SPAN MARGIN SYSTEM

The Standard Portfolio Analysis of Risk (SPAN) margin system provides a method to integrate both futures and options on futures contracts into the same system to assess a portfolio's risk. Contracts are examined over a range of price and volatility changes to determine potential gains and losses. SPAN also allows for both Inter-Month and Inter-Commodity spreading.

ICE Clear U.S. uses the SPAN margin system to calculate the original margin requirements of its clearing member firms. Additionally, ICE Futures U.S. requires its member firms to margin their customer positions using the SPAN system. The use of SPAN requires the ICE Clear U.S. Risk Department to set parameters that determine how each ICE Futures U.S. contract is analyzed. Those parameters will be outlined in this document and examples of how those parameters impact the calculation of risk will be provided. The ICE Clear U.S. Risk Department also sets allowable spreads between commodities. Each day SPAN risk arrays are computed using these parameters and disseminated by ICE Clear U.S. to give individual firms and customers the data needed to determine their margin requirements.

This document provides an introduction to the SPAN system. Section I of this document is a brief overview of the SPAN margin system. It is followed by Section II contains a detailed explanation and examples of the methods used to calculate SPAN margin requirements.

SECTION I

SPAN OVERVIEW

Introduction to SPAN

The first process that SPAN performs is determining the risk for each futures and options contract for a particular commodity by scanning over sixteen different price and volatility scenarios. The Commodity Scanning Risk is then established by adding up the risk of each futures expiration month and each strike price for each option contract.   As part of the calculation for determining risk, SPAN allows different futures and options months for a particular commodity to offset one another in the scanning process. Next, Inter-Month Spread Charges are added to account for the basis risk between contracts. The sum of the Commodity Scanning Risk and the Inter-Month Spread Charge equals the Commodity Risk.

Once the Commodity Risk is calculated, SPAN credits, or provides a margin reduction, for Inter-Commodity Spreads. These credits recognize the price relationship between different commodities and credit the portfolio for these relationships. The summation of all Commodity Risks minus the lnter-Commodity Spread Credits yields the Risk Margin.

As a final risk check, SPAN totals the gross number of short options and assesses a charge for each one. This total charge is the Short Option Minimum. Each commodity's Short Option Minimum is compared with the commodity's Risk Margin. The larger number is the commodity's Maintenance Margin. This number is multiplied by the Initial-to-Maintenance Margin Ratio to determine the Initial Margin. The summation of all commodity's Maintenance Margins is the Portfolio Maintenance Margin. The summation of all commodity's Initial Margins is the Portfolio Initial Margin.

The next sections explain the components of the SPAN risk calculation described above.

Scanning Risk

SPAN uses option pricing models to determine how each contract will perform over a number of scenarios. Option pricing models are typically constructed using five inputs:
1. Price of Underlying Instrument
2. Strike Price
3. Volatility
4. Risk-free interest Rate
5. Time to Expiration

In a model for options on futures, the strike price is set and the interest rate is essentially irrelevant. The SPAN model takes the remaining three variables (price of the underlying instrument, volatility and time to expiration) and examines the commodity risk under various changes in these variables. SPAN currently looks at the following 16 scenarios:

Scenario	Price of Underlying	Volatility	Time to Expiration
One	Futures unchanged	Up	Reduced by 1 day
Two	Futures unchanged	Down	Reduced by 1 day
Three	Futures up 1/3 range	Up	Reduced by I day
Four	Futures up 1/3 range	Down	Reduced by 1 day
Five	Futures down 1/3 range	Up	Reduced by 1 day
Six	Futures down 1/3 range	Down	Reduced by 1 day
Seven	Futures up 2/3 range	Up	Reduced by 1 day
Eight	Futures up 2/3 range	Down	Reduced by 1 day
Nine	Futures down 2/3 range	Up	Reduced by 1 day
Ten	Futures down 2/3 range	Down	Reduced by 1 day
Eleven	Futures up 3/3 range	Up	Reduced by I day
Twelve	Futures up 3/3 range	Down	Reduced by 1 day
Thirteen	Futures down 3/3 range	Up	Reduced by 1 day
Fourteen	Futures down 3/3 range	Down	Reduced by 1 day
Fifteen	Futures up extreme move Cover % of loss	Unchanged	Reduced by 1 day
Sixteen	Futures down extreme move Cover % of loss	Unchanged	Reduced by 1 day

The price range examined is based on the futures maintenance margin for the commodity. Both the futures maintenance margin and volatility range are set by the ICE Clear U.S. Risk Department. In addition to the 14 scenarios based on the maintenance margin, two scenarios are based on an extreme market move. The extreme scenarios calculates the change in value when the futures moves several times the margin, but only a fraction of the resulting change in value is covered. The purpose of the extreme move is to cover losses for deep out-of-the-money options. Futures positions are examined over these same scenarios. The change in volatility does not affect the futures. A portfolio composed entirely of futures positions would find its maximum total loss under Scenario 11 or Scenario 13, depending on whether the portfolio is long or short. Scenarios 15 and 16 are set to never exceed 11 and 13 for futures portfolios.

Each day after the markets close, ICE Clear U.S. will apply each scenario to each option and futures contract. It will create a Risk Array with 16 loss and gain values for each contract. Each month and each strike price will have its own risk array. These risk arrays are provided to market participants who can use them to determine their margin requirements.

A portfolio's net position in each contract is multiplied by the 16 array values which yields loss arrays for each contract. The loss array values are then summed across each scenario for each commodity to determine the Total Loss for the commodity. The highest value of the 16 loss values is the Commodity Scanning Risk.

More information on the Scanning Risk, including a sample calculation for Sugar #11, can be found in Section II starting on page 10. In this example, the gross position of each Sugar #11 contract is multiplied by its Risk Array. The loss arrays are then summed to find the Total Loss Array. Positive values are losses to the portfolio and negative values are gains. The highest number in the Total Loss Array is the Commodity Scanning Risk. In this example, Line 14 has

the greatest loss of $2,099 (page 11).

The simplicity of SPAN is that clearing member firms and market participants do not have to calculate the loss or gain under the various scenarios. ICE Clear U.S. will calculate these arrays and disseminate them each day. The firm simply has to multiply across arrays to find the commodity risk.

Inter-month Spread Charges
In scanning across commodities, SPAN treats all contract months the same. The scanning arrays are created with the assumption that the underlying futures contracts will all move by the same dollar amount. For example, ICE Clear U.S. will set only one margin amount for Sugar #11 and this amount will cover all contract months. If the Sugar #11 margins are set at $2,000, the scanning range will be $2,000 for May Sugar #11 and $2,000 for November Sugar #11. The reality is that futures contract months do not always move in such a synchronous manner.

To account for the difference in price movement in certain contract months, SPAN adds Inter-Month Spread Charges to the Commodity Scanning Risk of a portfolio. These spread charges acknowledge the fact that there is some basis risk between contract months that is netted out during the scanning process. SPAN includes option contracts in the Inter-Month Spread Charge using the option's delta to create futures equivalent positions. In this way the true Inter-Month Spread Charge is observed.

ICE Clear U.S. currently recognizes three methods of assessing Inter-Month Spread Charges to account for different commodities. The first method does not recognize Inter-Month Spreads and assumes that all prices for all contracts move in tandem. The second method creates as many spreads as possible between net long and net short months. It charges the same rate for all spreads created. The third method creates as many spreads as possible between net long and net short months, just like the second method. However, it groups certain contract months together and charges different rates for spreads within and between each group of contract months. The ICE Clear U.S. Risk Department determines which Inter-Month Spread Charge method is appropriate for each commodity. This information is included with the parameters that accompany the risk arrays produced and distributed each day.

More information Inter-Month Spread Charges can be found in Section II.

Delivery Month Charge
SPAN has the option of adding charges to those commodities that carry more risk during the delivery month. This information is included with the parameters that accompany the risk arrays produced and distributed each day. Currently, ICE Clear U.S. does not include this charge for any commodity.

More information Delivery Month Charges can be found in Section II.

Inter-Commodity Spread Credits
SPAN recognizes that different commodities may have predictable relationships in the movement of their prices and spreads between such commodities may reduce the risk in a

portfolio. Because these spreads lessen risk, SPAN gives a credit, or reduction, on the amount of margin assessed on a portfolio. Again, SPAN allows options to be included in Inter-Commodity Spreads by using option deltas to create futures equivalent positions.

The amount of spread credit is determined by the relationship between the two commodities and is set by the ICE Clear U.S. Risk Department. Spreads are sorted by the percentage savings. The highest percentage saving spread is given the highest priority. Spreads are formed using the net deltas of the commodities in the order of spread priority.

SPAN isolates the futures price risk per delta for each commodity and the margin is reduced by this amount multiplied by the percent saving for any spread that is formed. Information on Inter-Commodity Spread Credits is distributed each day with the parameters that accompany the risk arrays.

More information Inter-Commodity Spread Credits, including an example, can be found in Section II.

Short Option Minimum Margin
Deep out-of-the-money options may present more risk to the portfolio than the scanning range covers. In order to account for this fact, SPAN creates a Short Option Minimum Margin. Each commodity is assigned a Short Option Minimum Charge by the ICE Clear U.S. Risk Department. All short options, puts and calls, are totaled and multiplied by the appropriate short option charge. The result is the Short Option Minimum Margin.

The Short Option Minimum is not a charge to be added to the portfolio risk. Rather, it is the absolute minimum margin assessed to a portfolio. The margin calculated under SPAN is compared to the Short Option Minimum Margin and the larger number is taken to be the portfolio's margin. Thus, the Short Option Minimum Margin acts as an absolute floor on the margin amount for the portfolio. Information on Short Option Minimum Margins is distributed each day with the parameters that accompany the risk arrays.

More information Short Option Minimum Margin can be found in Section II.

Portfolio Risk Margin
To find the total portfolio margin, SPAN sums the Scanning Risk, Inter-Month Spread Charge, and Delivery Month Charge for each commodity to derive the commodities' risk. Then, SPAN sums the commodity risk of all commodities and subtracts the Inter-Commodity Spread Credits. This number is compared with the Short Option Minimum to determine the Maintenance Margin. The Maintenance Margin is multiplied by the Initial Margin Mark-up Percentage to determine the Initial Margin.

The summation of all Maintenance Margins equals the Portfolio Maintenance Margin. The summation of all Initial Margins equals the Portfolio Initial Margin.

SECTION II

SPAN TECHNICAL SPECIFICATIONS AND EXAMPLES

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Risk Arrays
SPAN assesses the change in value for each option over sixteen scenarios or *Risk Arrays*. The change in option value is defined as the difference between the option settle price and the theoretical value of the option that is calculated when subjected to the 16 scenarios outlined below. The parameters for these sixteen scenarios are determined by the ICE Clear U.S. Risk Department and are subject to change without notice.

The 16 market scenarios for each option used to generate the Risk Arrays are as follows:

1. Leave the option's underlying futures price unchanged and increase the option's volatility a set percentage
2. Leave the option's underlying futures price unchanged and decrease the option's volatility a set percentage
3. Increase the option's underlying futures price by 1/3 the margin and increase the option's volatility a set percentage
4. Increase the option's underlying futures price by 1/3 the margin and decrease the option's volatility a set percentage
5. Decrease the option's underlying futures price by 1/3 the margin and increase the option's volatility a set percentage
6. Decrease the option's underlying futures price by 1/3 the margin and increase the option's volatility a set percentage
7. Increase the option's underlying futures price by 2/3 the margin and increase the option's volatility a set percentage
8. Increase the option's underlying futures price by 2/3 the margin and decrease the option's volatility a set percentage
9. Decrease the option's underlying futures price by 2/3 the margin and increase the option's volatility a set percentage
10. Decrease the option's underlying futures price by 2/3 the margin and increase the option's volatility a set percentage
11. Increase the option's underlying futures price by its the margin and increase the option's volatility a set percentage
12. Increase the option's underlying futures price by its margin and decrease the option's volatility a set percentage
13. Decrease the option's underlying futures price by its margin and increase the option's volatility a set percentage
14. Decrease the option's underlying futures price by its the margin and increase the option's volatility a set percentage
15. Increase the price of the underlying futures three times the margin and multiply the resulting change in the option's value by 32%. The option's volatility remains unchanged.
16. Decrease the price of the underlying futures three times the margin and multiply the resulting change in the option's value by 32%. The option's volatility remains unchanged.

Scenarios 15 and 16 are known as the extreme scenarios.

Scan Risk Calculation
Scanning Risk is SPAN's most basic portfolio risk calculation. It assesses the risk of each individual contract month and strike price.

The change in value for each position in each scenario is multiplied by the portfolio position size in that option (long positions are indicated by a positive number, short positions by a negative number).

The Scan Risk calculation sums changes in value in all positions for each Risk Array. The Scan Risk for a portfolio in each commodity equals the largest Total Loss value (of sixteen) for that commodity.

The following steps calculate the Scanning Risk for a portfolio's positions in one commodity. For each position of each commodity in the portfolio:
1. Select the arrays for those contracts where the portfolio has positions. Ignore the arrays of contract where the portfolio does not have positions.
2. Multiply each line on each selected array by the corresponding position size.
    a. For long futures, long calls, and long puts, multiply by a positive position size. For short futures, short calls, and short puts, multiply by a negative position size.
    b. Examples: If a position is long 2 calls, multiply by +2 If a position is short 2 calls, multiply by -2
3. On each line, add across the arrays to find the Total Loss for that commodity. Ignore any difference between contract months or expirations.
4. This step yields 16 different Total Loss values for the commodity.
5. Scanning Risk equals the largest Total Loss for this commodity. Remember, a positive number indicates a loss.

SPAN Scan Risk Calculation Example
The following is an example of how SPAN calculates the Scan Risk in a portfolio of futures and options on futures. The arrays represent the theoretical change in the price of the position for each market scenario.

Sample Portfolio
1 short May 2010 Sugar #11 Futures
1 long May 2010 Sugar #11 23.25 Put
4 long may 2010 Sugar #11 24.25 Calls

Here is other pertinent information about the portfolio:

	Future	Put	Call
Price	22.64	1.87	0.93
Strike Price		23.25	24.25
Contract Value	$25,356.80	$2,094.4	$1,041.6
Delta		-0.5319	0.3752
Volatility		0.48881	0.49706

The following table shows the SPAN risk arrays for the 3 positions in the portfolio (negative numbers represent theoretical gains and positive numbers represent theoretical losses):

SPAN Risk Arrays for selected positions	Future	Put 23.25	Call 24.25
1. Volatility Scan Range up, futures unchanged	0	(186)	(178)
2. Volatility Scan Range down, futures unchanged	0	225	212
3. Volatility Scan Range up, futures up 1/3 margin	(767)	188	(504)
4. Volatility Scan Range down, futures up 1/3 margin	(767)	611	(84)
5. Volatility Scan Range up, futures down 1/3 margin	767	(609)	100
6. Volatility Scan Range down, futures down 1/3 margin	767	(224)	451
7. Volatility Scan Range up, futures up 2/3 margin	(1,533)	514	(876)
8. Volatility Scan Range down, futures up 2/3 margin	(1,533)	934	(440)
9. Volatility Scan Range up, futures down 2/3 margin	1,533	(1,083)	333
10. Volatility Scan Range down, futures down 2/3 margin	1,533	(734)	636
11. Volatility Scan Range up, futures up 1 margin	(2,300)	795	(1,296)
12. Volatility Scan Range down, futures up 1 margin	(2,300)	1,201	(855)
13. Volatility Scan Range up, futures down 1 margin	2,300	(1,605)	522
14. Volatility Scan Range down, futures down 1 margin	2,300	(1,303)	774
15. Volatility Scan Range unchanged, 32% X futures up 3 margins	(2,277)	613	(1,475)
16. Volatility Scan Range unchanged, 32% X futures down 3 margins	2,277	(1,824)	334

The following are the risk arrays that are created after the positions are applied to the risk arrays. In addition, the summary array is the sum of the values of each position's applicable risk scenarios.

	Future	Put	Call	Summary Array
Positions:	-1	-1	4	
1. Volatility Scan Range up, futures unchanged	0	186	(712)	(526)
2. Volatility Scan Range down, futures unchanged	0	(225)	848	623
3. Volatility Scan Range up, futures up 1/3 margin	767	(188)	(2,016)	(1,437)
4. Volatility Scan Range down, futures up 1/3 margin	767	(611)	(336)	(180)
5. Volatility Scan Range up, futures down 1/3 margin	(767)	609	400	242
6. Volatility Scan Range down, futures down 1/3 margin	(767)	224	1,804	1,261
7. Volatility Scan Range up, futures up 2/3 margin	1,533	(514)	(3,504)	(2,485)
8. Volatility Scan Range down, futures up 2/3 margin	1,533	(934)	(1,760)	(1,161)
9. Volatility Scan Range up, futures down 2/3 margin	(1,533)	1,083	1,332	882
10. Volatility Scan Range down, futures down 2/3 margin	(1,533)	734	2,544	1,745
11. Volatility Scan Range up, futures up 1 margin	2,300	(795)	(5,184)	(3,679)
12. Volatility Scan Range down, futures up 1 margin	2,300	(1,201)	(3,420)	(2,321)
13. Volatility Scan Range up, futures down 1 margin	(2,300)	1,605	2,088	1,393
14. Volatility Scan Range down, futures down 1 margin	(2,300)	1,303	3,096	2,099

15. Volatility Scan Range unchanged, 32% X futures up 3 margins	2,277	(613)	(5,900)	(4,236)
16. Volatility Scan Range unchanged, 32% X futures down 3 margins	(2,277)	1,824	1,336	883

Largest Theoretical Loss of Summary Array: 2,099

The scan risk equals the largest theoretical loss. If there are no other adjustments, the portfolio's maintenance margin will equal the scan risk.

Inter-Month Spread Charge

Scan Risk applies no charge for inter-month spread risk. The Scan Risk calculation assumes that a long position in one month exactly offsets a short position of the same amount in a different month. SPAN applies an Inter-Month Spread Charge to each spread in the portfolio to cover this risk.

The ICE Clear U.S. Risk Department selects an Inter-Month Spread Charge Method for each commodity:

Method 1:   No extra charge is added

Method 2:   Charge a single rate for all Inter-Month spreads

Method 3:   Charge different rates for different contract tiers. Tiers are defined as groups of contract months of a commodity. For example, months one thru four could be Tier 1, months five thru eight could be Tier 2 and months nine thru all remaining months could be Tier 3.

Inter-Month Spread Charge Examples

For Method 1:

Inter-Month Spread Charge = 0

For Method 2:

- Add all positions within a commodity month to find the net delta for each commodity month. A long position is indicated by a positive number. A short position is indicated by a negative number.

- Add all net long delta month totals to get a combined total net long delta value and all net short delta month totals to get a combined total net short delta value.

- Deltas may be rounded depending on the settings in the SPAN software.

- Calculate the number of Inter-Month spreads.
  - Example: If the rounded total combined net long delta value is +5 and the rounded total combined net short delta value is -3, SPAN will calculate 3 Inter-Month spreads.

- Calculate the Inter-Month Spread Charge for the portfolio.
  - Multiply the number of inter-month spreads by the Inter-Month Spread Charge for the commodity. The result is the Inter-Month Spread Charge for the portfolio in this commodity.

  - Example: If the Spread Charge Rate is $100 and there are 3 spreads, SPAN will apply an Inter-Month Spread Charge of $300 to the portfolio for this commodity.

- Add the spread charge to the Scan Risk previously calculated.

For Method 3:

- Add all positions within a commodity month to find the net delta for each commodity month. A long position is indicated by a positive number. A short position is indicated by a negative number.

- Add all net long deltas for each tier to get a combined total net long back-month delta value. Add all net short deltas for each tier to get a combined total net short back-month delta value.

- Deltas may be rounded depending on the settings in the SPAN software.

- Calculate the number of Inter-Month spreads within each tier.
  - Example: If the rounded total combined net long delta value is +5 and the rounded total combined net short delta value is -3 within a tier, SPAN will calculate 3 Inter-Month spreads in that tier.

- Calculate the number of spreads between each tier.
  - Example: If the rounded total combined net long delta for tier 1 is +5 and the rounded total combined net short delta for tier 2 is -3, SPAN will calculate 3 Inter-Month spreads between Tier 1 and Tier 2.

- Calculate the Inter-Month Spread Charge for the portfolio.
  - SPAN multiplies the number of Inter-Month spreads by the appropriate Inter-Month Spread Charge for the commodity. The calculation is made for spreads formed with each tier and between different tiers.

o Example: If the Tier 1 Inter-Month Spread Charge Rate is $200, the Tier 2 Inter-Month Spread Charge Rate is $100 and the Inter-Month Spread Charge Rate for spreads between Tier 1 and Tier 2 is $300, and there are 3 spreads within Tier 1, 3 spreads, within Tier 2 and 2 spreads between Tier 1 and Tier 2, SPAN will apply an Inter-Month Spread Charge of (3 X $200) + (3 X $100) + (2 X $300), or $1,500 to the portfolio for this commodity.

Delivery Month Charge

SPAN applies a Delivery Month Charge to cover the added futures price risk of a delivery month commodity.

The Exchange selects a Delivery Month Charge Method for each commodity:

Method 1:   No extra charge is added

Method 2:   The Inter-Month Spread Charge for delivery month spreads is less than the Delivery Month Charge for outrights. Method 2 applies the Delivery Month Charge exclusively to net positions and adds no Delivery Month Charge to delivery month spreads.

Delivery Month Charge Examples

For Method 1:

Delivery Month Charge = 0

For Method 2:

Calculate the number of delivery month spreads. Apply no Delivery Month Charge to delivery month spreads and apply a Delivery Month Charge only to delivery month net positions.
o Example: If the Delivery Month Charge rate is $200, the front-month Inter-Month Spread Charge is $100 and there are 3 front-month spreads and 2 front-month outrights, SPAN will apply an Inter-Month Spread Charge of $300 and a Delivery Month Charge of $400 to the portfolio for this commodity.

Inter-Commodity Spread Credits

SPAN will reduce the margin on positions that represent valid spreads within a portfolio. The reduction in margin for inter-commodity spreads is called the spread credit. The ICE Clear U.S. Risk Department determines the following parameters related to spread credits:
- Which products are related, thereby, authorizing margin reduction for spread positions;
- The ratio of positions that must be present in an account for the spread to be applied;

- The amount of the spread credit; and
- The priority for applying spreads.

SPAN calculates spread credits by:
1. Determine the number of spreads that exist in the portfolio:
    - Calculate the net delta for each commodity.
        - Add the monthly net deltas to get the commodity's net delta.
        - See the Inter-Month spread charge section for an explanation of calculation of the commodity's net delta.
    - Form the spreads between net long and net short positions.
    - Identify the highest priority spread.
    - Identify the ratio of positions required to form spreads.
    - Use the available deltas to form as many spread types as possible.
    - Remove the deltas used for these spreads from the pool of available deltas.
    - With the remaining deltas, form other spreads with lower priorities.
        - Repeat this step until no more spreads could be formed.

2. Determine the amount of margin reduction for each spread.
    - Calculate the futures price risk.
        - The following formula provides an estimation:
            - Scan Risk = Futures Price Risk + Volatility Risk + Time Risk
        - Delta values and the resulting spreads do not relate to Volatility Risk or Time Risk.
        - Therefore, inter-commodity spreads should not be impacted by Volatility Risk or Time Risk.
    - Calculate the Time Risk by summing the results of the summary array for scenario 1 and scenario 2 and dividing the sum by 2.
        - See the Scan Risk Calculation above.
    - Identify the Scanning Risk line from the scenario of the summary array that contained the largest loss and its Paired Line which is identified in the following table:

If the Scanning Risk is on Line:	The Paired Line is:
1	2
2	1
3	4
4	3
5	6
6	5
7	8
8	7
9	10
10	9
11	12
12	11
13	14

14	13
15	15 (not 16)
16	16 (not 15)

- Calculate the Volatility Risk by summing the results of the summary array for the scenario with the largest loss and its paired line and dividing the sum by 2.
- Calculate the futures price risk by averaging the Scanning Risk and Paired Line Loss and subtracting the Time Risk.
- Calculate the Weighted Futures Price Risk by dividing the Futures Price Risk by the absolute value of its delta.

Inter-Commodity Spread Credits Example

Assume the following positions are in a portfolio:

100 long June 2010 Russell 2000 Calls (TF) with a Strike Price of 700 (Delta of .5661)
80 short June 2010 Russell 1000 Calls (RF) with a Strike Price of 600 (Delta of .8754)

Here is the summary array for each position:

Scenario	100 Long July 2010 700 TF Calls	80 Short July 2010 600 RF Calls
1	(25,600)	28,960
2	28,900	(19,200)
3	(105,400)	96,400
4	(52,500)	58,240
5	45,900	(35,440)
6	100,000	(94,560)
7	(193,200)	166,400
8	(143,200)	136,880
9	108,300	(96,240)
10	160,600	(166,480)
11	(288,400)	238,640
12	(242,500)	216,240
13	162,000	(153,120)
14	210,600	(233,520)
15	(317,600)	229,680
16	109,700	(141,520)
Delta	56.61	(70.03)
Scan Risk	210,600	238,640
Time Risk	1,650	4,880
Paired Line Loss	162,000	216,240
Futures Price Risk	184,650	222,560
Weighted Futures Price Risk	3,262	3,178

Number of spreads	57	57
Spread Credit Percentage	80%	80%
Spread Credit Amount	147,720	143,924
Margin Per Product	62,880	94,716

The total margin for the portfolio would be $157,596

Short Option Minimum Charge
SPAN applies a Short Option Minimum Charge to the total number of short option contracts in a commodity portfolio.

- Example: If the Short Option Minimum Charge Rate for a commodity is $100, and there are 5 short option contracts in that commodity portfolio, SPAN will apply a Short Option Minimum Charge of $500 to the portfolio for this commodity.

Maintenance and Initial Margins
The Exchange-determined mark-up for Initial Margins is 1.4% over Maintenance Margin for agricultural commodities, and 1.33% for financial and index commodities.

For a Clearing Member Portfolio (margined by Clearing House):

SPAN applies the Maintenance Margin Requirement to all portfolios.

For a Customer Portfolio (margined by Clearing Member):

- SPAN applies the Maintenance Margin Requirement to all portfolios.
- If Maintenance Margin Requirement exceeds customer margin funds available, SPAN applies Initial Margin to entire Customer Portfolio.

OTHER INFORMATION RELATED TO MARGINS

When an account's equity is below its margin requirement, the account has a margin deficiency. For more information on calculating the margin excess or deficiency, please refer to the Margins Handbook, written by the Joint Audit Committee, at http://www.wjammer.com/jac/.

The Margins Handbook contains information on issuing calls and other miscellaneous margin topics.

Information on the margin settlement process at ICE Clear U.S., see the ICE web site at www.theice.com, or https://www.theice.com/publicdocs/clear_us/ICE_Clear_US_Brochure.pdf

You may also contact the Bruce Domash in the ICE Clear U.S. Risk Department, at 312-836-6709 and bruce.domash@theice.com.