

Margins Handbook

Prepared by the Joint Audit Committee

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The Joint Audit Committee (JAC) is a representative committee of U.S. futures exchanges and regulatory organizations which participate in a joint audit and financial surveillance program that has been approved and is overseen by the Commodity Futures Trading Commission. The purpose of the joint program is to coordinate among the participants numerous audit and financial surveillance procedures over registered futures industry entities. Each registered futures entity is assigned a “Designated” Self-Regulatory Organization, known as the DSRO, which is responsible for, among other things, conducting periodic audits of that entity and sharing any and all information with the other regulatory bodies of which the firm is a member. The result of the coordinated audit and surveillance effort is an effective and efficient regulatory forum. By standardizing the audit function and avoiding duplication, the JAC has streamlined the regulation necessary to assure the best interests of market participants.

The JAC’s objectives in creating this handbook are to establish sound policies for monitoring margin risk exposure and to improve operational efficiency. Consistent treatment of these policies across all exchanges is beneficial to both market participants and regulators. Through an improved understanding and application of margin policies, this handbook strives to strengthen the financial protection margin is intended to provide.

The JAC will periodically update this handbook to account for material changes. Subsequent editions will be available through the Web sites of the various exchanges and National Futures Association (NFA). Each FCM will receive a notice of any material change and will be instructed to download the new edition from the applicable Web site.

Users of this handbook are reminded of the difference between the definition of “margin” within the futures industry (a bond that ensures performance) versus the securities industry (a percentage payment toward the outright purchase of stock).

The JAC is not responsible for any errors or omissions contained in this publication. Any questions concerning margin and related topics should be directed to a firm’s DSRO.

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Table of Contents

Chapter 1 – Definitions	4
Chapter 2 – Margin Rates and Requirements	8
Standard Portfolio Analysis of Risk Margin System (SPAN®)	8
SPAN Margin System Requirements	8
Hedge Accounts	9
Chapter 3 – Margin Deposits	10
Acceptable Margin Deposits	10
Margin Deposits – Acceptability by Exchange (Exhibit)	11
Chapter 4 – Margin Calls	12
Issuance of Margin Calls	12
Computation of Margin Calls	12
Pure SPAN Method	13
Total Equity Method	13
Aging of Margin Calls	13
Reduction and Deletion of Margin Calls	14
Examples	15
Chapter 5 – Undermargined Capital Charges	19
Accounts Subject to an Undermargined Capital Charge	19
Current Margin Calls	19
Calculation of Undermargined Capital Charges	21
Examples	21
Chapter 6 – Undermargined and In Debit Trading	26
Types of Trading	26
Non-Member Policies	26
Allowable Trading Activity — Undermargined Accounts	26
Allowable Trading Activity — In Debit Accounts	27
Miscellaneous	27
Examples	27
Chapter 7 – Omnibus Accounts	34
Reporting of Positions	34
Margin Rates and Requirements	34
Undermargined Accounts	34
Unique SRO Policies	34
NFA Required Notification (Rule 2-33)	34
Chapter 8 – Proprietary Accounts	35
Financial Statement Presentation	35
Covered Positions	35
Calculation of Proprietary Capital Charges	35
Examples	37

Chapter 9 – Combined Accounts	39
Related Accounts	39
Affiliated Accounts	39
Joint Accounts	40
Examples	42
Chapter 10 – Miscellaneous Margin Topics	45
Excess Margin Payments	45
Concurrent Long and Short Positions	45
Concurrent Long and Short Hold-Open Positions	46
Alternative Margining Systems	46
Chapter 11 – Standard Portfolio Analysis of Risk (SPAN®)	47
SPAN Overview	47
Advantages and Rationale of SPAN	47
Option Equity and Risk Margin	47
Margin Calculations	47
Risk Arrays	47
Futures Scan Range	48
Volatility Scan Range	48
Extreme Move Scenario	48
“What If” Scenarios	48
Other Factors Affecting SPAN Margin Requirements	48
A Simple Margin Calculation	49
Chapter 12 – Cross-Margins for Equity Index and Interest Rate Futures and Options	51
General Information	51
Eligible Participants	51
Margin Collateral and Requirements	53
Net Capital Implications of Cross-Margins	53
Examples	55

Aging of Margin Calls

In aging margin calls, days are defined as:

- 1 = business day position is put on/account becomes undermargined
- 2 = business day margin call is issued
- 3 = first business day margin call is outstanding
- 4 = second business day margin call is outstanding
- 5 = third business day margin call is outstanding
- etc.

Carrying Broker

An FCM through which another FCM, foreign broker, or customer/noncustomer elects to clear trades.

Concurrent Long and Short Positions

Long and short positions traded on the same contract market in the same futures or options contract for the same delivery month or expiration date and, if applicable, having the same strike price.

Covered Position

A futures or options contract, the risk of which is effectively eliminated by an equal offsetting position in a cash commodity, physical inventory, forward contract or fixed price commitment. Refer to CFTC Regulation 1.17(j) for further explanation.

Current Margin Calls

Bona fide margin calls which have been outstanding a reasonable time; that is, less than five business days for customers and less than four business days for noncustomers and omnibus accounts. Note: Days are counted from and include the day the account became undermargined.

Customer

An account holder trading in any futures or options contract, except the holder of a proprietary or noncustomer account as defined by CFTC Regulation 1.3(y).

Customer - Secured

Customers trading futures and options on foreign exchanges, including all U.S.-domiciled and, if secured for, foreign-domiciled customers.

Customer - Segregated

Customers trading futures and options on U.S. exchanges, including both U.S.-domiciled and foreign-domiciled customers.

Day Trading

The establishment and closure of a futures or options position on the same trading day.

Equity Component of SPAN®Margin System Requirement

The marked to the market value of option positions.

Favorable Market Movement

The appreciation in market value of an account's open positions.

Free Funds

Funds available for withdrawal from an account without restriction. For a futures and options trading account, margin equity in excess of initial margin requirements.

Futures Commission Merchant (FCM)

Any entity engaged in soliciting or accepting orders for the purchase or sale of futures or options contracts on or subject to the rules of any contract market and that, in connection with such solicitation or acceptance of orders, accepts money, securities, or property (or extends credit in lieu thereof) to margin, guarantee or secure any trades or contracts that result or may result therefrom. FCMs must be registered as such with the CFTC.

Hedge

The purchase or sale of futures or options contracts executed for the purpose of minimizing price risk or facilitating the customary or normal conduct of business. Refer to CFTC Regulation 1.3(z) for further explanation of "bona fide hedging transactions and positions."

Hold-Open Positions

Positions offset at the exchange that, for convenience and customer service purposes, have been held open on the FCM's internal book-keeping records.

Initial Margin Requirement (IMR)

Generally, a factored amount over the maintenance margin requirement calculated by the SPAN margin system.

Maintenance Margin Requirement (MMR)

The minimum amount of margin equity required to be maintained in an account. The maintenance margin requirement is the actual risk margin calculated by the SPAN margin system. Refer to definition – Risk Component of SPAN Margin System Requirement.

Margin

A good faith deposit or performance bond. Also referred to as Performance Bond.

Margin Call

A request from an FCM to an account owner to deposit additional funds to meet margin requirements.

Margin Deficiency

For an account which has margin equity less than the maintenance margin requirement, the amount by which margin equity is less than the initial margin requirement. If margin equity in an account is equal to or greater than the maintenance margin requirement, then no margin deficiency exists.

Margin Equity

An account's net liquidating equity plus the collateral value of acceptable margin deposits.

"Marked to the Market" Margin Rate

A "marked to the market" margin rate requires no margin for a position provided that margin equity in the account is zero or greater.

Member Account (Individual)

An account owned by an individual having floor trading privileges at an exchange or any exchange division. "Member" applies only to the privileges of the specific type of membership category. For margin purposes, member seat lessees are treated as members (i.e., receive member margin rates).

Net Liquidating Equity (NLE)

The sum of an account's ledger balance (LB), open trade equity (OTE), and net option value (NOV). Also referred to as net liquidating value (NLV).

Noncustomer

An account holder trading in any futures or options contract which is not defined as customer or proprietary. Noncustomer accounts include accounts of affiliated entities and certain employees of an FCM. Refer to CFTC Regulations 1.3(k), 1.3(y), and 1.17(b)(4) for further information.

Omnibus Account

An account held in the name of an FCM or foreign broker that is utilized for placing and clearing the trades of one or more undisclosed entities or persons.

Performance Bond

A good faith deposit. Also referred to as Margin.

Proprietary

A futures and options trading account carried on the books of an FCM for the FCM itself or for the general partners of the FCM. Refer to CFTC Regulations 1.3(y) and 1.17(b)(3) for further information.

Proprietary Charge

A reduction to net capital for uncovered futures and options positions carried in proprietary accounts. This charge is reflected on 1-FR line 16. of the Statement of the Computation of the Minimum Capital Requirements or on FOCUS line 6.E. of the Computation of Net Capital.

Reasonable Time

Industry custom and FCM capital requirements have implied a reasonable time to be less than five business days for customers and less than four business days for noncustomers and omnibus accounts. Note: Days are counted from and include the day the account became undermargined.

Risk Component of SPAN Margin System Requirement

The assessment for changes in the underlying portfolio's price and volatility.

The risk component corresponds to an equivalent futures position margin and represents the risk margin of the account. Refer to definition – Maintenance Margin Requirement.

Speculative

Trading in futures and options with the objective of achieving profits through the successful anticipation of price movement. Trading for purposes other than hedging.

Standard Portfolio Analysis of Risk Margin System (SPAN®)

A risk-based, portfolio approach margining system used to compute minimum margin requirements for all futures and options positions.

Undermargined Amount

The amount by which margin equity is less than the maintenance margin requirement.

Undermargined Capital Charge

A reduction to net capital as a safety factor for accounts which are undermargined an unreasonable time. This charge is reflected on 1-FR lines 15.A., B., and C., as appropriate, of the Statement of the Computation of the

Chapter 2 — Margin Rates and Requirements

Minimum Capital Requirements or on FOCUS line 6.A.2. of the Computation of Net Capital.

Margin rates and requirements on domestic contracts are governed by the individual exchanges.

Exchanges establish different margin rates/requirements for different account types (i.e., speculative, hedge, and member).

With the exception of the NYCE, any changes in initial and maintenance margin requirements made by an exchange are applicable to all positions, new or existing. At the NYCE, increases in margin requirements apply only to new positions, whereas decreases in margin requirements may be applied to all positions, new or existing.

FCMs, at their discretion, may set higher margin rates/requirements than required by exchange rules and regulations. FCMs should review their internal margin rates/requirements on a continual basis to ensure compliance with exchange minimum requirements.

Standard Portfolio Analysis of Risk Margin System (SPAN®)
The Standard Portfolio Analysis of Risk Margin System (SPAN) is the risk margin system adopted by all domestic futures exchanges. Margin requirements generated by the SPAN margin system shall constitute exchange minimum margin requirements.

The SPAN margin system is a risk-based, portfolio approach margining system used to compute minimum margin requirements for all futures and options positions. SPAN margin system requirements are computed using risk parameter files which are distributed daily, at a minimum, by the individual exchanges.

Firms should apply the SPAN methodology or an alternative equivalent system to compute margin requirements on all accounts with domestic futures or options on futures. Generally, the firm's bookkeeping system will automatically calculate the margin requirements. However, firms could use PC-SPAN to verify or estimate margin requirements. FCMs and other market participants could purchase PC-SPAN from the Chicago Mercantile Exchange. In addition to the PC-SPAN software, market participants must obtain the SPAN array file for the positions contained in the portfolio. PC-SPAN users could download the array for any exchange from the CME or CBOT web sites at:

<http://www.cbot.com>

and

<http://www.cme.com>

SPAN Margin System Requirements

Initial and maintenance margin requirements include only the risk component of the SPAN margin system requirement. The risk component is the assessment for changes in the underlying portfolio's price and volatility.

The equity component of the SPAN margin system requirement is included in margin equity. The equity component is the marked to the market value of options. See Chapter 11 for additional detail on the SPAN margin system.

Hedge Accounts

A hedge transaction is the purchase or sale of futures or options contracts executed for the purpose of minimizing price risk or facilitating the customary or normal conduct of business. Refer to CFTC Regulation 1.3(z) for a definition of “bona fide hedging transactions and positions.”

FCMs should have a reasonable basis to grant hedge status to positions held in an account. A signed letter from an account holder may be considered satisfactory evidence of hedge status unless there is reason to suspect otherwise. Such letter shall clearly indicate which contracts/product categories are eligible for hedge status unless the account owner indicates that all activity in an account is held for hedging purposes.

Bona fide hedge and speculative positions must be held in separate accounts unless the firm is able to identify within the account hedge from speculative positions.

A firm’s records should clearly identify hedge accounts.

Acceptable margin deposits and their collateral value are dictated by the individual exchanges. Refer to the rules of the individual exchanges for specific requirements governing margin collateral.

Acceptable Margin Deposits

All exchanges accept U.S. Dollars as margin. For all other acceptable margin deposits, refer to the Exhibit on the following page.

If an FCM accepts foreign currencies to margin a domestic futures or options contract, a Subordination Agreement, required by CFTC Interpretation #12, shall be obtained from the account owner. This subordination agreement is required for U.S.-domiciled and foreign-domiciled customers trading U.S. futures and options contracts and shall be maintained on file by the firm.

For accounts holding multiple exchange positions, firms should ensure that the specific instruments being used for margin are allowed under the applicable exchange rules.

**MARGIN DEPOSITS
ACCEPTABILITY BY EXCHANGE**

Exhibit

Exchange	Rule(s)	Foreign Currencies	U.S. Government Obligations	Municipal Bonds	Equity Securities	U.S. Deliverable Warehouse Receipts	Letters of Credit	Loans	Other
CBOT	CBOT Rule 431.02	YES	YES	YES	YES	YES	NO	NO	Any readily marketable Security Net of SEC Haircuts
CME	CME Rule 930.C	YES	YES	YES	YES	YES	YES	YES If Secured	Any Readily Marketable Security Net of SEC Haircuts
CSCE	CSCE Rule 4.02	British Pounds	YES	NO	YES	YES	NO	YES If Secured (Futures Only)	NONE
COMEX	NYMEX Rule 4.01(E)(2)	YES	YES	NO	YES	YES	YES	YES	Physical Commodities Non-Deliverable Gold and Silver
KCBOT	KCBOT Rule 1160.01	NO	YES	NO	YES	NO	NO	NO	NONE
MACE	MACE Rule 431.02	YES	YES	YES	YES	YES	NO	NO	Any Readily Marketable Security Net of SEC Haircuts
MGE	MGE Rule 760	YES	YES	YES	YES	YES	YES	YES If Secured	NONE
NYCE	NYCE Rule 2.03	Some Foreign Currencies on Cross-Rate Contract	YES	NO	YES	Cotton Only	YES	YES	NONE
NYFE	NYFE Rule 7.03	NO	YES	NO	YES	NO	YES	YES	NONE
NYMEX	NYMEX Rule 4.01(e)(1)	NO	Yes, if maturity, 10 yrs.	NO	NO	NO	NO	YES If Secured	NONE
PBOT	PBOT Rule 1006(d)	YES	YES	YES	YES	NO	YES	NO	NONE

Margin calls are issued to collect required margin to ensure the performance of a contract. A margin call is a request from an FCM to an account owner to deposit additional funds to meet margin requirements.

In computing margin calls under the SPAN margin system, the initial/maintenance margin requirement includes only the risk component. The equity component of the SPAN margin system requirement is included in margin equity.

In computing margin calls, option values of all options contracts are allowed to meet an account's total risk margin requirement.

Identically owned accounts should be combined for purposes of computing margin calls within the account classifications of customer segregated, customer secured, and nonsegregated. For further information on combining accounts for margin purposes refer to Chapter 9 – Combined Accounts.

Firms must keep documentation on file for any manual adjustments made to equity system reports to determine an account owner's margin status (e.g., adjustments to margin requirements, margin calls, undermargined charges, etc.).

Issuance of Margin Calls

FCMs are required to make a bona fide attempt to collect required margin.

Firms must issue calls for margin that would bring an account up to the minimum initial margin requirement (1) when margin equity in an account initially falls below the minimum maintenance margin requirement and (2) subsequently when margin equity plus existing margin calls in an account is less than the minimum maintenance margin requirement. Thus, outstanding margin calls are treated similarly to margin equity in determining whether an incremental margin call is required.

Required margin calls shall be made within one business day after the occurrence of the event giving rise to the call.

FCMs are required to keep written records of all margin calls, whether made in writing or by telephone.

Firms may, but are not required to, collect or call for margin on day trades.

Computation of Margin Calls

In determining margin calls, accounts shall be reviewed as of the close of the trading day. Firms, at their discretion, may issue margin calls on a more frequent basis including the issuance of intra-day margin calls.

A margin call is issued whenever the margin equity (plus outstanding calls) falls below the maintenance margin. The amount of the call is the difference between the margin equity and the initial margin requirement less any previously issued margin calls.

The following formula represents the proper calculation when determining if a margin call should be issued:

Initial Margin Requirement
less (Margin Equity)
less (Outstanding Margin Calls)

A positive balance represents amount of margin call to be issued

Firms may calculate margin deficiency using two alternative methods called the Pure SPAN and Total Equity Methods. In most situations, the margin deficiency will be identical for either alternative. However, some circumstances involving long options could result in the Equity Method having a larger margin deficiency.

Pure SPAN Method

Under the Pure SPAN method, the SPAN margin requirement is compared to an account's Net Liquidating Value (plus any margin collateral). By using this method, firms compare an account's total assets to the risk in the account.

Total Equity Method

Alternatively, firms may compare the Total Equity in an account (defined as the ledger balance, open trade equity and margin collateral) to the SPAN margin requirement adjusted for the option value. Net long option value reduces the SPAN margin requirement and net short option value increases it.

By using simple math, firms are transferring the net option value from the equity component to the margin component when they deploy the Total Equity Method. The two methods will yield identical margin excess or deficiency amounts unless an account has net long option value that exceeds the unadjusted SPAN margin requirement. When this occurs, firms should set the margin requirement under the Total Equity Method to zero (margin requirement could never be less than zero). If the net long option value exceeds the unadjusted SPAN margin requirement, any deficit amount in Total Equity would trigger a margin call. However, a Total Equity deficit may not necessarily indicate a margin deficiency.

Firms may call for additional margin at their discretion.

Aging of Margin Calls

In aging margin calls, days are defined as:

- 1 = business day position is put on/account becomes undermargined
- 2 = business day margin call is issued
- 3 = first business day margin call is outstanding
- 4 = second business day margin call is outstanding
- 5 = third business day margin call is outstanding
- etc.

Individual margin calls shall be aged *separately* throughout their existence.

An account's total margin call is the sum of all individually aged margin calls.

An FCM's records should clearly indicate the age of all margin calls issued and outstanding.

Reduction and Deletion of Margin Calls

The reduction of a margin call partially decreases in amount an account's total margin call outstanding. In contrast, a margin call deletion eliminates an account's total margin call in its entirety.

A margin call shall only be *reduced* through the receipt of acceptable margin deposits.

A margin call may be deleted through the receipt of acceptable margin deposits only if the deposits equal or exceed the amount of the total margin call.

A margin call may also be deleted through inter-day favorable market movements and/or the liquidation of positions only if margin equity in the account is equal to or greater than the initial margin requirement.

In order to protect the age of outstanding margin calls for re-established positions, margin calls may not be reduced by the liquidation of positions. Furthermore, the liquidation and re-establishment of positions to circumvent margin rules and regulations is not allowed.

The oldest individually aged outstanding margin call shall be reduced first.

Written records shall be maintained of all margin calls reduced or deleted.

EXAMPLES OF CALCULATING MARGIN CALLS

Overall Assumptions:

1. Account balances and margin requirements are as of the end of business on the date indicated.
2. The account's open positions were put on during the previous week and had been properly margined.

Example #1 — Impact on Margin Calls Due to Unfavorable Market Movements

Assume: No margin collateral was deposited during week.

Unfavorable market movements occurred on:

Tuesday (\$12,000)

Wednesday (\$13,000)

Friday (\$5,000)

	Monday	Tuesday	Wednesday	Thursday	Friday
Ledger Balance	20,000	20,000	20,000	20,000	20,000
Open Trade Equity	27,000	15,000	2,000	2,000	(3,000)
Net Option Value	2,000	2,000	2,000	2,000	2,000
Net Liquidating Equity	49,000	37,000	24,000	24,000	19,000
Outstanding Calls	-0-	11,000	23,000	36,000	36,000
SUBTOTAL	49,000	48,000	47,000	60,000	55,000
Initial Margin	60,000	60,000	60,000	60,000	60,000
Maintenance Margin	50,000	50,000	50,000	50,000	50,000
Amount Under Maint.	1,000	2,000	3,000	-0-	-0-
CALL/AGE	11,000 (1)	11,000(2) 12,000(1)	11,000(3) 12,000(2) 13,000(1)	11,000(4) 12,000(3) 13,000(2)	11,000(5) 12,000(4) 13,000(3)

Example #2 – Impact on Margin Calls Due to Liquidation of Positions

Assume: No margin collateral was deposited during week.

Ledger balance and margin requirement changes are due to liquidations.

	Monday	Tuesday	Wednesday	Thursday	Friday
Ledger Balance	45,000	46,000	46,000	47,500	47,500
Open Trade Equity	5,000	4,000	4,000	3,000	3,000
Net Option Value	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)
Net Liquidating Equity	45,000	45,000	45,000	45,500	45,500
Outstanding Calls	-0-	15,000	15,000	15,000	15,000
SUBTOTAL	45,000	60,000	60,000	60,500	60,500
Initial Margin	60,000	55,000	55,000	50,000	45,000
Maintenance Margin	55,000	53,000	53,000	48,000	43,000
Amount Under Maint.	10,000	-0-	-0-	-0-	-0-
CALL/AGE	15,000 (1)	15,000(2)	15,000(3)	15,000(4)	-0-

Example #3 – Impact on Margin Calls Due to Receipt of Margin Collateral

Assume Cash deposits were made on:

Thursday \$3,000

Friday \$13,000

	Monday	Tuesday	Wednesday	Thursday	Friday
Ledger Balance	45,000	45,000	45,000	48,000	61,000
Open Trade Equity	10,000	5,000	4,000	4,000	(1,000)
Net Option Value	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)
Net Liquidating Equity	50,000	45,000	44,000	47,000	55,000
Outstanding Calls	-0-	10,000	10,000	13,000	-0-
SUBTOTAL	50,000	55,000	54,000	60,000	55,000
Initial Margin	60,000	60,000	60,000	60,000	60,000
Maintenance Margin	55,000	55,000	55,000	55,000	55,000
Amount Under Maint.	5,000	-0-	1,000	-0-	-0-
CALL/AGE	10,000 (1)	10,000(2)	10,000(3)	7,000(4)	-0-
			6,000(1)	6,000(2)	

NOTE: A margin call may be deleted through the receipt of cash that equals or exceeds the amount of the total margin call. Thus, the margin call was properly deleted on Friday even though margin equity was not brought up to initial margin requirements.

Example #4 — Impact on Margin Calls Due to Receipt of Margin Collateral and Unfavorable Market Movements on Same Day

Assume: Cash deposit of \$5,000 received Wednesday
Favorable market movement of \$5,000 occurred on Tuesday

	Monday	Tuesday	Wednesday	Thursday	Friday
Ledger Balance	38,000	38,000	43,000	43,000	43,000
Open Trade Equity	10,000	15,000	6,000	6,000	4,000
Net Option Value	2,000	2,000	2,000	2,000	2,000
Net Liquidating Equity	50,000	55,000	51,000	51,000	49,000
Outstanding Calls	-0-	10,000	5,000	9,000	9,000
SUBTOTAL	50,000	65,000	56,000	60,000	58,000
Initial Margin	60,000	60,000	60,000	60,000	60,000
Maintenance Margin	58,000	58,000	58,000	58,000	58,000
Amount Under Maint.	8,000	-0-	2,000	-0-	-0-
CALL/AGE	10,000 (1)	10,000(2)	5,000(3)	5,000(4)	5,000(5)
			4,000(1)	4,000(2)	4,000(3)

Example #5 — Impact on Margin Calls Due to Favorable Market Movements less than Total Margin Call Outstanding

Assume: No margin collateral was deposited during week.
Favorable market movements occurred on:
Tuesday \$3,000
Thursday \$6,000

	Monday	Tuesday	Wednesday	Thursday	Friday
Ledger Balance	38,000	38,000	38,000	38,000	38,000
Open Trade Equity	15,000	18,000	12,000	18,000	15,000
Net Option Value	2,000	2,000	2,000	2,000	2,000
Net Liquidating Equity	55,000	58,000	52,000	58,000	55,000
Outstanding Calls	-0-	5,000	5,000	8,000	8,000
SUBTOTAL	55,000	63,000	57,000	66,000	63,000
Initial Margin	60,000	60,000	60,000	60,000	60,000
Maintenance Margin	58,000	58,000	58,000	58,000	58,000
Amount Under Maint.	3,000	-0-	1,000	-0-	-0-
CALL/AGE	5,000 (1)	5,000(2)	5,000(3)	5,000(4)	5,000(5)
			3,000(1)	3,000(2)	3,000(3)

NOTE: Margin calls may only be deleted due to favorable market movements when margin equity in the account equals or exceeds the initial margin requirement. Thus, the increase in OTE on Thursday of \$6,000 cannot delete the individually aged \$5,000 margin call.

Example #6 — Impact on Margin Calls When Favorable Market Movements plus Receipt of Margin Collateral Exceed Total Margin Call

Assume: Cash deposit of \$9,000 was received on Thursday.
Favorable market movement of \$2,000 occurred on Tuesday.

	Monday	Tuesday	Wednesday	Thursday	Friday
Ledger Balance	38,000	38,000	38,000	47,000	47,000
Open Trade Equity	10,000	12,000	12,000	12,000	4,000
Net Option Value	2,000	2,000	2,000	2,000	2,000
Net Liquidating Equity	50,000	52,000	52,000	61,000	53,000
Outstanding Calls	-0-	10,000	10,000	-0-	-0-
SUBTOTAL	50,000	62,000	62,000	61,000	53,000
Initial Margin	60,000	60,000	60,000	60,000	60,000
Maintenance Margin	58,000	58,000	58,000	58,000	58,000
Amount Under Maint.	8,000	-0-	-0-	-0-	5,000
CALL/AGE	10,000 (1)	10,000(2)	10,000(3)	-0-	7,000(1)
NOTE: As margin equity exceeded the initial margin requirement on Thursday, the margin call was properly deleted.					

Example #7 — Impact on Margin Calls When Favorable Market Movements Exceed Total Margin Call

Assume: No margin collateral was deposited during week.
Favorable market movements occurred on:
Wednesday \$7,000
Friday \$8,000

	Monday	Tuesday	Wednesday	Thursday	Friday
Ledger Balance	30,000	30,000	30,000	30,000	30,000
Open Trade Equity	22,000	19,000	26,000	20,000	28,000
Net Option Value	2,000	2,000	2,000	2,000	2,000
Net Liquidating Equity	54,000	51,000	58,000	52,000	60,000
Outstanding Calls	-0-	6,000	6,000	6,000	-0-
SUBTOTAL	54,000	57,000	64,000	58,000	60,000
Initial Margin	60,000	60,000	60,000	60,000	60,000
Maintenance Margin	55,000	55,000	55,000	55,000	55,000
Amount Under Maint.	1,000	-0-	-0-	-0-	-0-
CALL/AGE	6,000 (1)	6,000(2)	6,000(3)	6,000(4)	-0-
NOTE: As margin equity was less than the initial margin requirement on Wednesday, the margin call was not deleted. As margin equity was equal to the initial margin requirement on Friday, the margin call was properly deleted.					

Capital charges for undermargined accounts are not a substitute for the deposit of margin funds. The collection of required margin is essential to proper margin compliance and good internal control.

Undermargined capital charges are based on exchange minimum margin requirements.

If an exchange does not require its members to collect margin from their account holders, the FCM must use the exchange clearing house's margin requirements in determining capital charges.

In calculating undermargined capital charges under the SPAN margin system, the maintenance margin requirement includes only the risk component. The equity component of the SPAN margin system requirement is included in margin equity.

In computing undermargined capital charges, option values of all options contracts are allowed to meet an account's total risk margin requirement.

Identically owned accounts should be combined for margin call/charge purposes within the account classifications of customer segregated, customer secured, and nonsegregated. For further information on combining accounts for margin purposes refer to Chapter 9 – Combined Accounts.

Undermargined capital charges are applicable to accounts trading on both domestic and foreign exchanges.

In determining capital charges, accounts should be reviewed as of the close of business.

Any manual adjustments made to equity system reports to determine an account owner's margin status (e.g., adjustments to margin requirements, margin calls, undermargined charges, etc.) shall be maintained on file.

For capital charges on proprietary positions refer to Chapter 8 – Proprietary Accounts.

Accounts Subject to an Undermargined Capital Charge

A capital charge may apply to all accounts which are subject to margin calls for five business days or more for customers (including seat owners, lessees, retail and institutional accounts) and four business days or more for noncustomers and omnibus accounts.

If a required margin call was not made to an account, the account is subject to an immediate undermargined capital charge.

If a margin call was made to an account for an amount less than what was required, an immediate undermargined capital charge would apply if the amount of the margin call made plus margin equity was less than the maintenance margin requirement.

Current Margin Calls

A margin call will be considered current only to the extent that it represents a *bona fide* attempt to obtain funds. A bona fide margin call is demonstrated through an account actually meeting margin calls in a timely manner. Conse-

quently, bona fide margin calls would not remain outstanding an unreasonable period of time.

FCMs may call for additional margin at their discretion. However, any margin call which has as its primary purpose the avoidance of a capital charge shall not be considered current.

Margin calls that are older than the time allowed for current call treatment and are merely called again with a more current date of issuance may not be deducted in determining the capital charge.

To determine current margin calls available to reduce the undermargined capital charge of an account, margin calls in the account must be reviewed individually and collectively.

INDIVIDUAL MARGIN CALLS

Individual current margin calls are calls which have been outstanding a reasonable time; that is, less than five business days for customers and less than four business days for noncustomers and omnibus accounts. Note: Days are counted from and include the day the account became undermargined.

In determining current margin calls *as of the close of business* on the capital computation date, individual calls which are aged five business days for customers (four business days for noncustomers and omnibus accounts) are considered noncurrent. The margin calls have not been met within five business days for customers (four business days for noncustomers and omnibus accounts) as the calls are still outstanding after the close of business.

TOTAL MARGIN CALLS

To determine an account's current margin calls for capital charge purposes, individual margin calls should be reviewed collectively as of the close of business according to the guidelines set forth below. These guidelines have been written based on the customer undermargined grace period of five business days and should be adjusted accordingly to four business days for noncustomers and omnibus accounts.

- If an account has *no* individual margin calls aged to be five business days old or greater, then all margin calls in the account may be considered current.
- If an account has *one or more* individual margin calls aged to be five business days old or greater, then all margin calls in the account are considered noncurrent (i.e., one call noncurrent, all calls noncurrent).

The FCM has not collected required margin within a reasonable time. Thus, the issuance of an additional required margin call (presently less than five business days old) does not appear to be a bona fide attempt to collect required margin.

An FCM's records should clearly support the current call treatment of all margin calls used to reduce undermargined capital charges.

For further information on margin calls refer to Chapter 4 – Margin Calls.

Calculation of Undermargined Capital Charges

If an account is undermargined at the close of business on the capital computation date and the preceding four business days for customers or three business days for noncustomers and omnibus accounts, a capital charge may apply.

The undermargined capital charge is the maintenance margin requirement less credit net liquidating equity, acceptable margin collateral in excess of the amount used to secure deficit equity, and current margin calls.

Undermargined Capital Charge =

Maintenance Margin
(less) Credit NLE
(less) Margin Deposits in Excess of Amounts to Secure Deficits
(less) Current Margin Calls

The maximum undermargined capital charge for an account is its maintenance margin requirement.

Undermargined capital charges should be calculated using exchange minimum margin requirements. If an FCM computes margin calls based on higher rates, then margin calls should be recomputed as if they were generated using exchange minimums in calculating capital charges based on exchange requirements.

It is acceptable for a firm to calculate undermargined capital charges using higher firm rates provided that the FCM can demonstrate and maintains documentation of the following:

- Firm's margin rates are higher than exchange minimums,
- Margin calls are based on higher firm margin rates, and
- This policy is consistently applied.

Examples

Assumptions:

1. All accounts are customer owned.
2. Account balances, margin requirements, and margin call ages are as of the end of business on the date indicated.
3. All securities are indicated at their margin value.
4. Initial and maintenance SPAN margin system requirements are the same.
5. All margin calls are properly issued for the full amount.
6. The account was properly margined on the previous business day (Friday).
7. Current calls are determined as of the close of business. Thus, margin calls indicated as five days old for customers are considered noncurrent.
8. The capital computation date is as of the close of business on Friday.

If an account is subject to an undermargined capital charge, the charge shall equal:

MMR - Credit NLE - Margin Deposits in Excess of - Current Margin
Amount used to Secure Deficits Calls (CC)

Example #1 – No Current Margin Calls

	Monday	Tuesday	Wednesday	Thursday	Friday
NLE	55,000	55,000	55,000	55,000	55,000
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	5,000	5,000	5,000	5,000	5,000
CALL/AGE	5,000(1)	5,000(2)	5,000(3)	5,000(4)	5,000(5)
The capital charge would be \$5,000 as the call was five business days old or more as of the close of business. {\$60,000 MMR - \$55,000 NLE}					

Example #2 – Current Margin Calls and Daily Wire Transfers

	Monday	Tuesday	Wednesday	Thursday	Friday
LB	30,000	35,000	45,000	49,000	57,000
OTE/NOV	<u>25,000</u>	<u>15,000</u>	<u>11,000</u>	<u>3,000</u>	<u><8,000></u>
NLE	55,000	50,000	56,000	52,000	49,000
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	5,000	10,000	4,000	8,000	11,000
CALL/AGE	5,000(1)	10,000(1)	4,000(1)	8,000(1)	11,000(1)
Due to unfavorable market movements, the account was never properly margined as of the close of business. However, all margin calls were met on a daily basis. As all individual margin calls are less than five business days old as of the close of business, all margin calls in the account can be considered current. Thus, the undermargined capital charge would be zero. {\$60,000 MMR - \$49,000 NLE - \$11,000 CC}					

Example #3 – Current Margin Calls and Cash Received

	Monday	Tuesday	Wednesday	Thursday	Friday
LB	50,000	50,000	62,000	62,000	62,000
OTE/NOV	<2,000>	<2,000>	<7,000>	<3,000>	<9,000>
NLE	48,000	48,000	55,000	59,000	53,000
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	12,000	12,000	5,000	1,000	7,000
CALL/AGE	12,000(1)	12,000(2)	5,000(1)	5,000(2)	5,000(3) 2,000(1)
\$12,000 cash was deposited on Wednesday. Due to unfavorable market movements, the account was never properly margined as of the close of business. As all individual margin calls are less than five business days old as of the close of business, all margin calls in the account can be considered current. Thus, the undermargined capital charge would be zero. {\$60,000 MMR - \$53,000 NLE - \$7,000 CC}					

Example #4 – Current Margin Calls and Market Movements

	Monday	Tuesday	Wednesday	Thursday	Friday
LB	50,000	50,000	50,000	50,000	50,000
OTE/NOV	<u>10,000</u>	<u>5,000</u>	<u>3,000</u>	<u>2,000</u>	<u>7,000</u>
NLE	60,000	55,000	53,000	52,000	57,000
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	-0-	5,000	7,000	8,000	3,000
CALL/AGE	-0-	5,000(1)	5,000(2) 2,000(1)	5,000(3) 2,000(2)	5,000(4) 2,000(3) 1,000(1) 1,000(2)
As all individual margin calls are less than five business days old as of the close of business, all margin calls in the account can be considered current. The undermargined capital charge would be zero. {\$60,000 MMR - \$57,000 NLE - \$8,000 CC} NOTE: Even though the account is only undermargined by \$3,000 on Friday, the \$5,000 margin call from Tuesday cannot be deleted as the favorable market movement did not bring margin equity up to initial margin requirements.					

Example #5 - Current and Noncurrent Individual Margin Calls

	Monday	Tuesday	Wednesday	Thursday	Friday
LB	20,000	20,000	20,000	20,000	20,000
OTE/NOV	<u>35,000</u>	<u>30,000</u>	<u>25,000</u>	<u>20,000</u>	<u>15,000</u>
NLE	55,000	50,000	45,000	40,000	35,000
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	5,000	10,000	15,000	20,000	25,000
CALL/AGE	5,000(1)	5,000(2)	5,000(3)	5,000(4)	5,000(5)
		5,000(1)	5,000(2)	5,000(3)	5,000(4)
			5,000(1)	5,000(2)	5,000(3)
				5,000(1)	5,000(2)
					5,000(1)
As the account has an individual margin call aged to be five business days old or more as of the close of business, all margin calls in the account would be considered noncurrent. The undermargined capital charge would be \$25,000. {\$60,000 MMR - \$35,000 NLE}					

Example #6 – Noncurrent Deficit Equity

	Monday	Tuesday	Wednesday	Thursday	Friday
NLE	<9,000>	<9,000>	<9,000>	<9,000>	<9,000>
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	69,000	69,000	69,000	69,000	69,000
CALL/AGE	69,000(1)	69,000(2)	69,000(3)	69,000(4)	69,000(5)
No collateral or commission holdbacks are available to secure the deficit. The firm would record a \$9,000 noncurrent receivable from customer on the balance sheet and the deficit would be excluded from the undermargined capital charge computation. The margin call is five business days old or more as of the capital computation date and is therefore considered noncurrent. Thus, the undermargined capital charge would be \$60,000, the account's maintenance margin requirement.					

Example #7 – Current Deficit Equity

	Monday	Tuesday	Wednesday	Thursday	Friday
NLE	<9,000>	<9,000>	<9,000>	<9,000>	<9,000>
T-BILL	49,000	49,000	49,000	49,000	49,000
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	20,000	20,000	20,000	20,000	20,000
CALL/AGE	20,000(1)	20,000(2)	20,000(3)	20,000(4)	20,000(5)
The firm would record a \$9,000 current (secured by the Treasury Bill) receivable from customer on the balance sheet. The margin collateral value in excess of the deficit can reduce the capital charge. The margin call is five business days old or more as of the capital computation date and is therefore considered noncurrent. Thus, the undermargined capital charge would be \$20,000. {\$60,000 MMR - \$40,000 Excess Collateral (\$49,000 T-BILL less <\$9,000> NLE)}					

Example #8 – Partially Secured Deficit

	Monday	Tuesday	Wednesday	Thursday	Friday
LB	<1,000>	<1,000>	1,000	1,000	1,000
OTE/NOV	<5,000>	<5,000>	<9,500>	<9,500>	<9,500>
NLE	<6,000>	<6,000>	<8,500>	<8,500>	<8,500>
T-BILL	8,000	8,000	8,000	8,000	8,000
IMR/MMR	5,000	5,000	5,000	5,000	5,000
AMT U/M	3,000	3,000	5,500	5,500	5,500
CALL/AGE	3,000(1)	3,000(2)	1,000(3)	1,000(4)	1,000(5)
			4,500(1)	4,500(2)	4,500(3)
\$2,000 cash was deposited on Wednesday. The firm would record an \$8,000 current (secured by the Treasury Bill) and \$500 noncurrent receivable from customer on the balance sheet. As there is no excess collateral over the deficit, the Treasury Bill cannot be used to reduce the undermargined capital charge. As the account has an individual margin call aged to be five business days old or more as of the close of business, all margin calls in the account would be considered noncurrent. Thus, the undermargined capital charge would be \$5,000, the account's maintenance margin requirement.					

Capital charges for undermargined and in debit accounts are not a substitute for margin funds. Margin functions as financial protection for the marketplace. The collection of margin funds within a reasonable time is essential to proper margin compliance and good internal control.

A reasonable time refers to the number of days deemed acceptable for the collection of required margin calls. Currently, a reasonable time is defined to be less than five business days for customers and less than four business days for noncustomers and omnibus accounts. Note: Days are counted from and include the day the account became undermargined.

Thus, if an account is subject to an outstanding margin/equity call which is aged to be five business days old or more for customers or four business days old or more for noncustomers and omnibus accounts, then the account is deemed to be undermargined/in debit an unreasonable time. The age of the margin call is determined as of the close of business.

For undermargined and in debit trading policy purposes, all non-member accounts should be treated identically (retail customer, institutional, commercial, hedge, noncustomer, etc.).

For information on undermargined and in debit trading policies for individual member accounts, contact the appropriate exchange.

FCMs are responsible for reviewing the trading activity of accounts undermargined and in debit to monitor the receipt of margin and the acceptability of orders.

Types of Trading

The addition of a position is the establishment of a futures or options position which may or may not impact an account's risk margin requirement.

The liquidation of a position is the closure of an established futures or options position which may or may not impact an account's risk margin requirement.

A day trade is the establishment and closure of a futures or options position on the same trading day.

A risk neutral trade is the establishment of futures or options positions which does not impact an account's risk margin requirement (e.g., establishing both legs of a spread position with no margin requirement).

A risk increasing trade is the establishment or closure of a futures or options position which increases an account's risk margin requirement (e.g., closing one leg of a spread position).

A risk reducing trade is the establishment or closure of a futures or options position which reduces the risk of existing positions in the account (e.g., adding a spread position to a naked position).

Non-Member Policies:

Allowable Trading Activity – Undermargined Accounts

An account may trade as long as it is properly margined or margin is forthcoming within a reasonable time.

Accounts undermargined an unreasonable time are not allowed to day trade.

If an account is undermargined an unreasonable time, an FCM may only accept orders that serve to reduce the risk of existing positions in the account; that is, an FCM may only accept orders for *risk reducing trades*. Refer to the matrix below.

If an account that is undermargined an unreasonable time liquidates all of its positions resulting in a debit balance, the firm may not accept orders for the account until sufficient funds equal to or in excess of the debit amount are deposited.

Allowable Trading Activity
Undermargined an Unreasonable Time

ACCOUNT TYPE	UNREASONABLE TIME DEFINED	RISK INCREASING	RISK NEUTRAL	DAY TRADING	RISK REDUCING
Customer	≥5 business days	No	No	No	Yes
Noncustomer/ Omnibus	≥4 business days	No	No	No	Yes

Allowable Trading Activity – In Debit Accounts

An account in debit is an account with a free debit balance, i.e., holding no open futures or options positions.

Accounts in debit an unreasonable time are not allowed to day trade.

A firm may not accept any orders for accounts in debit an unreasonable time.

Notwithstanding the foregoing, if an account in debit holds acceptable noncash margin deposits (such as securities, warehouse receipts, letters of credit, etc.), the account may trade provided there is positive margin equity; that is, the ledger balance plus the collateral value of acceptable margin deposits is greater than or equal to zero.

Miscellaneous

For non-member accounts, a firm cannot reclassify a trading debit/deficit to a note receivable in order to allow an account to trade while undermargined or in debit an unreasonable time.

Examples

Assumptions:

1. The accounts are customer retail accounts.
2. All accounts are undermargined or in debit, as appropriate, for an unreasonable time.
3. All margin/equity calls are properly issued and aged for the full amount.
4. Initial and maintenance SPAN margin system requirements are the same. The British Pound futures margin rate is \$1,800 per contract. The spread rate for British Pound futures is zero.

Example #1 – Undermargined Account

Open Positions:

	Long	Short	Month/Year	Commodity
	10		March, 1995	British Pound Futures
		5	June, 1995	British Pound Futures
LB	\$ 1,000	MMR	\$ 9,000	{ \$1,800/contract }
OTE	\$ 3,000	AMT U/M	\$ 5,000	{ \$9,000 MMR - \$4,000 NLE }
NLE	\$ 4,000			

Risk Increasing Trade/Liquidation of Positions

Customer buys five June, 1995 British Pound futures contracts. Assuming the positions P&S'd at the previous day's settlement (i.e., no effect on the account's NLE), the maintenance margin requirement would increase to \$18,000 { \$1,800 MMR/contract * 10 Positions } and the undermargined amount would increase to \$14,000 { \$18,000 MMR - \$4,000 NLE }. Even though positions were liquidated, the risk margin requirement increased as one leg of a spread position was closed. Therefore, this would not be an acceptable trade.

Risk Reducing Trade/Liquidation of Positions

Customer sells two March, 1995 British Pound futures contracts. Assuming the positions P&S'd at the previous day's settlement (i.e., no effect on the account's NLE), the maintenance margin requirement would decrease to \$5,400 { \$1,800 MMR/contract * 3 Positions } and the undermargined amount would decrease to \$1,400 { \$5,400 MMR - \$4,000 NLE }. The risk margin on existing positions decreased as two naked positions were closed. Therefore, this would be an acceptable trade.

Risk Increasing Trade/Addition of Positions

Customer sells 25 June, 1995 British Pound futures contracts. Assuming no change in OTE, the maintenance margin requirement would increase to \$36,000 { \$1,800 MMR/contract * 20 Positions } and the undermargined amount would increase to \$32,000 { \$36,000 MMR - \$4,000 NLE }. Therefore, as the risk margin requirement increased, this would not be an acceptable trade.

Example #1 – Undermargined Account (continued)

Open Positions:

	Long	Short	Month/Year	Commodity
	10		March, 1995	British Pound Futures
		5	June, 1995	British Pound Futures
LB	\$ 1,000	MMR	\$ 9,000	{ \$1,800/contract }
OTE	\$ 3,000	AMT U/M	\$ 5,000	{ \$9,000 MMR - \$4,000 NLE }
NLE	\$ 4,000			

Risk Reducing Trade / Addition of Positions

Customer sells five June, 1995 British Pound futures contracts. Assuming no change in OTE, the account would become properly margined as all the positions would be spread and there would be no risk margin requirement. As the trade has reduced the risk of existing positions, this would be an acceptable trade.

Day Trading

Customer establishes and closes 10 March, 1995 British Pound futures contracts. Day trading is not allowed. The risk of existing positions has not been reduced. Therefore, this would not be an acceptable trade.

Deposit of Funds to Delete Call / Risk Increasing Trade / Addition of Positions

Customer deposits \$5,000 in the account, thereby eliminating the margin call. On the same day, the customer buys five March, 1995 British Pound futures contracts increasing their margin requirement to \$18,000 (\$1,800 MMR / contract * 10 Positions). Assuming no change in OTE, the account would be undermargined by \$9,000 (\$18,000 MMR - \$9,000 NLE). As funds were received to delete the \$5,000 outstanding margin call, the \$9,000 margin call is a current call (Day 1). Therefore, this would be an acceptable trade.

Deposit of Funds to Reduce Call / Risk Increasing Trade / Addition of Positions

Customer deposits \$2,000 in the account, thereby reducing the outstanding margin call to \$3,000. On the same day, the customer buys five March, 1995 British Pound futures contracts increasing their margin requirement to \$18,000 (\$1,800 MMR / contract * 10 Positions). Assuming no change in OTE, the account would be undermargined by \$12,000 (\$18,000 MMR - \$6,000 NLE). As the \$3,000 margin call has been outstanding five business days or more (i.e., an unreasonable time), this would not be an acceptable trade.

Example #2 – In Debit Account

Open Positions:

None			
LB	\$ <8,000>	MMR	\$ -0-
OTE	\$ -0-	DEBIT	\$ 8,000
NLE	\$ <8,000>		
Note: Account has no other acceptable margin deposits.			

Day Trading

Customer establishes and closes 10 March, 1995 British Pound futures contracts. Day trading is not allowed for accounts in debit an unreasonable time. Therefore, as funds were not received to cover the debit, this would not be an acceptable trade.

Addition of Positions

Customer buys 10 March, 1995 British Pound futures contracts and sells 10 June, 1995 British Pound futures contracts, creating a spread position.

Although the risk margin requirement remains at zero, this trade would not be acceptable as funds were not deposited to cover the debit balance.

NOTE: Accounts which have been in debit an unreasonable time are not allowed to trade until sufficient funds equal to or in excess of the debit amount are deposited.

Deposit of Funds to Delete Equity Call/Risk Increasing Trade / Addition of Positions

Customer deposits \$10,000 in the account. On the same day, the customer buys five March, 1995 British Pound futures contracts. Assuming the new positions create no OTE and the maintenance margin requirement increases to \$9,000 {\$1,800 MMR/contract * 5 Positions}, the account would be undermargined by \$7,000 {\$9,000 MMR - \$2,000 NLE}. However, as the account met its equity call (i.e., sufficient funds were received to cover the debit), the trade is acceptable. The account has become undermargined (Day 1) and has a reasonable time to meet the margin call.

Deposit of Funds to Reduce Equity Call/Risk Increasing Trade / Addition of Positions

Customer deposits \$5,000 in the account. On the same day, the customer buys five March, 1995 British Pound futures contracts. Assuming the new positions create no OTE and the maintenance margin requirement increases to \$9,000 {\$1,800 MMR/contract * 5 Positions}, the account would be undermargined by \$12,000 {\$9,000 MMR - <\$3,000> NLE}. As the account only partially met its equity call, the trade is not acceptable.

Assumptions:

1. All accounts are customer retail accounts.
2. All margin calls are properly issued and aged for the full amount.
3. Initial and maintenance SPAN margin system requirements are the same.
4. The account was properly margined on the previous business day (Friday).

Allowable Trading Activity Abbreviations:

All: All trading activity is allowed as the account is not undermargined an unreasonable time.

RR: Only risk reducing trades are allowed as the account is undermargined an unreasonable time.

Example #3 – Unreasonable Time: Deletion of Margin Calls

Week 1

	Monday	Tuesday	Wednesday	Thursday	Friday
LB	35,000	35,000	35,000	35,000	35,000
OTE/NOV	<u>30,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
NLE	65,000	55,000	55,000	55,000	55,000
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	-0-	5,000	5,000	5,000	5,000
CALL/AGE	-0-	5,000(1)	5,000(2)	5,000(3)	5,000(4)
TRADING	All	All	All	All	All

Week 2

	Monday	Tuesday	Wednesday	Thursday	Friday
LB	35,000	35,000	35,000	35,000	36,000
OTE/NOV	<u>20,000</u>	<u>20,000</u>	<u>19,000</u>	<u>22,000</u>	<u>24,000</u>
NLE	55,000	55,000	54,000	57,000	60,000
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	5,000	5,000	6,000	3,000	-0-
CALL/AGE	5,000(5)	5,000(6)	5,000(7) 1,000(1)	5,000(8) 1,000(2)	-0- -0-
TRADING	All	RR	RR	RR	All

- Cash was deposited on Friday of Week 2 of \$1,000. Favorable market movements occurred on Thursday of Week 2 of \$3,000 and on Friday of Week 2 of \$2,000. Unfavorable market movements occurred on Tuesday of Week 1 of \$10,000 and on Wednesday of Week 2 of \$1,000.
- As of the close of business on Monday of Week 2 the margin call was five business days old or more, and the account became undermargined an unreasonable time. Thus, only risk reducing trading activity was allowed as of Tuesday of Week 2.
- On Friday of Week 2 the account became properly margined. Once the account becomes properly margined, all trading activity would be allowed on the following Monday.

Example #4 – Unreasonable Time: Reduction of Margin Calls

Week 1

	Monday	Tuesday	Wednesday	Thursday	Friday
LB	25,000	25,000	25,000	25,000	25,000
OTE/NOV	<u>25,000</u>	<u>25,000</u>	<u>25,000</u>	<u>20,000</u>	<u>20,000</u>
NLE	50,000	50,000	50,000	45,000	45,000
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	10,000	10,000	10,000	15,000	15,000
CALL/AGE	10,000(1)	10,000(2)	10,000(3)	10,000(4) 5,000(1)	10,000(5) 5,000(2)
TRADING	All	All	All	All	All

Week 2

	Monday	Tuesday	Wednesday	Thursday	Friday
LB	25,000	35,000	35,000	38,000	38,000
OTE/NOV	<u>20,000</u>	<u>20,000</u>	<u>22,000</u>	<u>18,000</u>	<u>21,000</u>
NLE	45,000	55,000	57,000	56,000	59,000
IMR/MMR	60,000	60,000	60,000	60,000	60,000
AMT U/M	15,000	5,000	3,000	4,000	1,000
CALL/AGE	10,000(6) 5,000(3)	5,000(4)	5,000(5)	2,000(6) 2,000(1)	2,000(7) 2,000(2)
TRADING	RR	All	All	RR	RR

- Cash was deposited on Tuesday of Week 2 of \$10,000 and on Thursday of Week 2 of \$3,000. Favorable market movements occurred on Wednesday of Week 2 of \$2,000 and on Friday of Week 2 of \$3,000. Unfavorable market movements occurred on Thursday of Week 1 of \$5,000 and on Thursday of Week 2 of \$4,000.
- As of the close of business on Friday of Week 1 the margin call was five business days old or more, and the account became undermargined an unreasonable time. Thus, only risk reducing trading activity was allowed as of Monday of Week 2.
- On Tuesday of Week 2 the account deposited funds which reduced the margin call. After the deposit of margin funds, the only remaining margin call on Tuesday of Week 2 was less than five business days old, thus all trading activity in the account would be allowed. The account had demonstrated a good faith effort to deposit required margin and has a reasonable time to meet the remaining margin call.

- As of the close of business on Wednesday of Week 2 the margin call was five business days old or more, and the account became undermargined an unreasonable time. Thus, only risk reducing trading activity was allowed as of Thursday of Week 2.

The records of an FCM should clearly indicate all domestic and foreign omnibus accounts.

Customer and house omnibus accounts of the same entity must be separately established and reviewed for margin purposes.

Reporting of Positions

Omnibus accounts are required to report gross positions to their carrying brokers. Thus, omnibus accounts generally contain concurrent long and short positions. Carrying brokers should take all necessary steps to ensure omnibus accounts are reporting positions on a gross basis.

An FCM shall obtain and maintain on file written instructions from omnibus accounts for positions which are entitled to be margined as spread or hedge positions.

For P&S offsets, the carrying broker should receive instructions on a daily basis. If there is a delay in closing out positions, the carrying broker should manually recompute the omnibus account's margin requirements. Such calculation shall be maintained on file along with any instructions for offsets.

Margin Rates and Requirements

Domestic omnibus accounts are required to be margined on a gross basis for all exchanges.

Omnibus accounts are margined using only maintenance margin requirements at exchanges; thus, initial margin requirements do not apply. An omnibus account's initial margin requirement equals the account's maintenance margin requirement.

For an omnibus account to receive spread or hedge margin rates, the carrying broker must receive and maintain on file written instructions for such positions.

Undermargined Accounts

For both domestic and foreign omnibus accounts, margin calls should be met within four business days or an appropriate undermargined capital charge should be taken.

For further information refer to Chapter 4 – Margin Calls and Chapter 5 – Undermargined Capital Charges.

Unique SRO Policies

NFA Required Notification (Rule 2-33)

An FCM must notify its designated self-regulatory organization (DSRO) or, if so directed by its DSRO, NFA whenever it accepts other than immediately available funds from an FCM doing business on an omnibus basis. This notification must be received within 24 hours of the acceptance of such funds. For purposes of this notification, wire transfers and certified checks shall be considered immediately available funds. Refer to NFA Rule 2-33.

Chapter 8 – Proprietary Accounts

Proprietary accounts are trading accounts carried for the FCM itself or for any general partners of the FCM. Additionally, firm error accounts are included as proprietary accounts. For further information refer to CFTC Regulations 1.3(y) and 1.17(b)(3).

Joint accounts with an FCM or general partner interest equal to or greater than 10 percent are also considered proprietary accounts. For further information on joint accounts refer to Chapter 9 - Combined Accounts.

A firm must take an immediate capital charge for uncovered futures and options positions in any proprietary account. The proprietary capital charge applies to positions on both domestic and foreign contract markets.

Financial Statement Presentation

For corporations:

- The equity in proprietary accounts, including firm error accounts, should be written off to profit/loss and reflected in retained earnings. This write-off to profit/loss should be made on a monthly basis.
- Securities used to margin proprietary accounts should be classified as firm-owned securities at the appropriate depository on the balance sheet.

For partnerships:

- The balances in general partners' accounts should be classified as equity capital or equities in partners' trading accounts as determined by the partnership agreement.

Covered Positions

A covered position is a futures or options contract in which the risk is effectively eliminated by an equal offsetting position in a cash commodity, physical inventory, forward contract or fixed price commitment. Refer to CFTC Regulation 1.17(j) for further explanation.

Other transactions may be recognized as cover if the FCM can demonstrate in writing to the CFTC that the transaction is economically appropriate to the reduction of risk in the conduct and management of its business.

Both the futures or options position and related cover position (e.g., inventory or forward contract) must be under identical ownership and under the FCM's control.

Covered positions of an FCM are not subject to a proprietary capital charge.

Calculation of Proprietary Capital Charges

An FCM must take an immediate charge against net capital for uncovered proprietary futures and options positions on both domestic and foreign exchanges, including open positions in firm error accounts.

The proprietary capital charge is the maintenance margin requirement multiplied by the applicable haircut percentage less proprietary equity not includable in adjusted net capital.

Proprietary Capital Charge =

(Maintenance Margin * Applicable Haircut) - Equity not Includable in Requirement Percentage Adjusted Net Capital

Exchange and clearing house margin requirements are based on the SPAN margin system. Thus, in calculating proprietary capital charges, the maintenance margin requirement includes only the risk component.

The required haircut percentage is applied to a proprietary position's exchange or clearing house maintenance margin requirement based on the FCM's clearing relationship with the exchange on which the contract is cleared.

Proprietary Capital Charge Percentages:

- If the FCM clears its own trades, 100% of the clearing house margin requirement.
- If the FCM is a member of a self-regulatory organization (SRO) and clears its trades through another clearing member, 150% of the greater of the clearing house or exchange maintenance margin requirement.
- If the exchange does not have a maintenance margin level, 200% of the initial margin requirement.

As proprietary equity of corporate FCMs is required to be included in adjusted net capital, it shall *not* reduce the proprietary capital charge. Only an FCM's partners' equity reported as a liability rather than as partnership capital shall reduce the proprietary capital charge.

Sample Format: Proprietary Charge Calculation

EXCHANGE	MMR	APPLICABLE	ADJUSTED	EQUITY	CAPITAL
		PERCENTAGE	MMR		CHARGE
(A)	(B)	(C)	(D)	(E)	(F)

- (A) The exchange on which the positions are cleared.
- (B) The exchange or clearing house SPAN margin system maintenance requirement.
- (C) Based on the FCM's clearing relationship with the exchange on which the contract is cleared, the appropriate haircut percentage.
- (D) The adjusted maintenance margin requirement for the proprietary capital charge. (Column B * Column C)
- (E) Account equity not includable in adjusted net capital. For corporate FCMs, this is always zero.
- (F) The computed proprietary capital charge. (Column D - Column E)
The total of column F is the proprietary capital charge reported on the firm's net capital computation.

Examples

Assumptions:

1. FCM is a clearing member of and clears their own trades at the CME.
2. FCM is a clearing member of the NYMEX, but prefers to clear its NYMEX trades through a carrying broker.
3. FCM clears its trades at the CBOT through a carrying broker. (The FCM is not a clearing member of the CBOT.)
4. All positions in the proprietary account are uncovered.

Example #1 – Proprietary Charge/Presentation of Equity – Corporate Account

MMR (CME Positions) \$ 100,000

MMR (CBOT Positions) \$ 50,000

NLE \$ 120,000

EXCHANGE	MMR	APPLICABLE PERCENTAGE	ADJUSTED MMR	EQUITY	CAPITAL CHARGE
CME	100,000	100%	100,000	0	\$ 100,000
CBOT	50,000	150%	75,000	0	\$ <u>75,000</u>
TOTAL CHARGE					\$ <u>175,000</u>
The proprietary capital charge is \$175,000. The \$120,000 net liquidating equity is recorded in retained earnings (written off to profit/loss). As the proprietary equity is included in adjusted net capital, it cannot be used to reduce the proprietary capital charge.					

Example #2 – Proprietary Charge/Presentation of Equity – Corporate Account

MMR (CME positions)	\$ 75,000
MMR (NYMEX positions)	\$ 80,000
NLE	\$ 150,000
Securities at Market	\$ 99,300

EXCHANGE	MMR	APPLICABLE PERCENTAGE	ADJUSTED MMR	EQUITY	CAPITAL CHARGE
CME	75,000	100%	75,000	0	\$ 75,000
NYMEX	80,000	150%	120,000	0	\$ <u>120,000</u>
TOTAL CHARGE					\$ <u>195,000</u>
The proprietary capital charge is \$195,000. The \$150,000 net liquidating equity is recorded in retained earnings (written off to profit/loss). The \$99,300 market value of securities should be classified as firm-owned securities at the appropriate depository. As the proprietary equity is included in adjusted net capital, it cannot be used to reduce the proprietary capital charge.					

Example #3 – Proprietary Charge/Presentation of Equity – Partnership Account

MMR (CME positions)	\$ 80,000
NLE - Equity Capital	\$ 100,000
NLE - Partners' Capital	\$ 20,000
Total Account NLE	\$ 120,000

EXCHANGE	MMR	APPLICABLE PERCENTAGE	ADJUSTED MMR	EQUITY	CAPITAL CHARGE
CME	80,000	100%	80,000	20,000	\$ <u>60,000</u>
TOTAL CHARGE					\$ <u>60,000</u>
The proprietary capital charge is \$60,000. The allocation of partners' and equity capital is determined by the partnership agreement. The \$100,000 net liquidating equity allocated as equity capital should be included as additional partnership capital (Ownership Equity). As the partnership equity capital is included in adjusted net capital, it cannot be used to reduce the proprietary capital charge. The \$20,000 net liquidating equity allocated as partners' capital should be classified as a liability (Equities in Partners' Trading Accounts) and can be used to reduce the proprietary capital charge.					

Related Accounts

Identically owned accounts within the same classification of customer segregated, customer secured, and nonsegregated should be combined for margin purposes. That is, positions across such identically owned accounts may be combined to recognize spreads and to net concurrent long and short positions. Such accounts may be combined even if denominated in different currencies.

As all noncustomer accounts are nonsegregated, identically owned non-customer accounts trading futures and options on U.S. exchanges and foreign exchanges should be combined for margin purposes.

An FCM may not apply free funds in an account under identical ownership but of a different classification or account type (e.g., securities, customer segregated, customer secured) to an account's margin deficiency. The funds must actually transfer to the identically owned undermargined account in order for them to be used for margin purposes. An equity system transfer is permissible when the firm maintains excess segregated funds in an amount at least equal to the dollar value of the credit entry.

Accounts under different ownership, in which all parties have signed a transfer of funds agreement, shall be margined separately. The funds must actually transfer to the applicable account for them to be used for margin purposes.

Individual accounts with a common owner but not under identical ownership shall be margined separately. For instance, Mr. Smith may own 50 percent of account A and 90 percent of account B with different partners. Accounts A and B should be treated separately for margin purposes. In a second example, Jack Donn is 100 percent owner of Donn, Inc. Mr. Donn's individual trading account and Donn, Inc.'s corporate trading account must be treated separately for margin purposes as these accounts are different legal entities.

Affiliated Accounts

Accounts of branches/divisions and subsidiaries of a parent corporation trading through an FCM should be treated as follows for margin purposes:

BRANCHES / DIVISIONS

A branch is not a separately incorporated entity apart from the parent itself, but merely a division of the parent. Thus, branch/division accounts are combined like all other related accounts. Refer to the Related Accounts discussion above.

For division accounts under the same control, a firm's internal bookkeeping may reflect a division's independent positions in a sub-account solely as a service to the division, (i.e., for profit center accounting). The division sub-accounts would contain hold-open positions; positions closed at the clearing house level (master account) but open on the firm's internal bookkeeping records (sub-account).

For division accounts under different control, separate division accounts are maintained which do not offset against the trading of other divisions.

An FCM's records should clearly indicate and support the method of combining branch/division account trading activities.

SUBSIDIARIES

A subsidiary of a parent corporation is a separate legal entity.

Subsidiaries holding bona fide positions must maintain separate accounts. Such accounts cannot be offset across subsidiaries or with divisions of the parent corporation regardless of whether the trading is for hedging or speculative purposes. An FCM shall treat each subsidiary account separately for margin purposes. Subsidiaries are independently responsible for the margin status of their accounts and for properly meeting their margin calls. If a subsidiary were to have divisions itself, the divisions would be accounted for as described above.

The above affiliated accounts are assumed to have funds and trading activities relating only to the division or subsidiary itself. If customers are introduced through the division or subsidiary, then either individual customer accounts or an omnibus account would need to be set up.

Joint Accounts

In general, the equity system classification, balance sheet presentation, and appropriate proprietary/undermargined charges of joint accounts are based upon the percentage of ownership interest of the parties.

The appropriate balances to be reflected as equities in customer accounts, noncustomer accounts, and in retained earnings are based on the ownership interests and the distribution of profits and losses.

The joint account agreement should clearly state the interests of the account owners whenever:

- (1) a customer or noncustomer has a joint account with the firm, or
- (2) a customer has a joint account with a noncustomer.

Whenever a customer has a joint account interest equal to 90 percent or less with either a proprietary or noncustomer account, the customer effectively forfeits segregation rights.

The following page contains a chart summarizing joint account treatment for the account types:

- Firm/Customer
- Firm/Noncustomer
- Noncustomer/Customer.

For each joint account type, the chart should be read across to determine equity system classification, balance sheet presentation, and the appropriate proprietary/undermargined charges. For example, the first line of the chart would be read as follows:

- The firm has a proprietary interest equal to or greater than 10 percent in a joint account with a customer. Therefore, the customer's interest is equal to or less than 90 percent.

- The joint account is classified in the house section of the equity system.
- The firm's percentage interest is reflected in retained earnings on the balance sheet. The customer's percentage interest is reflected as equities in noncustomer accounts on the balance sheet.
- An immediate proprietary capital charge is taken on the firm's percentage interest of the margin requirement. An undermargined capital charge is taken on the customer's percentage interest of the margin requirement according to the noncustomer undermargined grace period of four business days.

The chart should be used as a reference guide for standard joint account agreements.

As joint account agreements vary greatly and are tailored to the individual parties, an FCM should maintain adequate documentation of all joint account agreements.

A firm shall keep detailed records of joint account activities in order to support financial statement presentation and capital charges taken.

Joint Accounts Summary Chart

TYPE OF JOINT ACCOUNT	OWNERSHIP INTEREST %	EQUITY SYSTEM CLASSIFICATION	BALANCE SHEET PRESENTATION	PROPRIETARY/MARGIN CHARGE	GRACE PERIOD
Firm/ Customer	$\geq 10\%$ $\leq 90\%$	House	Retained Earnings Equities in Noncustomers	Proprietary Noncustomers	None 4 Days
Firm/ Customer	$< 10\%$ $> 90\%$	Customer	Retained Earnings Equities in Customers	Proprietary Customers	None 5 Days
Firm/ Noncustomer	$\geq 10\%$ $\leq 90\%$	House	Retained Earnings Equities in Noncustomers	Proprietary Noncustomers	None 4 Days
Firm/ Noncustomer	$< 10\%$ $> 90\%$	House	Retained Earnings Equities in Noncustomers	Proprietary Noncustomers	None 4 Days
Noncustomer/ Customer	$\geq 10\%$ $\leq 90\%$	House	Equities in Noncustomers	Noncustomers	4 Days
Noncustomer/ Customer	$< 10\%$ $> 90\%$	Customer	Equities in Customers	Customers	5 Days

Examples

Example #1 - Related Accounts

Assumptions:

1. All accounts are customer owned and under identical ownership.
2. All contracts traded in the accounts are settled in the currency indicated.
3. The currency indicated is deposited in the account for margin.

Classification	Currency	NLE- U.S.\$ Equivalent	MMR- U.S.\$ Equivalent	Excess U.S.\$ Equivalent
Segregated #1	US\$	\$ 10,000	\$ 9,000	\$ 1,000
Segregated #2	J-Yen	<u>(3,000)</u>	<u>2,000</u>	(5,000)
Total Segregated		<u>7,000</u>	<u>11,000</u>	
Secured #1	US\$	3,000	5,000	(2,000)
Secured #2	D-Mark	<u>4,000</u>	<u>1,000</u>	3,000
Total Secured		<u>7,000</u>	<u>6,000</u>	
Delivery Account	US\$	10,000	-0-	10,000

- The customer's segregated accounts are undermargined by \$4,000 computed as:
\$5,000 J-Yen Deficiency + \$1,000 US\$ NLE (Excess)
- The customer's secured accounts are not undermargined; the accounts have margin funds in excess of the maintenance margin requirements of \$1,000 computed as:
\$2,000 US\$ Deficiency + \$3,000 NLE Excess
- The excess equity balances in the secured accounts and in the delivery account cannot be used to margin the segregated accounts.

Examples – Joint Accounts

Assumptions:

1. The ownership interests of the joint account equals the profit/loss split.
2. Account equity is only made up of profits.
3. The FCM clears the trades.
4. The account's equity and margin information is as follows:

LB	-	\$ 15,000
OTE	-	\$ (5,000)
NOV	-	\$ 40,000
NLE	-	\$ 50,000
MMR	-	\$ 60,000

Example #2 – Firm/Customer Joint Account

The firm and a customer have agreed to a jointly owned account with a 60%/40% split of all profits and losses respectively.

- A. Equity System Classification: Account is classified in the house section of the equity system as the proprietary interest is equal to or greater than 10%.
- B. Balance Sheet Presentation: The balance sheet presentation is determined by the profit and loss split of 60%/40%. The firm's NLE interest of \$30,000 ($\$50,000 \text{ NLE} * 60\%$) is reflected in retained earnings. The customer's NLE portion of \$20,000 ($\$50,000 \text{ NLE} * 40\%$) is classified as equities in noncustomer accounts.
- C. Capital Charges: A \$36,000 ($\$60,000 \text{ MMR} * 60\%$) charge would be taken immediately on the proprietary interest of the account. (As the firm's equity interest has been reflected in retained earnings, it may not reduce the proprietary charge.) Since the customer's interest is classified as noncustomer, an undermargined charge of \$4,000 [$(\$60,000 \text{ MMR} * 40\%) - (\$50,000 \text{ NLE} * 40\%)$] would apply if the account was undermargined four business days or more (the noncustomer undermargined grace period).

Example #3 – Firm/Customer Joint Account

The firm and a customer have agreed to a jointly owned account with a 5%/95% split of all profits and losses respectively.

- A. Equity System Classification: Account is classified in the customer section of the equity system as the proprietary interest is less than 10%.
- B. Balance Sheet Presentation: The balance sheet presentation is determined by the profit and loss split of 5%/95%. The firm's NLE interest of \$2,500 ($\$50,000 \text{ NLE} * 5\%$) is reflected in retained earnings. The customer's NLE portion of \$47,500 ($\$50,000 \text{ NLE} * 95\%$) is classified as equities in customer accounts.
- C. Capital Charges: A \$3,000 ($\$60,000 \text{ MMR} * 5\%$) charge would be taken immediately on the proprietary interest of the account. (As the firm's equity interest has been reflected in retained earnings, it may not reduce the proprietary charge.) Since the customer's interest is classified as customer, an undermargined charge of \$9,500 [$(\$60,000 \text{ MMR} * 95\%) - (\$50,000 \text{ NLE} * 95\%)$] would apply if the account was undermargined five business days or more (the customer undermargined grace period).

Example #4 – Noncustomer/Customer Joint Account

A noncustomer and a customer have agreed to a jointly owned account with a 60%/40% split of all profits and losses respectively.

- A. Equity System Classification: Account is classified in the house section of the equity system as the noncustomer interest is equal to or greater than 10%.

- B. Balance Sheet Presentation: The account's entire NLE of \$50,000 is classified as equities in noncustomer accounts.
- C. Capital Charges: The account is margined as a noncustomer. Since the entire account, including the customer's interest, is classified as noncustomer, an undermargined charge of \$10,000 (\$60,000 MMR - \$50,000 NLE) would apply if the account was undermargined four business days or more (the noncustomer undermargined grace period).

Example #5 – Noncustomer/Customer Joint Account

A noncustomer and a customer have agreed to a jointly owned account with a 5%/95% split of all profits and losses respectively.

- A. Equity System Classification: Account is classified in the customer section of the equity system as the noncustomer interest is less than 10%.
- B. Balance Sheet Presentation: The account's entire NLE of \$50,000 is classified as equities in customer accounts.
- C. Capital Charges: The account is margined as a customer. Since the entire account, including the noncustomer's interest, is classified as customer, an undermargined charge of \$10,000 (\$60,000 MMR - \$50,000 NLE) would apply if the account was undermargined five business days or more (the customer undermargined grace period).

Excess Margin Payments

Throughout the handbook, the margin status of an account (i.e., margin calls and undermargined charges) is determined based upon margin equity and initial/maintenance margin requirements. The handbook has defined (1) margin equity as net liquidating equity plus the collateral value of acceptable margin deposits and (2) initial/maintenance margin requirements to include only the risk component of the SPAN margin system requirement. Thus, option value is allowed to meet an account's total risk margin requirement and is considered an acceptable margin deposit.

Margin Funds Available for Disbursement =

$$\text{Net Liquidating Value} + \text{Margin Deposits} - \text{Initial Margin Requirement} \geq 0$$

FCMs may also use the Total Equity Method as referred to in Chapter 4 for determining funds available for disbursement. In computing excess margin payments, if total equity plus margin deposits is zero or negative, a disbursement cannot be made as there are no funds available.

All identically owned accounts must be combined for purposes of determining the amount of funds available for disbursement within the account classifications of customer segregated, customer secured, and nonsegregated. Available funds from one account classification cannot be used for disbursement from another account classification. The transfer of funds must first occur in order for a disbursement to be made.

Concurrent Long and Short Positions

Concurrent long and short positions are long and short positions traded on the same contract market in the same futures or options contract for the same delivery month or expiration date and, if applicable, having the same strike price.

A firm may carry concurrent long and short positions as follows (see CFTC Regulation 1.46):

- In domestic and foreign omnibus accounts. All positions held by domestic and foreign omnibus accounts shall be margined on a gross basis.
- In a hedge account in which both the long and short positions are bona fide hedge positions. Such positions shall be margined on a net basis at all exchanges.
- In an account or identically owned accounts in which one side is a bona fide hedge position and the other side is a speculative position. Such positions shall be margined on a net basis at all exchanges.
- In separate accounts for identically owned speculative concurrent long and short positions which are separately and independently controlled. Such positions shall be margined on a net basis at all exchanges.
- For positions margined on a net basis, no margin is required; however, the account must maintain a zero or credit net liquidating equity.

Concurrent Long and Short Hold-Open Positions

Hold-open positions are positions offset at the exchange that, for convenience and customer service purposes, have been held open on the FCM's internal bookkeeping records. The firm's internal bookkeeping records shall clearly indicate all hold-open positions.

As hold-open positions only remain open on the firm's internal records and are not true exchange positions, no margin is required.

Alternative Margining Systems

The SPAN margin system has been adopted by all domestic futures exchanges. If an FCM elects to use an alternative margining system, the firm should contact the individual exchanges to determine its acceptability. A firm's records shall clearly identify the margining system used for all accounts.

An FCM should contact its DSRO for information on computing an account's margin status, margin calls, undermargined capital charges, and funds available for disbursement under the alternative margining system.

SPAN Overview

Developed by the Chicago Mercantile Exchange in 1988, the Standard Portfolio Analysis of Risk (SPAN) performance bond margining system for calculating requirements has become the futures industry standard.

SPAN evaluates the risk of an entire account's futures/options portfolio and assesses a margin requirement based on such risk. It accomplishes this by establishing reasonable movements in futures prices over a one-day period. The resulting effect of these "risk arrays" is to capture respective gains or losses of futures and options positions within that commodity. Each exchange maintains the responsibility of determining these risk arrays as well as the option calculations that are needed to determine the effect of various futures price movements on option values.

Advantages and Rationale of SPAN

SPAN recognizes the special characteristics of options and seeks to accurately assess the impact on option values from not only futures price movements but also changes in market volatility and the passage of time. The end result is that the minimum margin on the portfolio will more accurately reflect the inherent risk involved with those positions as a whole.

Option Equity and Risk Margin

One of the special characteristics of options is that a long option position can never be at risk for more than its premium. In order for SPAN to assess the risk of all positions in the portfolio and at the same time allow credit for the premium involved, SPAN allows the excess of the option premium over the risk margin for any option position to be applied to the risk margin on other positions.

Margin Calculations

Under SPAN, firms will receive risk arrays from the respective clearing organizations to calculate margins for their accounts. These firms will then calculate minimum margin requirements for all of its accounts based on the arrays on a daily basis. Individuals are able to calculate their own margin requirements through loading the risk arrays and their positions into PC-SPAN.

Risk Arrays

Under SPAN, each exchange will provide risk arrays for each commodity traded. These arrays are comprised of 16 "what if" scenarios that cover a range of reasonable futures price and volatility changes over the course of a day. For example, what if crude oil futures prices rose by \$1 and volatility on crude oil options fell? Each scenario measures the impact on profit and loss of the hypothetical movements on futures and options positions within that commodity. Each answer becomes a component of the risk array, and SPAN will take the largest loss from that array as the minimum margin for the day. In order to construct arrays, each exchange provides both the futures and volatility scan ranges.

Futures Scan Range

The futures scan range is equal to a firm's maintenance margin requirement for outright positions. This represents the interval that a futures contract's prices are likely to move (up or down) over a single day. For example, if the scan range is \$1,500 for crude oil contracts, it implies that crude oil futures prices are most likely to fluctuate within a band of \$1.50/barrel up or down (since each contract represents 1,000 barrels) from the last settlement price. To construct the risk arrays, SPAN sets fractions (multiples of 1/3) of the range both up and down as the plausible price changes. Each commodity traded has its own scan range.

Volatility Scan Range

In addition to futures price changes, a major determinant of option value is the inherent volatility that is expected in the market. Each exchange will set parameters, both up and down, for likely changes in expected market volatility. The impact on option value of these hypothetical changes is then used to capture the profit (or loss) on option positions, and hence the risk of options in a given portfolio.

Extreme Move Scenario

Each exchange will set an extreme move parameter, usually set equal to a multiple of the futures scan range, as well as a percent of this move it believes it needs to be covered for possible abrupt changes of futures prices.

Sixteen "What If" Scenarios

1. Futures unchanged, volatility up
2. Futures unchanged, volatility down
3. Futures up 1/3 range, volatility up
4. Futures up 1/3 range, volatility down
5. Futures down 1/3 range, volatility up
6. Futures down 1/3 range, volatility down
7. Futures up 2/3 range, volatility up
8. Futures up 2/3 range, volatility down
9. Futures down 2/3 range, volatility up
10. Futures down 2/3 range, volatility down
11. Futures up 3/3 range, volatility up
12. Futures up 3/3 range, volatility down
13. Futures down 3/3 range, volatility up
14. Futures down 3/3 range, volatility down
15. Futures up extreme move
(cover 35% of loss)
16. Futures down extreme move
(cover 35% of loss)

Other Factors Affecting SPAN Margin Requirements

In addition to the above risk arrays, each exchange will also assess intermonth spread charges, intercommodity spread credits, and short option minimum margins. These will affect the final margin requirements for large portfolios.

The intermonth spread charges represent additional margin payments that are assessed on positions on different contract months within a commodity that are on opposite sides of the market. This is to capture the risk that price changes between different contract months of the same commodity often do not match each other exactly. In fact, there are often times when different contract months within the same commodity experience opposite price change. Since this suggests a higher level of risk to the portfolio, an additional margin charge is assessed to these spread positions.

SPAN also recognizes that many commodities tend to experience similar price movements. For offsetting positions in different commodities that are related, SPAN allows certain credits to be given to the portfolio's total margin to reflect this lower overall risk.

Finally, unlike long option positions which have a maximum potential loss, the value of the option premium, short options have virtually unlimited risk. SPAN accounts for this characteristic of short option positions by having a minimum margin assessed, regardless of the losses determined in the above risk arrays.

Each exchange maintains the responsibility of setting the intermonth spread charge, the intercommodity spread credit, and the short option minimum margin.

A Simple Margin Calculation

Assume a position contains a single long January Crude Oil futures contract. Assuming an underlying futures price of \$20, a SPAN futures scan range of \$1,500, and volatility scan range of 2 percent. The risk array would look like the following:

SCENARIO	VALUE LOSS
1. Futures unchanged, volatility up	\$0
2. Futures unchanged, volatility down	\$0
3. Futures up 1/3 range, volatility up	-\$500
4. Futures up 1/3 range, volatility down	-\$500
5. Futures down 1/3 range, volatility up	\$500
6. Futures down 1/3 range, volatility down	\$500
7. Futures up 2/3 range, volatility up	-\$1,000
8. Futures up 2/3 range, volatility down	-\$1,000
9. Futures down 2/3 range, volatility up	\$1,000
10. Futures down 2/3 range, volatility down	\$1,000
11. Futures up 3/3 range, volatility up	-\$1,500
12. Futures up 3/3 range, volatility down	-\$1,500
13. Futures down 3/3 range, volatility up	\$1,500
14. Futures down 3/3 range, volatility down	\$1,500
15. Futures up extreme move (cover 35% of loss)	-\$1,050
16. Futures down extreme move (cover 35% of loss)	\$1,050

Scanning the value loss column, \$1,500 can be seen to be the worst case loss, and therefore becomes the margin. This also happens to be the outright

margin level, which illustrates that for simple outright positions, margin levels will be set the same way as they are currently established.

Suppose a position contains one short January \$20 Crude Oil Call Option. This risk array would look like the following:

SCENARIO	VALUE LOSS
1. Futures unchanged, volatility up	\$37
2. Futures unchanged, volatility down	-\$52
3. Futures up 1/3 range, volatility up	\$339
4. Futures up 1/3 range, volatility down	\$255
5. Futures down 1/3 range, volatility up	-\$170
6. Futures down 1/3 range, volatility down	-\$252
7. Futures up 2/3 range, volatility up	\$696
8. Futures up 2/3 range, volatility down	\$633
9. Futures down 2/3 range, volatility up	-\$317
10. Futures down 2/3 range, volatility down	-\$374
11. Futures up 3/3 range, volatility up	\$1,115
12. Futures up 3/3 range, volatility down	\$1,075
13. Futures down 3/3 range, volatility up	-\$369
14. Futures down 3/3 range, volatility down	-\$429
15. Futures up extreme move (cover 35% of loss)	\$890
16. Futures down extreme move (cover 35% of loss)	-\$159

To determine the margin, SPAN takes the maximum loss from the risk arrays (note: negative values refer to gains). In the above example, the margin resolves to line 11: \$1,115.

A somewhat more complicated example would be if we combined the two simple positions above. Adding the two risk array results in the following:

SCENARIO	VALUE LOSS
1. Futures unchanged, volatility up	\$37
2. Futures unchanged, volatility down	-\$52
3. Futures up 1/3 range, volatility up	-\$161
4. Futures up 1/3 range, volatility down	-\$245
5. Futures down 1/3 range, volatility up	\$330
6. Futures down 1/3 range, volatility down	\$248
7. Futures up 2/3 range, volatility up	-\$304
8. Futures up 2/3 range, volatility down	-\$367
9. Futures down 2/3 range, volatility up	\$683
10. Futures down 2/3 range, volatility down	\$626
11. Futures up 3/3 range, volatility up	-\$385
12. Futures up 3/3 range, volatility down	-\$425
13. Futures down 3/3 range, volatility up	\$1,104
14. Futures down 3/3 range, volatility down	\$1,071
15. Futures up extreme move (cover 35% of loss)	-\$160
16. Futures down extreme move (cover 35% of loss)	\$891

In this case the worse case loss resolves to \$1,104.

Chapter 12 – Cross-Margins for Equity Index and Interest Rate Futures and Options

General Information

Cross-margins programs have become increasingly valuable risk management tools in recent years. There are currently three approved cross-margins programs in place. The programs include (1) the Chicago Mercantile Exchange (CME), the New York Clearing Corporation (NYCC) and Options Clearing Corporation (OCC); (2) the Board of Trade Clearing Corporation (BOTCC) and OCC; and (3) the CME and the BOTCC. Note: The NYCC clears the trades of the New York Futures Exchange (NYFE), the BOTCC clears the trades of the Chicago Board of Trade (CBOT), while the OCC clears the trades for all securities options presently listed and traded on national securities exchanges.

The programs allow for cross margining of certain equity index and interest rate futures and options contracts for proprietary, noncustomer, and qualified market professional accounts. It is hoped that these programs can be expanded to include other products and account types in the future.

The cross-margins programs provide the reduced margin requirements and net settlement obligations by combining into one account eligible futures and options cleared by the respective programs. Using the SPAN margin system and/or the Theoretical Intermarket Margin system (TIMS), the cross-margins programs recognize all components of a related portfolio. This benefit may be available at both the account and clearing levels.

Eligible Participants

CME/BOTCC Cross-Margins Program:

Initially, clearing member firms can establish a cross-margins clearing account for house positions only. This includes proprietary and other non-customer accounts as defined by CFTC Regulation 1.3(y). In the future, the clearing organizations will allow firms to establish a customer cross-margins clearing account. This will include CME and CBOT member accounts, as well as non-member customers.

OCC Cross-Margins Programs:

Prior to April 1, 1998, Federal Reserve Regulation T (Extension of Credit to Customers) limited cross-margins participation. Until that time, Regulation T only recognized futures and options on futures as a reduction in security margin requirements for registered market makers and specialists, not futures locals. Thus, clearing firms were prohibited from giving futures traders a margin reduction on their securities positions based on offsetting futures contracts.

Amendments adopted in April 1998 to Regulation T allow commodities and foreign exchange positions in non-securities credit accounts to be considered in the calculation of margin for any securities transactions. Further, the amendments allow securities exchanges to override Regulation T by adopting rules permitting “portfolio margining.”

The OCC cross-margins programs have been approved for proprietary, noncustomer and market professional accounts. Generally, the programs include, or will include, those accounts defined in CFTC Regulation 1.3(y) for

CME, BOTCC and CCC contracts and those accounts not considered customer as defined by SEC Rules 8c-1 and 15c2-1 or those accounts which are otherwise permitted under OCC rules to be carried in the proprietary cross-margins account.

However, while clearing member affiliates are considered noncustomer accounts under CFTC regulations, they are considered customer accounts under SEC rules and thus are currently not eligible cross-margin participants. As a result, cross-margin benefits cannot be extended to affiliates yet. As stated above, exchange rules must be amended to allow for portfolio margining in order for the margins of affiliated customers to be reduced based upon offsetting futures positions.

Market professional accounts are those accounts of CME members of firms owning a CME membership, CBOT members or firms owning a CBOT membership, NYFE members or firms owning a NYFE membership, or market-makers, specialists or registered traders as defined by OCC rules. Unfortunately, at this time, no securities exchange has developed and adopted rules for portfolio margining. Therefore, as indicated below, the limitations on the OCC cross-margins programs still exist.

- Market professional participation is limited to registered market makers and specialists and excludes CME, CBOT and NYFE members.
- Unless an affiliate or employee is a registered market maker or specialist, the clearing member may not pass the reduced margin requirements to the affiliate or employee. However, the clearing member can receive the reduced margin requirements and net settlement obligations at the clearing level.

The exchanges and clearing organizations are actively working with the regulators to implement the necessary modifications to the margin rules to allow for portfolio based margining. Further, work is being done to amend the rules to include all approved eligible participants.

Cross-margins arrangements can be structured several different ways. A firm that is a member of all participating clearing organizations of a cross-margins program may enter into a joint cross-margins arrangement with those organizations. However, their participation is limited to those organizations where their memberships are held. A clearing member of at least one participating clearing organization with an affiliate at another participating clearing organization of a cross-margins program may enter into an affiliate cross-margins arrangement.

In the past, customers and noncustomers were allowed to use inter-exchange credits to reduce margin requirements. However, for eligible OCC cross-margin participants, these credits have been replaced with the cross-margins program. For the OCC cross-margins programs, inter-exchange credits are still available to those customers and noncustomers not currently eligible for cross-margins and to those clearing members that are not members of another participating clearing organization and do not have an affiliate with a membership at another participating clearing organization.

Margin Collateral and Requirements

Acceptable margin collateral at the clearing level includes cash (only U.S. dollars), U.S. Treasury Securities and letters of credit. Letters of credit must be in the approved standard format and are subject to the same limitations as letters of credit in the non-cross-margins origin, but computed separately. Pass through letters of credit are not acceptable.

Acceptable margin collateral for cross-margin participants at the account level is the same as non-cross-margin accounts. A clearing member may accept from an account holder as margin any collateral that is acceptable to the exchanges in the cross-margins programs. This generally includes cash currencies of any denomination, readily marketable securities and letters of credit subject to certain limitations for the OCC programs only.

As previously noted, the cross-margins programs allow a clearing member to combine into one account eligible commodity and security positions and account equity. This combined account is considered a futures account for regulatory purposes. However, the major service bureaus cannot maintain in one account both futures and security equity positions. Firms should consult with their service bureau regarding their capabilities with respect to cross-margins. Clearing members may have to manually combine the accounts to determine their margin status.

Market professionals and noncustomer accounts are subject to the same margin requirements as any other commodity account. A clearing member must issue, age and delete calls for margin. An account cannot continue to trade with a margin deficiency after an unreasonable period of time. A reasonable period of time is less than five business days for market professional accounts and four business days for noncustomer accounts.

In determining margin status, the three cross-margins programs are not treated identically. Because the CME/BOTCC program includes only products traded on futures exchanges, accounts belonging to customers participating in the program will be considered with other customer non-cross-margins accounts. Because the OCC programs include products from both futures and equity markets, cross-margin accounts belonging to market professionals are held in a separate origin and are considered separately from the market professionals' non-cross-margins accounts. Excess equity in one origin cannot meet the margin requirements in another origin. The clearing member must transfer equity between the market professional's accounts for the OCC cross-margins programs.

As there are no segregation requirements, a noncustomer's cross-margins account can be combined with its non-cross-margins futures account in determining margin status.

Net Capital Implications of Cross-Margins

Proprietary Accounts:

Firms must calculate capital charges on proprietary positions in their cross-margins accounts similarly to non-cross-margins futures accounts. Firms can use those positions to hedge SEC-regulated products or use the account's

margin requirement as the capital charge for those positions. However, to utilize the joint clearing account's margin requirement as the proprietary capital charge, firms must put the position into their house cross-margin account. CFTC regulations require firms to compute their proprietary capital charges on the clearing organization's margin requirements.

Customer and Noncustomer Accounts:

CME/BOTCC Cross-Margins Program

Noncustomer cross-margins accounts are subject to the same undermargined capital charges as non-cross-margins futures accounts. See Chapter 5. When customer accounts become eligible for this program, they will also be subject to the same undermargined capital charges as other non-cross-margin futures accounts.

OCC Cross-Margins Program

A market professional's and/or noncustomer's cross-margins account may be subject to either the (c)(2)(x) charge or the undermargined charge to capital. The (c)(2)(x)/undermargined charge equals the greater of the (c)(2)(x) deduction (based on Appendix A to SEC Rule 15c3-1) or the margin deficiency (based on the SPAN margin system) in the combined commodity and security cross-margins account. A cross-margins account is never subject to both charges. In computing the (c)(2)(x)/undermargined charge:

- The (c)(2)(x) charge for a cross-margins account is computed separately from the non-cross-margins security account.
- The undermargined charge is computed on the day the account becomes undermargined. It is an immediate charge to capital. Current calls cannot reduce an undermargined charge for cross-margin accounts.
- Excess equity in the cross-margins account may reduce the (c)(2)(x) charge for the non-cross-margins security account.
- Excess equity in the non-cross-margins security account may reduce the (c)(2)(x) charge for the cross-margins account. Excess equity in the non-cross margins security account may not reduce the undermargined charge for the cross-margins account. Thus, if the undermargined charge is greater than the net (c)(2)(x) charge, the clearing member is subject to an undermargined charge that can only be reduced once funds are transferred to the cross-margins account. Only an equity system transfer is required provided the clearing member maintains excess segregated funds in the cross-margins and non-cross-margins origins.
- Due to bankruptcy/subordination concerns, excess equity in the market professional's cross-margins account may not reduce the undermargined charge for the non-cross-margins futures account until funds are transferred to the non-cross-margins commodity account. Again, only an equity system transfer is required provided the clearing member maintains excess segregated funds in the cross-margins and non-cross-margins origins.

- Further, excess equity in the market professional's non-cross-margins futures account may not reduce the (c)(2)(x)/undermargined charge for the cross-margins account until funds are transferred to the cross-margins account. Only an equity system transfer is required provided the clearing member maintains excess segregated funds in the cross-margins and non-cross-margins origins.

Example #1 – Capital Charges for Cross-margins Market Makers:

	XM Account
TE/NLE	\$10,000
IMR/MMR	\$16,000
(c)(2)(x) Haircut	\$18,000
Margin (Deficiency)	\$(6,000)
Current Calls	\$ 6,000
(c)(2)(x) Charge	\$ 8,000

The capital charge is equal to the greater of the (c)(2)(x) charge or the undermargined charge. Therefore, in this example, the capital charge is equal to \$8,000.

Example #2

	XM Account
TE/NLE	\$10,000
IMR/MMR	\$20,000
(c)(2)(x) Haircut	\$18,000
Margin (Deficiency)	\$(10,000)
Current Calls	\$10,000
(c)(2)(x) Charge	\$ 8,000

The capital charge is equal to the greater of the (c)(2)(x) charge or the undermargined charge. However, because the undermargined charge is an immediate charge for cross-margins, the margin deficiency cannot be reduced by current calls. Therefore, in this example, the capital charge is equal to \$10,000.

Example #3

	XM Account	Non-XM Security Acct.	Non-XM Futures Acct.
TE/NLE	\$10,000	\$20,000	\$25,000
IMR/MMR	\$20,000	-0-	\$10,000
(c)(2)(x) Haircut	\$22,000	\$ 5,000	-0-
(Deficiency)/Excess	\$(10,000)	-0-	\$15,000
Current Calls	\$10,000	-0-	-0-
(c)(2)(x) Charge	\$12,000	-0-	-0-

Excess equity in the non-cross-margins security account may reduce the (c)(2)(x) charge in the cross-margins account but may not reduce the undermargined charge unless funds are transferred between the origins. Excess equity in the non-cross-margins futures account may not reduce either

the (c)(2)(x) charge or the undermargined charge for the cross-margins account. Therefore, in this example, the \$15,000 excess equity in the non-cross-margins security account may eliminate the \$12,000 (c)(2)(x) charge in the cross-margins account. This excess may not reduce the \$10,000 margin deficiency. The firm will take a \$10,000 capital charge for the cross-margin deficiency. No capital charge will apply to the non-cross-margins security or futures account.

Example #4

	XM Account	Non-XM Security Acct.	Non-XM Futures Acct.
TE/NLE	\$30,000	\$10,000	\$15,000
IMR/MMR	\$10,000	-0-	\$25,000
(c)(2)(x) Haircut	\$ 5,000	\$25,000	-0-
(Deficiency)/Excess	\$20,000	-0-	\$(10,000)
Current Calls	-0-	-0-	-0-
(c)(2)(x) Charge	-0-	\$15,000	-0-

In this example, the cross-margins account has excess funds and is therefore not subject to any capital charges. The \$25,000 excess equity over the (c)(2)(x) haircut may be applied against the \$15,000 (c)(2)(x) charge in the non-cross-margins security account. The excess equity in the cross-margins account may not be applied towards the undermargined charge in the non-cross-margins futures account. As the non-cross-margins futures account has been undermargined for greater than five days and therefore has no current calls, the firm will take a \$10,000 undermargined charge for this account. No capital charges will apply to the cross-margins account or the non-cross-margins security account. In addition, the firm may disburse the excess margin funds of \$20,000 in the cross-margins account to the customer.

Sources of Additional Information

Your attorney and accountant

Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, N.W.
Washington, D.C. 20581
(202) 418-5000
www.cftc.gov

Futures Industry Association
2001 Pennsylvania Avenue, N.W.
Suite 600
Washington, D.C. 20581
(202) 466-5460
www.fiafii.org

Managed Funds Association
2025 M Street, N.W.
Suite 800
Washington D.C. 20036-2422
(202) 367-1140
www.mfainfo.org

National Introducing Brokers Association
55 West Monroe Street
Suite 3330
Chicago, IL 60603
(312) 977-0598
www.theniba.com

National Futures Association
300 South Riverside Plaza
Suite 1800
Chicago, IL 60606-6615
(312) 781-1410
www.nfa.futures.org