amount of such obligation. In the event that the final amount of the Guaranty Payment is greater or less than the amount originally determined, the Reimbursement Obligation shall be adjusted accordingly and payment of the difference shall be made between the Guarantor and the Defaulting Member. It is understood and agreed that, in the event that a Bankruptcy proceeding is commenced in the U.S. involving a Cross-Margining Participant or its US Cross-Margining Affiliate, the Bankruptcy laws of the U.S. shall apply and any payment between the Guarantor and the Beneficiary with respect to the Guaranty, and any payment between the Defaulting Member and the Guarantor, is a "margin payment" as defined in Section 761 of the US Bankruptcy Code. In the event that the Guarantor had a Net Surplus in respect of the Defaulting Member, such Net Surplus shall constitute "cash, securities, or other property held by or due from" the Guarantor within the meaning of Section 362 of the US Bankruptcy Code, and the Reimbursement Obligation of the Defaulting Member shall be netted and setoff against such Net Surplus, and any remaining Net Surplus shall be returned to the Defaulting Member or its representative or otherwise disposed of in accordance with the Rules of the Guarantor.

It is understood and agreed that, in the event that an Insolvency proceeding is commenced in the UK involving a Cross-Margining Participant or its UK Cross-Margining Affiliate, the Insolvency laws of the UK shall apply including Section 159 of the Companies Act 1989 and the Default Rules of LCH.

In the event that a Bankruptcy proceeding and an Insolvency proceeding are commenced at the same time, in the US and UK respectively, involving a Cross-Margining Participant and its Cross-Margining Affiliate, if applicable, the laws of the jurisdiction that is determined to be the "primary forum" shall control and the laws of the other jurisdiction shall be "ancillary."

(f) A Guaranty Payment shall be returned to the Guarantor by the Beneficiary after liquidation of the Defaulting Member's entire Proprietary Portfolio if the Beneficiary has a Proprietary Account Surplus after making required guaranty payments, if any, to other clearing organizations pursuant to other cross-margining programs. Any such Guaranty Payments described in the preceding sentence shall be returned by the Beneficiary to the Guarantor on a *pro rata* basis, if necessary, to prevent the Beneficiary from incurring a Proprietary Account Deficit. A Beneficiary required to return any or all of a Guaranty Payment to a Guarantor shall not incur a Proprietary Account Deficit as a result of returning such Guaranty Payment.

(g) In the event that a Clearing Organization has a Proprietary Account Deficit and the other Clearing Organization has a Proprietary Account Surplus after taking into consideration all of the loss-sharing obligations stated above in this Section 7, the Clearing Organization with a surplus will make a Maximization Payment to the other Clearing Organization up to the maximum amount associated with the Offsetting Positions of such Clearing Organization if the Guarantor has not already made a payment equal to such maximum amount. For purposes of the proceeding sentence, the Maximization Payment associated with Offsetting Positions is the sum of the Beneficiary's Cross-Margining Reduction and the Guarantor's Net Surplus on Offsetting Positions. If the Guarantor incurred a Net Loss on Offsetting Positions, the Maximization Payment would be equal to the Beneficiary's Cross-Margining Reduction plus an amount that would equalize the Net Losses on Offsetting Positions of both Clearing Organizations. A Maximization Payment will not cause the Guarantor to incur a Proprietary Account Deficit. If a Guarantor is a participant in other cross-margining arrangements and there are other clearing organizations with a proprietary account deficit at the time a Maximization Payment is to be made, the Guarantor will make Maximization Payments to all such clearing organizations to the extent its Proprietary Account Surplus is insufficient to satisfy all such proprietary account deficits, the Guarantor shall prorate such payments to other clearing organizations based upon the Cross-Margining Reduction it last guaranteed to such other clearing organizations. A Guarantor shall not pay out any Proprietary Account Surplus that it is legally prohibited from paying. Each Clearing Organization may, in its discretion, apply internally, Proprietary Account Surpluses to customer or client deficits prior to making a Maximization Payment. (Attached as Appendix H are examples that illustrate how the above loss-sharing provisions will operate.)

8A. Guaranty of CME to LCH. (a) CME hereby unconditionally guaranties the prompt payment when due (whether at maturity, by declaration, by demand or otherwise), and at any and all times thereafter, of all indebtedness and other obligations of every kind and nature of each Cross-Margining Participant or its Cross-Margining Affiliate (hereafter referred to, in either case, as LCH's Debtor) to LCH, direct or indirect, absolute or contingent, due or to become due, whether now or hereafter existing arising from or related to Offsetting Positions or the liquidation thereof subject only to the amount determined in accordance with Section 7 of this Agreement (all such indebtedness and other obligations being hereinafter collectively called the "Indebtedness to LCH"). CME further agrees to pay any and all reasonable costs and expenses (including counsel fees and expenses) incurred by LCH in enforcing its rights against CME under this Section 8A.

(b) The liability of CME under this Guaranty shall be unconditional and irrespective of (i) any lack of enforceability of any Indebtedness to LCH or any guaranty thereof; (ii) any change of the time, manner or place of payment, or any other term, of any Indebtedness to LCH or any guaranty thereof; (iii) any taking, exchange, subordination, release or non-perfection of any collateral securing payment of any Indebtedness to LCH; (iv) the acceptance of additional parties or the release of anyone primarily or secondarily liable on the Indebtedness to LCH; (v) any law, rule, regulation or order of any jurisdiction or any governmental, regulatory or administrative authority of any kind, whether now or hereafter in effect, affecting any term of any Indebtedness to LCH or any guaranty or security therefor or LCH's rights with respect thereto; and (vi) any other circumstance which might otherwise constitute a defense available to, or a discharge of, LCH's Debtor or a

guarantor. CME waives promptness, diligence, and notices with respect to any Indebtedness to LCH and this Guaranty and any requirement that LCH exhaust any right or take any action against LCH's Debtor or any other person or entity or with respect to any guaranty or collateral security therefor.

CME acknowledges that this Guaranty is a guaranty of payment not collection and that CME has made and will continue to make its own investigations with respect to all matters regarding LCH's Debtor.

(c) In the event that CME makes any payment to LCH under this Guaranty, CME shall be subrogated to the rights of LCH against the Cross-Margining Participant or its Cross-Margining Affiliate in respect of whose Indebtedness to LCH such Guaranty payment was made and to the rights of LCH against any other guarantor or other third party with respect to such Indebtedness to LCH. However, notwithstanding the CME's subrogation rights hereunder, the Defaulting Member is directly required under the CME Rules to satisfy its Reimbursement Obligation to the CME.

(d) All of LCH's rights and remedies provided for herein or otherwise available to CME at law or otherwise, and all of the CME's direct legal rights against the Defaulting Member, shall be cumulative to the extent permitted by law.

8B. Guaranty of LCH to CME. (a) LCH hereby unconditionally guaranties the prompt payment when due (whether at maturity, by declaration, by demand or otherwise), and at any and all times thereafter, of all indebtedness and other obligations of every kind and nature of each Cross-Margining Participant or its Cross-Margining Affiliate (hereafter referred to, in either case, as CME's Debtor) to CME, direct or indirect, absolute or contingent, due or to become due, whether now or hereafter existing arising from or related to Offsetting Positions or the liquidation thereof subject only to the amount determined in accordance with Section 7 of this Agreement (all such indebtedness and other obligations being hereinafter collectively called the "Indebtedness to CME"). LCH further agrees to pay any and all reasonable costs and expenses (including counsel fees and expenses) incurred by CME in enforcing its rights against LCH under this Section 8B.

(b) The liability of LCH under this Guaranty shall be unconditional and irrespective of (i) any lack of enforceability of any Indebtedness to CME or any guaranty thereof; (ii) any change of the time, manner or place of payment, or any other term, of any Indebtedness to CME or any guaranty thereof; (iii) any taking, exchange, subordination, release or non-perfection of any collateral securing payment of any Indebtedness to CME; (iv) the acceptance of additional parties or the release of anyone primarily or secondarily liable on the Indebtedness to CME; (v) any law, rule, regulation or order of any jurisdiction or any governmental, regulatory or administrative authority of any kind, whether now or hereafter in effect, affecting any term of any Indebtedness to CME or any guaranty or security therefor or CME's rights with respect thereto; and (vi) any other circumstance which might otherwise constitute a defense available to, or a discharge of, CME's Debtor or a guarantor. LCH waives promptness, diligence, and notices with respect to any Indebtedness to CME and this Guaranty and any requirement that CME exhaust any right or take any action against CME's Debtor or any other person or entity or with respect to any guaranty or collateral security therefor. LCH acknowledges that this Guaranty is a guaranty of payment not collection and that LCH has

made and will continue to make its own investigations with respect to all matters regarding CME's Debtor.

(c) In the event that LCH makes any payment to CME under this Guaranty, LCH shall be subrogated to the rights of CME against the Cross-Margining Participant or its Cross-Margining Affiliate in respect of whose Indebtedness to CME such Guaranty payment was made and to the rights of CME against any other guarantor or other third party with respect to such Indebtedness to CME. However, notwithstanding LCH's subrogation rights hereunder, the Defaulting Member is directly required under the LCH Rules to satisfy its Reimbursement Obligation to LCH.

(d) All of CME's rights and remedies provided for herein or otherwise available to LCH at law or otherwise, and all of the LCH's direct legal rights against the Defaulting Member, shall be cumulative to the extent permitted by law.

9. Confidentiality. (a) Except as expressly authorized in this Agreement, each party shall maintain in confidence, and shall not disclose to any third party, any information obtained by it in connection with this Agreement or the transactions or activities contemplated herein with respect to any party or the positions, transactions or financial condition of any Clearing Member ("Confidential Information"). The foregoing shall not apply to: (i) any information which is or becomes generally known to the public, other than through an action or failure to act by such party or Clearing Member, or (ii) the disclosure of Confidential Information to a third party to whom such information was previously known. This Section 9 shall not prohibit any party from furnishing Confidential Information to the CFTC or the FSA or, pursuant to any surveillance agreement or similar arrangement to which such party is a party, to any "self-regulatory organization" within the meaning of the CEA or the Financial Services Act 1986 or to any other government or regulatory body.

(b) In the event that any party is required by subpoena, or by any other order of court, law or regulation to disclose any Confidential Information in the possession of such party, it is agreed that the party which is subject to such requirement shall provide the other parties with prompt notice of such requirement so that the other parties may seek an appropriate protective order and/or waive compliance with the provisions of this Section with respect to such required disclosure. In the event that such other parties determine to seek a protective order, the party subject to the requirement shall cooperate to the extent reasonably requested by the others. It is further agreed that if in the absence of a protective order or the receipt of a waiver hereunder, the party subject to the requirement is nonetheless, in the opinion of its counsel, compelled to disclose such Confidential Information to any tribunal or regulatory agency or else stand liable for contempt or suffer other censure or penalty, such party may produce such Confidential Information without liability under this Section 9.

10. Indemnification. (a) Each of the parties (each, individually an "Indemnitor") shall indemnify, defend and hold harmless the others, its directors, officers, employees and each person, if any, who controls the indemnified party (each an "Indemnified Party") against any Claims and Losses (as defined below) incurred by an Indemnified Party as the result, or arising from allegations, of any act or failure to act by the Indemnitor if such act or failure to act constitutes either (i) gross

negligence on the part of the Indemnitor; or (ii) a material breach of this Agreement, or any obligation undertaken in connection with this Agreement, any Rule of the indemnitor (except to the extent that such Rule is inconsistent with the provisions of this Agreement), or any law or governmental regulation applicable to the Indemnitor.

(b) As used in this Section 10, the term "Claims and Losses" means any and all losses, damages and expenses whatsoever arising from claims of third parties including, without limitation, liabilities, judgments, damages, costs of investigation, reasonable attorney's fees and other expenses and amounts paid in settlement (pursuant to consent of the Indemnitor, which consent shall not be unreasonably withheld) in connection with any action, suit, litigation, claim or proceeding to which an Indemnified Party is made a party defendant, or is threatened to be made such a party.

(c) Promptly after receipt by an Indemnified Party of notice of the commencement of any action or the assertion of any claim against such Indemnified Party, such Indemnified Party shall, if a claim in respect thereof is to be made against the Indemnitors, notify the Indemnitors in writing of the commencement of such action or assertion of such claims, but the omission so to notify the Indemnitors will not relieve the Indemnitors from any liability which it may have to any Indemnified Party except to the extent that the Indemnitors have been prejudiced by the lack of prompt notice and shall in any event not relieve the Indemnitors of any liability which it may have to an Indemnified Party otherwise than under this Section 10. In case any such action is brought against any Indemnified Party, and such party promptly notifies the Indemnitors of the commencement thereof, the Indemnitors will be entitled to participate in, and, to the extent that it may wish, to assume and control the defense thereof, with counsel chosen by it, and, after notice from the Indemnitors to such Indemnified Party of its election so to assume the defense thereof, the Indemnitors will not be liable to such Indemnified Party under this Section 10 for any legal or other expenses subsequently incurred by such Indemnified Party in connection with the defense thereof other than reasonable costs of investigation, but the Indemnified Party may, at its own expense, participate in such defense by counsel chosen by it, without, however, impairing the Indemnitors' control of the defense. In any action in which the named parties include the Indemnitors and one or more Indemnified Parties, the Indemnitors shall have the right to assume control of any legal defenses that are available to them and any of the Indemnified Parties. Notwithstanding the foregoing, in any action in which the named parties include both the Indemnitors and an Indemnified Party and in which the Indemnified Party shall have been advised by its counsel that there may be legal defenses available to the Indemnified Party that are different from or additional to those available to the Indemnitors, the Indemnitors shall not have the right to assume such different or additional legal defenses, and provided further that the Indemnitors shall not, in connection with one action or separate but substantially similar actions arising out of the same general allegations or circumstances, be liable for more than the reasonable fees and disbursements of one separate firm of attorneys for all of the Indemnified Parties for the purpose of conducting such different or additional legal defenses. The Indemnitors may negotiate a compromise or settlement of any such action or claim provided that such compromise or settlement does not require a contribution by, or otherwise adversely affect the rights of, the Indemnified Party.

11. Rules of the Clearing Organizations. CME and LCH each shall propose and use all reasonable efforts to obtain any necessary regulatory approval to adopt and maintain in effect such



Downside Maximisation with Product Level Trigger

1) Neither Clearing

Liquidating Deficit on the Offsetting Positions (Reflects

	<u>NL/NS on</u> <u>Offsetting</u> <u>Contracts</u> <u>Before</u> <u>Payment</u>	<u>Assumption 3)</u> <u>Cross-</u> <u>Margining</u> <u>Reduction</u>	<u>Surplus/Loss</u> <u>on Offsetting</u> <u>Contracts</u> <u>After</u> <u>Payment</u>
CME	10	-40	10
LCH	20	-20	20

Action: No payment as both clearing organisations have a Net Surplus on the Offsetting Positions (regardless of the relative profits and losses on the Offsetting Positions and the Cross-Margining Reduction)

1) Potential Payment Maximization – Proprietary Account Level Loss-sharing Payment  
(Clearing Organization Surplus Exceeds Combined Maximum Payment to Other Clearing Organizations)

	<u>Cross-</u> <u>Margining</u> <u>Reduction</u>	<u>NL/NS on</u> <u>Offsetting</u> <u>Contracts</u> <u>Before</u> <u>Payment</u>	<u>Proprietary</u> <u>Account</u> <u>Surplus/</u> <u>Deficit</u> <u>Excluding</u> <u>Effects of</u> <u>Loss-Sharing</u>	<u>Prior Bi-</u> <u>Lateral Loss-</u> <u>Sharing</u> <u>Payments</u> <u>(Payments</u> <u>Eligible for</u> <u>Forgiveness or</u> <u>Maximization)</u>	<u>Loss-Sharing</u> <u>Payments Under</u> <u>Unlimited Loss-</u> <u>Sharing</u> <u>Agreement</u> <u>(Ineligible for</u> <u>Forgiveness or</u> <u>Maximization)</u>	<u>Proprietary</u> <u>Account</u> <u>S/D After</u> <u>Initial Loss-</u> <u>Sharing</u> <u>Payments</u>	<u>Proprietary</u> <u>Account</u> <u>Level Loss</u> <u>Sharing</u> <u>Payment</u>	<u>Final</u> <u>Surplus/</u> <u>Deficit</u>
CME	-40	10	100	0	-20	80	-70	10
LCH	-20	20	-40	0	0	-40	30	-10
CH2(w/CME)	-30 each	10	-50	0	0	-50	40	-10
OCC/CME	n/a	n/a	-40	0	20	0	0	0

Action: CME paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio; there was no other loss-sharing at the Offsetting Positions level since all CH's had a Net Surplus on the Offsetting Positions. Since CME has a Proprietary Account Surplus greater than the total of the maximum payments allowable to the other clearing houses, the CME makes a portfolio level loss-sharing payment to the other clearing organizations up to the maximum of the sum of each beneficiary clearing organization's Cross-Margining Reduction plus the CME's Net Surplus on the Offsetting Positions cross-margined against that clearing house.

OR

1) Potential Payment Maximization – Proprietary Account Level Loss-sharing Payment  
(Combined Maximum Payments to Clearing Organizations in Deficit Exceed the Other Clearing Organization's Surplus)

	<u>Cross-</u> <u>Margining</u> <u>Reduction</u>	<u>NL/NS on</u> <u>Offsetting</u> <u>Contracts</u> <u>Before</u> <u>Payment</u>	<u>Proprietary</u> <u>Account</u> <u>Surplus/</u> <u>Deficit</u> <u>Excluding</u> <u>Effects of</u> <u>Loss-Sharing</u>	<u>Prior Bi-</u> <u>Lateral Loss-</u> <u>Sharing</u> <u>Payments</u> <u>(Payments</u> <u>Eligible for</u> <u>Forgiveness or</u> <u>Maximization)</u>	<u>Loss-Sharing</u> <u>Payments Under</u> <u>Unlimited Loss-</u> <u>Sharing</u> <u>Agreement</u> <u>(Ineligible for</u> <u>Forgiveness or</u> <u>Maximization)</u>	<u>Proprietary</u> <u>Account</u> <u>S/D After</u> <u>Initial Loss-</u> <u>Sharing</u> <u>Payments</u>	<u>Proprietary</u> <u>Account</u> <u>Level Loss</u> <u>Sharing</u> <u>Payment</u>	<u>Final</u> <u>Surplus/</u> <u>Deficit</u>
CME	-40	10	40	0	-20	20	-20	0
LCH	-20	20	-30	0	0	-30	10	-20
CH2(w/CME)	-30 each	10	-10	0	0	-10	10	0
OCC/CME			-40	0	20	0	0	0

Action: CME paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio; there was no other loss-sharing at the Offsetting Positions level since all CH's had a Net Surplus on the Offsetting Positions. Since CME has a Proprietary Account Surplus less than the total of the Maximum Payments allowable to other clearing houses, the CME prorates its Proprietary Account Surplus according to the initial Cross-Margining Reductions it guaranteed to the other clearing houses. Since CH2's deficit is less than their pro rata share of the CME surplus, their payment is capped at their deficit, and the additional CME surplus is allocated to the remaining CH's with deficits. In this case, capping CH2's share resulted in an additional payment of 2 to LCH increasing the payment LCH receives from 8 to 10.

Profit Maximisation with Product Level Triages

Result Net Loss  
on the Offsetting Position

2 a) and the profit on one leg exceeds the loss on the other (Reflects Assumption 4)

	<u>NL/NS on Offsetting Contracts Before Payment</u>	<u>Cross- Margining Reduction</u>	<u>Surplus/Loss on Offsetting Contracts After Payment</u>
CME	-30	-40	20
LCH	50	-20	0

Action: LCH pays a total of 50 to CME. LCH both replenishes CME's initial margin to pre-offset levels (a payment of 40 representing the Cross-Margining Reduction) and also passes over the remaining Net Surplus on the Offsetting Positions (a payment of 10).

AND

2a) Potential Loss-sharing Payment Forgiveness

	<u>Cross- Margining Reduction</u>	<u>Prior Loss- Sharing Payments Eligible for Payment Forgiveness</u>	<u>Proprietary Account S/D After Initial Loss-Sharing Payments</u>	<u>Return of Forgiven Payments</u>	<u>Final Surplus/ Deficit</u>
CME	-40	80	30	-30	0
LCH	-20	-50	30	18.75	48.75
CH2(w/CME)	-30 each	-30	30	11.25	41.25
OCC/CME		0	0	0	0

Action: CME received loss-sharing payments of 50 from LCH, 30 from CH2, and paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio. However, the 20 paid to OCC is not eligible for payment forgiveness. Since CME has a Proprietary Account Surplus less than the total of the bi-lateral loss-sharing payments it received, CME returns a portion of each clearing organization's loss-sharing payment to the extent of CME surplus, pro-rated based on the Cross-Margining Reductions CME guaranteed to each clearing house.

OR

2a) Potential Payment Maximization – Proprietary Account Level Loss-sharing Payment  
(Clearing Organization Surplus Exceeds Combined Maximum Payments to Other Clearing Organization)

	<u>NL/NS on Offsetting Contracts Before Payment</u>	<u>Proprietary Account Surplus/ Deficit Excluding Effects of Loss-Sharing</u>	<u>Prior Bi- Lateral Loss- Sharing Payments (Payments Eligible for Forgiveness or Maximization)</u>	<u>Loss-Sharing Payments Under Unlimited Loss- Sharing Agreement (Ineligible for Forgiveness or Maximization)</u>	<u>Proprietary Account S/D After Initial Loss- Sharing Payments</u>	<u>Proprietary Account Level Loss Sharing Payment</u>	<u>Final Surplus/ Deficit</u>	
CME	-40	-30	-140	80	-20	-80	40	-40
LCH	-20	50	140	-50	0	90	-40	50
CH2(w/CME)	-30 each	10	-20	-30	0	-50	0	-50
OCC/CME			-40	0	20	0	0	0

Action: CME received loss-sharing payments of 50 from LCH, 30 from CH2, based on the liquidation of offsetting positions, and paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio. Since CME has a Proprietary Account Deficit, and LCH has a Proprietary Account Surplus that would allow LCH to make the Maximum Payment associated with the Offsetting Positions, LCH pays CME 40, the difference between the Maximum Payment associated with the Offsetting Positions (the sum of the beneficiary clearing organization's Cross-Margining Reduction and the paying clearing organization's Net Surplus on the Offsetting Positions) and the amount already paid under the Offsetting Position level loss-sharing. Since LCH does not cross-margin with CH2, CH2 is not involved in the portfolio level loss-sharing.

Product Level Trigger

option 5)

	<u>NL/NS on Offsetting Contracts Before Payment</u>	<u>Cross- Margining Reduction</u>	<u>Surplus/Loss on Offsetting Contracts After Payment</u>
CME	-20	-40	0
LCH	15	-20	-5

Action: LCH pays a total of 20 to CME since CME's Net Loss is less than the Cross-Margining Reduction.  
AND

2b) Potential Loss-sharing Payment Forgiveness

	<u>Cross- Margining Reduction</u>	<u>Prior Loss- Sharing Payments Eligible for Payment Forgiveness</u>	<u>Proprietary Account S/D After Initial Loss-Sharing Payments</u>	<u>Return of Forgiven Payments</u>	<u>Final Surplus/ Deficit</u>
CME	-40	50	30	-30	0
LCH	-20	-20	30	12	42
CH2(w/CME)	-30 each	-30	30	18	48
OCC/CME			0	0	0

Action: CME received loss-sharing payments of 20 from LCH, 30 from CH2, and paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio. However, the OCC payment is not eligible for payment forgiveness. Since CME has a Proprietary Account Surplus less than the total of the eligible loss-sharing payments it received, CME returns a portion of each clearing organization's loss-sharing payment to the extent of the CME surplus. The payment forgiveness is pro-rated based on the Cross-Margining Reduction CME guaranteed to each clearing organization.  
OR

2b) Potential Payment Maximization – Proprietary Account Level Loss-sharing Payment  
(Clearing Organization Surplus is Insufficient to Support Maximum Payment to all Other Clearing Organizations)

	<u>NL/NS on Offsetting Contracts Before Payment</u>	<u>Proprietary Account Surplus/ Deficit Excluding Effects of Loss-Sharing</u>	<u>Prior Bi- Lateral Loss- Sharing Payments (Payments Eligible for Forgiveness or Maximization)</u>	<u>Loss-Sharing Payments Under Unlimited Loss- Sharing Agreement (Ineligible for Forgiveness or Maximization)</u>	<u>Proprietary Account S/D After Initial Loss- Sharing Payments</u>	<u>Proprietary Account Level Loss Sharing Payment</u>	<u>Final Surplus/ Deficit</u>	
CME	-40	-20	-110	50	-20	-80	10	-70
LCH	-20	15	30	-20	0	10	-10	0
CH2(w/CME)	-30 each	10	-20	-30	0	-50	0	-50
OCC/CME			-40	0	20	0	0	0

Action: CME received loss-sharing payments of 50 from LCH, 30 from CH2, based on the liquidation of Offsetting Positions, and paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio. Since CME has a Proprietary Account Deficit, and LCH has a Proprietary Account Surplus insufficient to enable LCH to make the Maximum Payment associated with the Offsetting Positions (the sum of the beneficiary clearing organization's Cross-Margining Reduction and the paying clearing organization's Net Surplus on the Offsetting Positions), LCH pays CME 10, the amount of its remaining Proprietary Account Surplus. Since LCH does not cross-margin with CH2, CH2 is not involved in the portfolio level loss-sharing.

Affects

	<u>NL/NS on Offsetting Contracts Before Payment</u>	<u>Cross-Margining Reduction</u>	<u>Surplus/Loss on Offsetting Contracts After Payment</u>
CME	-50	-40	-10
LCH	15	-20	-25

Action: LCH pays a total of 40, the amount of the Cross-Margining Reduction, to CME to replenish CME margin to pre-offset levels  
And

2c) Potential Loss-sharing Payment Forgiveness

	<u>Cross-Margining Reduction</u>	<u>Prior Loss-Sharing Payments Eligible for Forgiveness</u>	<u>Proprietary Account S/D After Initial Loss-Sharing Payments</u>	<u>Return of Forgiven Payments</u>	<u>Final Surplus/Deficit</u>
CME	-40	70	90	-70	20
LCH	-20	-40	-50	40	-10
CH2(w/CME)	-30 each	-30	30	30	60
OCC/CME		0	0	0	0

Action: CME received loss-sharing payments of 40 from LCH, 30 from CH2, and paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio. However, the OCC payment is not eligible for payment forgiveness. Since CME has a Proprietary Account Surplus greater than the total of the eligible loss-sharing payments it received, CME returns each clearing organization's entire loss-sharing payment.

AND

2c) Potential Payment Maximization— Proprietary Account Level Loss-sharing Payment (In Conjunction with Payment Forgiveness) (Clearing Organization Surplus is not exhausted under Payment Forgiveness and Other Clearing Organization(s) have Deficits Remaining)

	<u>Cross-Margining Reduction</u>	<u>NL/NS on Offsetting Contracts Before Payment</u>	<u>Proprietary Account Surplus/Deficit Excluding Effects of Loss-Sharing</u>	<u>Prior Bi-Lateral Loss-Sharing Payments (Payments Eligible for Forgiveness or Maximization)</u>	<u>Loss-Sharing Payments Under Unlimited Loss-Sharing Agreement (Ineligible for Forgiveness or Maximization)</u>	<u>Proprietary Account S/D After Initial Loss-Sharing Payments</u>	<u>Return of Forgiven Payments</u>	<u>Remaining Proprietary Account Surplus/Deficit</u>	<u>Proprietary Account Level Loss-Sharing Payment</u>	<u>Final Surplus/Deficit</u>
CME	-40	-50	40	70	-20	90	-70	20	-10	10
LCH	-20	15	-10	-40	0	-50	40	-10	10	0
CH2(w/CME)	-30 each	10	60	-30	0	30	30	60	0	60
OCC/CME			-40	0	20	0	0	0	0	0

Action: CME received loss-sharing payments of 40 from LCH, 30 from CH2, based on the liquidation of offsetting positions, and paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio. Since CME has a Proprietary Account Surplus following payment forgiveness, and LCH has a remaining Proprietary Account Deficit, CME will pay LCH the lesser of the Maximum Payment associated with Offsetting Positions (in this case the 20 representing LCH's Cross-Margining Reduction since CME had the larger Net Loss on the Offsetting Positions), the amount of LCH's remaining Proprietary Account Deficit, or the amount of CME's remaining Proprietary Account Surplus. In this case, CME pays LCH 10 to cover LCH's remaining deficit. Although CME does cross-margin with CH2, CH2 is not involved in the Proprietary Account level loss-sharing following payment forgiveness because CH2 has a Proprietary Account Surplus. In the case of competing deficits, the paying clearing organization would prorate according to the Cross-Margining Reduction it guaranteed each CH.

3) Both Clearing

the Offsetting Positions

3a) and both remain in deficit after the offset payment (Reflects Assumption 6)

	<u>NL/NS on Offsetting Contracts Before Payment</u>	<u>Cross- Margining Reduction</u>	<u>Surplus/ Loss on Offsetting Contracts After Payment</u>
CME	-30	-40	-20
LCH	-50	-20	-60

Action: LCH pays CME 10. The payment is based on a net exchange of 20 to CME to account for both clearing houses' Cross-Margining Reductions since both have a loss (40 to CME and 20 to LCH) plus the sharing of the Net Loss/Net Profit on the Offsetting Positions (10 to LCH).

And

3a) Potential Loss-sharing Payment Forgiveness

	<u>Cross- Margining Reduction</u>	<u>Prior Loss- Sharing Payments Eligible for Payment Forgiveness</u>	<u>Proprietary Account S/D After Initial Loss-Sharing Payments</u>	<u>Return of Forgiven Payments</u>	<u>Final Surplus/ Deficit</u>
CME	-40	40	30	-30	0
LCH	-20	-10	-10	7.5	-2.5
CH2(w/CME)	-30 each	-30	30	22.5	52.5
OCC/CME			0	0	0

Action: CME received loss-sharing payments of 10 from LCH, 30 from CH2, and paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio. However, the OCC payment is not eligible for payment forgiveness. Since CME has a Proprietary Account Surplus less than the total of the eligible loss-sharing payments it received, CME returns a portion of each clearing organization's loss-sharing payment to the extent of its surplus. CME's Proprietary Account Surplus is pro-rated among clearing houses based on the Cross-Margining Reduction CME guaranteed to each of them.

OR

3a) Potential Payment Maximization - Proprietary Account Level Loss-sharing Payment  
(Clearing Organization Surplus is Insufficient to Support Maximum Payment to all other Clearing Organizations)

	<u>Cross- Margining Reduction</u>	<u>NL/NS on Offsetting Contracts Before Payment</u>	<u>Proprietary Account Surplus/ Deficit Excluding Effects of Loss-Sharing</u>	<u>Prior Bi- Lateral Loss- Sharing Payments (Payments Eligible for Forgiveness or Maximization)</u>	<u>Loss-Sharing Payments Under Unlimited Loss- Sharing Agreement (Ineligible for Forgiveness or Maximization)</u>	<u>Proprietary Account S/D After Initial Loss- Sharing Payments</u>	<u>Proprietary Account Level Loss Sharing Payment</u>	<u>Final Surplus/ Deficit</u>
CME	-40	-30	-60	40	-20	-40	25	-15
LCH	-20	-50	35	-10	0	25	-25	0
CH2(w/CME)	-30 each	10	-20	-30	0	-50	0	-50
OCC/CME			-40	0	20	0	0	0

Action: CME received loss-sharing payments of 10 from LCH, 30 from CH2, based on the liquidation of Offsetting Positions, and paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio. However, the OCC payment is not eligible for payment maximization. Since CME has a Proprietary Account Deficit, and LCH has a Proprietary Account Surplus insufficient to allow LCH to make the Maximum Payment associated with the Offsetting Positions (the sum of the beneficiary clearing organization's Cross-Margining Reduction and the paying clearing organization's Net Surplus on the Offsetting Positions), LCH pays CME 25, the amount of its remaining Proprietary Account Surplus. Since LCH does not cross-margin with CH2, CH2 is not involved in the Proprietary Account level loss-sharing.

Payment Maximisation with...

... payment potentially provides the recipient with a surplus on the Offsetting Position (Assumption 7)

	<u>NL/NS on Offsetting Contracts Before Payment</u>	<u>Cross-Margining Reduction</u>	<u>Surplus/Loss on Offsetting Contracts After Payment</u>
CME	-10	-40	0
LCH	-20	-20	-30

Action: 3a suggests that LCH should pay CME 15 - (net exchange of Cross-Margining Reductions of 20 to CME less net exchange of losses on the positions of 5 to LCH) but this would provide CME with a net surplus in the Offsetting Positions of 5 and push LCH further into deficit in the Offsetting Positions. Therefore the payment would be capped at CME's total Net Loss of 10. LCH would pay CME 10.

3b) Potential Loss-sharing Payment Forgiveness

	<u>Cross-Margining Reduction</u>	<u>Prior Loss-Sharing Payments Eligible for Forgiveness</u>	<u>Proprietary Account S/D After Initial Loss-Sharing Payments</u>	<u>Return of Forgiven Payments</u>	<u>Final Surplus/Deficit</u>
CME	-40	40	50	-40	10
LCH	-20	-10	-20	10	-10
CH2(w/CME	-30 each	-30	30	30	60
OCC/CME	portfolio	n/a	0	0	0

Action: CME received loss-sharing payments of 10 from LCH, 30 from CH2, and paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio. However, the OCC payment is not eligible for payment forgiveness. Since CME has a Proprietary Account Surplus greater than the total of the eligible loss-sharing payments it received, CME returns to each clearing organization its entire loss-sharing payment.

OR

3b) Potential Payment Maximization— Proprietary Account Level Loss-sharing Payment (Clearing Organization Surplus is Insufficient to Support Maximum Payment to all Other Clearing Organizations)

	<u>Cross-Margining Reduction</u>	<u>NL/NS on Offsetting Contracts Before Payment</u>	<u>Proprietary Account Surplus/Deficit Excluding Effects of Loss-Sharing</u>	<u>Prior Bi-Lateral Loss-Sharing Payments (Payments Eligible for Forgiveness or Maximization)</u>	<u>Loss-Sharing Payments Under Unlimited Loss-Sharing Agreement (Ineligible for Forgiveness or Maximization)</u>	<u>Proprietary Account S/D After Initial Loss-Sharing Payments</u>	<u>Proprietary Account Level Loss-Sharing Payment</u>	<u>Final Surplus/Deficit</u>
CME	-40	-10	-40	40	-20	-20	20	0
LCH	-20	-20	60	-10	0	50	-20	30
CH2(w/CME	-30 each	10	-20	-30	0	-50	0	-50
OCC/CME			-40	0	20	0	0	0

Action: CME received loss-sharing payments of 10 from LCH, 30 from CH2, based on the liquidation of offsetting positions, and paid 20 as its share of the losses in the liquidation of the CME/OCC joint portfolio. However, the OCC payment is not eligible for payment maximization. Since CME has a Proprietary Account Deficit, and LCH has a Proprietary Account Surplus, LCH will pay CME the lesser of the Maximum Payment associated with the Offsetting Positions (in this case the 40 representing CME's Cross-Margining Reduction since LCH had the larger Net Loss on the Offsetting Positions), the amount of CME's remaining Proprietary Account Deficit, or the amount of LCH's remaining Proprietary Account Surplus. In this case, LCH pays CME 20 to cover CME's remaining deficit. Since LCH does not cross-margin with CH2, CH2 is not involved in the Proprietary Account level loss-sharing.