

THEORETICALLY BASED CAPITAL CHARGES

Risk Based Haircuts (RBH)

USER GUIDE

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I. Theoretically Based Capital Charges Overview

The *Risk Based Haircut* methodology may be used to calculate theoretically based capital charges as set forth within the SEC net capital rule. It applies option pricing theory and portfolio theory to positions involving listed options for the computation of capital charges.

Under the risk based method, option pricing theory is utilized to project portfolio liquidating values under various potential market scenarios. Portfolios may consist of positions in options, stocks, futures, and options on futures based on the same underlying instrument or on different highly correlated underlying instruments. Option positions include equity, index and currency products.

OCC utilizes a proprietary derivation of the Cox-Ross-Rubinstein binomial option pricing model to calculate projected liquidating prices. Projected prices are calculated based upon the closing underlying asset price for each day plus and minus price moves at ten equidistant data points over a broad range of market movement.

For broker-dealers other than non-clearing specialists and/or market makers, the appropriate percentages of the daily market price of the underlying are +/-15% for equities, narrow-based indexes, and non-high capitalization diversified indexes, +/-10% for high capitalization diversified indexes, +/-6% for major market foreign currencies and +/-20% for all other currencies. For non-clearing specialists and market makers, the percentages of the daily market price of the underlying are +6/-8% for high capitalization diversified indexes, +/-10% for non-high capitalization indexes and +/-4.5% for major market foreign currencies.

The implied volatility curve specific to an option's underlying security and maturity is matched to the potential market scenarios in the calculation of projected prices for that option. Interest rates reflect inter-bank swap rates, and dividend amounts are input as reported by an outside vendor.

Prices for all instruments are projected, and the resulting profits and losses of the portfolio are summed to estimate the projected aggregate gain or loss at the underlying price move.

Profit and loss values are aggregated first at the class group level, then the product group level, and finally at the portfolio group level if the positions are part of product groups that is contained in a portfolio group.

A Class Group contains options, futures, and equities relating to the same underlying instrument. Within a class group (all products with the same underlying instrument), 100% of a position's gain at any one valuation point is allowed to offset another position's loss at the same valuation point.

Other offsets are provided to instruments based on product groups and portfolio groups. A Product Group contains class groups whose underlying securities exhibit a high degree of historical price correlation. Product groups are comprised of closely related broad-based indexes, sector indexes and currencies. Portfolio groups consist of closely related product groups. Not all product groups are contained in a portfolio group.

In the case of index options and related instruments where offset by a qualified stock basket is available (as defined in Appendix A of the net capital rule), there will be a 95% offset and a minimum charge of 5% of the market value of the basket for high capitalization diversified and narrow-based indexes or 7.5% of the market value of the basket for non-high capitalization diversified indexes. A qualified stock basket will offset all products in the basket's corresponding class group.

To account for liquidation risk, a minimum charge of \$0.25 per contract times the appropriate multiplier is applied when the class, product or portfolio group reflects little or no market exposure.

The largest projected loss for the entire class group, product group, or portfolio group, in the case of the offset-eligible products, over the range of ten potential market scenarios is the required capital charge for a portfolio.

OCC computes and makes available theoretical profit and loss values for each option series and for the related and underlying instruments on a daily basis. Firms' open positions and the theoretical values can be combined to compute the appropriate capital charge.

A. Product Group Parameters

For a current list of product groups and parameters being used by the OCC, please see the RBH Offsets Matrix file at

<http://www.optionsclearing.com/risk-management/rbh/documentation.jsp>

B. Valid Basket Codes

For the valid basket codes being used by the OCC, please see the Valid RBH & CPM Basket Codes file at

<http://www.optionsclearing.com/risk-management/rbh/documentation.jsp>

II. OCC Contact List

A. Member Services Help Desk:

(800) 544-6091
MemberServices@theocc.com

B. General OCC:

(800) 621-6072 (in the US)
(800) 424-7230 (in Canada)
(312) 322-6200 (outside the US)

C. Options Industry Services:

1.888.678.4667
(1.888.OPTIONS)
options@theocc.com

D. Risk Systems:

risksystems@theocc.com

III. OCC Profit & Loss Values File Descriptions

A. Types of Profit & Loss Values Files

OCC is the provider of profit & loss values for the *Risk Based Haircut* methodology used to calculate *theoretically based capital charges*.

Risk Based Haircut (RBH) users can acquire the profit/loss data via an NDM or FTP+ transmission consisting of two full files of profit & loss values. Contact the OCC in order to acquire the files.

Two types of profit/loss values files are needed for RBH calculations.

1. RBH Broker-Dealer file - which includes profit & loss values based on appropriate percentages of the daily market price of the underlying, including: +/-15% for equities, narrow-based indexes and non-high capitalization diversified indexes, +/-10% for high capitalization diversified indexes, +/-6% for major-market foreign currencies and +/-20% for all other currencies.
2. RBH Non-Clearing Specialist and/or Market Maker file - which includes profit & loss values based on the percentage of the daily market price of the underlying including: +6/-8% for high capitalization diversified indexes, +/-10% for non-high capitalization diversified indexes, and +/-4.5% for major market foreign currencies.

B. Record Descriptions

There are seven types of records on the OCC profit & loss files.

1. Header

- The record on the file which identifies the processing date of the file.

2. Control

- Record on the file which indicates the default equity price moves, default currency price moves, and default index price moves.

3. Product Group and Basket

- Record on the file which first identifies the product group number, the offset, the minimum basket charge, the 10 RBH broker-dealer price moves, and the product group description.

- Basket ID, basket offset, basket minimum, basket capitalization minimum, basket market moves, basket's corresponding product group ID, and basket description.

4. Market-Maker Price Moves

- Record on the file which identifies the product group and the underlying percentage price movements RBH market-makers.

5. Portfolio Group

- Record on the file which identifies the portfolio group information.

6. Profit & Loss Values

- Record on the file which includes the profit/loss values.

7. Trailer

- Last record on the file which identifies the total number of records on the file.

1. Header Record Description

NAME OF FIELD	CHARACTER DESCRIPTION	START/ END	DESCRIPTION
TRANS-ID	N,R,ZERO 3	1/3	This field will always be '800'.
RECORD-ID	AN,L,BLANK 1	4/4	This field will always be 'H'.
DATE	N,R,ZERO 8	5/12	This field represents the date the file was produced and is in CCYYMMDD format.
FILE-ID	N,R,ZERO 1	13/13	Represent the file id. 1 - Broker-dealer file 2 - Non-Clearing Specialists and/or Market Maker file 4 - CPM
FILE-DESC	AN,BLANK 50	14/63	This field will identify the file in text format. "BROKER/DEALER FILE", or "NON-CLEARING SPECIALIST/MRKT MAKER FILE"
UNUSED FIELD	AN,BLANK 137	64/200	For future OCC use.

CHARACTER DESCRIPTION LEGEND:

AN - Alphanumeric, the field can be a combination of letters and numbers.

N - Numeric, the field must be a number.

R - Right Justify, the field is justified to the right.

L - Left Justify, the field is justified to the left.

ZERO - The field is padded with zeros.

BLANKS - The field is padded with blanks.

Numeric fields (N) in this user guide are described as Nx(y.z) where x is the total number of digits in the field; y is the number of integer digits; and z is the number of decimal digits. For example, "N18 (11.7)" represents an eighteen digit number with eleven integers and seven decimals.

2. Control Record Description

NAME OF FIELD	CHARACTER DESCRIPTION	START/ END	DESCRIPTION
TRANS-ID	N,R,ZERO 3	1/3	This field will always be '800'.
RECORD-ID	AN,L,BLANK 1	4/4	This field will always be 'C'.
MINIMUM SURCHARGE ^	N,R,ZERO 6	5/10	The minimum charge per unit of the derivative for non-customers.
EQUITY PRICE MOVE * (OCCURS 5 TIMES)	N,R,ZERO 3	11/25	The market price move percentages applied to all equity products. 5 upside and 5 downside intervals are calculated.
CURRENCY PRICE MOVE * (OCCURS 5 TIMES)	N,R,ZERO 3	26/40	The default market price move percentages applied to major market currency products. 5 upside and 5 downside intervals are calculated.
INDEX PRICE MOVE * (OCCURS 5 TIMES)	N,R,ZERO 3	41/55	The default market price move percentages applied to index products. 5 upside and 5 downside intervals are calculated.
UNUSED FIELD	AN,BLANK 145	56/200	For future OCC use.

CHARACTER DESCRIPTION LEGEND:

AN - Alphanumeric, the field can be a combination of letters and numbers.

N - Numeric, the field must be a number.

R - Right Justify, the field is justified to the right.

L - Left Justify, the field is justified to the left.

ZERO - The field is padded with zeros.

BLANKS - The field is padded with blanks.

Numeric fields (N) in this user guide are described as Nx(y.z) where x is the total number of digits in the field; y is the number of integer digits; and z is the number of decimal digits. For example, "N18(11.7)" represents an eighteen digit number with eleven integers and seven decimals.

^ Each surcharge should be divided by 1,000,000 in order to align the decimal point.

* Each price move should be divided by 1000 in order to align the decimal point.

3. Product Group and Basket Record Description

NAME OF FIELD	CHARACTER DESCRIPTION	START/END	DESCRIPTION
TRANS-ID	N,R,ZERO 3	1/3	This field will always be '800'.
RECORD-ID	AN,L,BLANK 1	4/4	This field will always be 'P'.
PRODUCT GROUP	AN,L,ZERO OR BLANK 5	5/9	Product group ID or Basket ID.
UNUSED FIELD	AN,BLANK 1	10/10	For future OCC use.
OFFSET*	N,R,ZERO 2	11/12	The offset percentage that is applied to class group totals within a product group or Basket offset percentage.
UNUSED FIELD	AN,BLANK 1	13/13	For future OCC use.
MINIMUM BASKET	N,R,ZERO 3(2.1)	14/16	The percentage used to calculate the minimum haircut for a basket.
UNUSED FIELD	AN,BLANK 1	17/17	For future OCC use.
MINIMUM CAP*	N,R,ZERO 2	18/19	Minimum Capitalization required for a qualified stock basket.
UNUSED FIELD	AN,BLANK 1	20/20	For future OCC use.
PRODUCT GROUP / BASKET PRICE MOVE** (OCCURS 10 TIMES)	N,R,ZERO 3	21/50	The RBH broker-dealer market price move percentages applied to the market value of the underlying or stocks within a basket. 5 upside and 5 downside intervals are calculated.
UNUSED FIELD	AN,BLANK 1	51/51	For future OCC use.
ORIGINAL PRODUCT GROUP	AN,L,ZERO OR BLANK 5	52/56	The original product group id corresponding to the basket.
UNUSED FIELD	AN,BLANK 1	57/57	For future OCC use.
PRODUCT GROUP OR BASKET DESCRIPTION	AN,L,BLANK 45	58/102	This field will identify the product group or basket name.
UNUSED FIELD	AN, BLANK 98	103/200	For future OCC use.

CHARACTER DESCRIPTION LEGEND:

AN - Alphanumeric, the field can be a combination of letters and numbers.

N - Numeric, the field must be a number.

R - Right Justify, the field is justified to the right.

L - Left Justify, the field is justified to the left.

ZERO - The field is padded with zeros.

BLANKS - The field is padded with blanks.

Numeric fields (N) in this user guide are described as Nx(y.z) where x is the total number of digits in the field; y is the number of integer digits; and z is the number of decimal digits. For example, "N18(11.7)" represents an eighteen digit number with eleven integers and seven decimals.

* Each offset or minimum should be divided by 100 in order to align the decimal point.

** Each price move should be divided by 1000 in order to align the decimal point.

4. Market-Maker Price Move Record Description

NAME OF FIELD	CHARACTER DESCRIPTION	START/ END	DESCRIPTION
TRANS-ID	N,R,ZERO 3	1/3	This field will always be '800'.
RECORD-ID	AN,L,BLANK 1	4/4	This field will always be 'M'.
PRODUCT GROUP ID	N,R,ZERO 5	5/9	Product Group ID of the associated class groups whose various underlying securities exhibit a high degree of historical price correlation and are grouped together for portfolio margin offsets.
UNUSED FIELD	AN,BLANK 9	10/18	For OCC use.
M-M MOVE PERCENTS* (OCCURS 10 TIMES)	N,R,ZERO 3	19/48	The market-maker price move percentages applied to the underlying.
UNUSED FIELD	AN,BLANK 152	49/200	For future OCC use.

CHARACTER DESCRIPTION LEGEND:

AN - Alphanumeric, the field can be a combination of letters and numbers.

N - Numeric, the field must be a number.

R - Right Justify, the field is justified to the right.

L - Left Justify, the field is justified to the left.

ZERO - The field is padded with zeros.

BLANKS - The field is padded with blanks.

Numeric fields (N) in this user guide are described as Nx(y.z) where x is the total number of digits in the field; y is the number of integer digits; and z is the number of decimal digits. For example, "N18(11.7)" represents an eighteen digit number with eleven integers and seven decimals.

* Each price move should be divided by 1000 in order to align the decimal point.

5. Portfolio Group Record Description

NAME OF FIELD	CHARACTER DESCRIPTION	START/ END	DESCRIPTION
TRANS-ID	N,R,ZERO 3	1/3	This field will always be '800'.
RECORD-ID *	AN,L,BLANK 1	4/4	This field will be 'F' or 'G'
PORTFOLIO GROUP	AN,R,ZERO 5	5/9	Portfolio Group ID.
UNUSED FIELD	AN,BLANK 1	10/10	For future OCC use.
PORTFOLIO OFFSET	N,R,ZERO 2	11/12	The offset percentage applied to product group totals in a portfolio group.
UNUSED FIELD	AN,BLANK 1	13/13	For future OCC use.
PORTFOLIO PRODUCT GROUP IDs (OCCURS 29 TIMES)	N,R,ZERO 5	14/158	Associated product groups eligible for offset in the haircut or margin calculation. Up to 29 different product groups may be grouped into a portfolio group.
UNUSED FIELD	AN,BLANK 42	159/200	For future OCC use.

CHARACTER DESCRIPTION LEGEND:

AN - Alphanumeric, the field can be a combination of letters and numbers.

N - Numeric, the field must be a number.

R - Right Justify, the field is justified to the right.

L - Left Justify, the field is justified to the left.

ZERO - The field is padded with zeros.

BLANKS - The field is padded with blanks.

Numeric fields (N) in this user guide are described as Nx(y.z) where x is the total number of digits in the field; y is the number of integer digits; and z is the number of decimal digits. For example, "N18(11.7)" represents an eighteen digit number with eleven integers and seven decimals.

* Each offset should be divided by 100 in order to align the decimal point.

6. Profit & Loss Values Record Description

NAME OF FIELD	CHARACTER DESCRIPTION	START/END	DESCRIPTION
TRANS-ID	N,R,ZERO 3	1/3	This field will always be '800'.
RECORD-ID	AN,L,BLANK 1	4/4	This field will always be blank.
PRODUCT GROUP ID	N,R,ZERO 5	5/9	Product group to which the record belongs.
CLASS GROUP ID	AN,L,BLANK 6	10/15	Class Group to which the record belongs.
PUT/CALL INDICATOR	AN,L,BLANK 1	16/16	A put or call indicator (P-PUT, C-CALL) will be included for all option products. For future, stock, currency spot and forward positions, the field will be blank.
SYMBOL	AN,L,BLANK 6	17/22	Option, stock, or future trading symbol. Included for all products.
CONTRACT EXPIRATION CENTURY	N,R,ZERO 2	23/24	The century in which the option or future expires. The field will be zeros for stocks.
CONTRACT EXPIRATION YEAR	N,R,ZERO 2	25/26	The year in which the option or future expires. The field will be zeros for stocks.
CONTRACT EXPIRATION MONTH	N,R,ZERO 2	27/28	The month in which the option or future expires. The field will be zeros stocks.
CONTRACT EXPIRATION DAY	AN,BLANK 2	29/30	The day on which the option or future expires.
STRIKE PRICE	N,R,ZERO 9(5.4)	31/39	For an option the strike dollar amount. The field will be zero for non-option security types.
RECORD TYPE INDICATOR	AN,L,BLANK 1	40/40	Represents the type of security instrument. O - Equity or Non-equity option I - Future's option F - Future S - Stock
CUSTOMER MINIMUM VALUE	N,R,ZERO 8(5.3)	41/48	Minimum per unit contract charge for customer accounts.
RBH MINIMUM VALUE	N,R,ZERO 8(5.3)	49/56	Minimum per unit contract charge for non-clearing specialists and/or market makers, and net capital computing broker dealer accounts.

Note: the remainder of the record description is on the next page.

NAME OF FIELD	CHARACTER DESCRIPTION	START/ END	DESCRIPTION
CURRENT MARKET VALUE	SN,R,ZERO 12(6.6)	57/68	Underlying security price
EXTENDED MARK PRICE	SN,R,ZERO 10(7.3)	69/78	Closing price multiplied by the contract multiplier.
SPOT CURRENCY DIVISOR*	N,R,ZERO 6	79/84	A divisor that is used to convert an option's current market value to the underlying currency current market value.
UNUSED FIELD	N,R,ZERO 5(1.4)	85/89	This field is not used and is always populated with a 1 and 4 zeros. (Multiple Deliverable)
PROFIT/LOSS VALUE (OCCURS 10 TIMES)	SN,R,ZERO 10(7.3)	90/189	Total projected profit or loss at each interval (1-10) for class or product group.
VOLATILITY	N,R,ZERO 3	190/192	Volatility used in calculation of the mark price.
CPM ELIGIBILITY INDICATOR	AN,R,BLANK 1	193/193	Set to Y if the product is included on the CPM file otherwise it is blank.
UNUSED FIELD	AN,BLANK 27	194/200	For future OCC use.

CHARACTER DESCRIPTION LEGEND:

- AN - Alphanumeric, the field can be a combination of letters and numbers.
N - Numeric, the field must be a number.
SN - Signed Numeric, the field must be a number and is signed.
R - Right Justify, the field is justified to the right.
L - Left Justify, the field is justified to the left.
ZERO - The field is padded with zeros.
BLANKS - The field is padded with blanks.

Numeric fields (N) in this user guide are described as Nx(y.z) where x is the total number of digits in the field; y is the number of integer digits; and z is the number of decimal digits. For example, "N18 (11.7)" represents an eighteen digit number with eleven integers and seven decimals.

Signed Numeric fields (SN) in this user guide are described as SNx(y.z) where x is the total number of digits in the field; y is the number of integer digits; z is the number of decimal digits; and the sign is contained within the last digit of the field. For example, "SN18 (11.7)" represents an eighteen digit number with eleven integers and seven decimals and the sign is contained within the last digit of the field. You may wish to refer to the table on the next page to interpret the last digit of the field if your system does not handle a field formatted in this manner.

a) Interpretation table for SN fields

(Sign is contained within the last digit)

 "Sign" is the sign for the entire value, and "Digit" becomes the last digit in the field.

Char	EBCDIC	ASCII hex	ASCII	Sign	Digit
----	-----	-----	-----	-----	-----
'{'	C0	7B	123	+	0
'A'	C1	41	65	+	1
'B'	C2	42	66	+	2
'C'	C3	43	67	+	3
'D'	C4	44	68	+	4
'E'	C5	45	69	+	5
'F'	C6	46	70	+	6
'G'	C7	47	71	+	7
'H'	C8	48	72	+	8
'I'	C9	49	73	+	9
'}'	D0	7D	125	-	0
'J'	D1	4A	74	-	1
'K'	D2	4B	75	-	2
'L'	D3	4C	76	-	3
'M'	D4	4D	77	-	4
'N'	D5	4E	78	-	5
'O'	D6	4F	79	-	6
'P'	D7	4G	80	-	7
'Q'	D8	4H	81	-	8
'R'	D9	4I	82	-	9

7. Trailer Record Description

NAME OF FIELD	CHARACTER DESCRIPTION	START/ END	DESCRIPTION
TRANS-ID	N,R,ZERO 3	1/3	This field will always be '800'.
RECORD-ID	AN,L,BLANK 1	4/4	This field will always have a 'T'.
TOTAL RECORDS	N,R,ZERO 7	5/10	Total number of detail records that exist on the file.
UNUSED FIELD	AN,BLANK 189	12/200	For future OCC use.

CHARACTER DESCRIPTION LEGEND:

AN - Alphanumeric, the field can be a combination of letters and numbers.

N - Numeric, the field must be a number.

R - Right Justify, the field is justified to the right.

L - Left Justify, the field is justified to the left.

ZERO - The field is padded with zeros.

BLANKS - The field is padded with blanks.

Numeric fields (N) in this user guide are described as Nx(y.z) where x is the total number of digits in the field; y is the number of integer digits; and z is the number of decimal digits. For example, "N18(11.7)" represents an eighteen digit number with eleven integers and seven decimals.

C. Position Record Description

The position record description which follows describes the records that are contained within a position file. Compliance with this record layout is suggested in order to facilitate rule compliance auditing to be completed by the exchanges.

1. Position Header Record

NAME OF FIELD	CHARACTER DESCRIPTION	START/ END	DESCRIPTION
TRANS-ID	N,R,ZERO 3	1/3	This field will always be '346'.
RECORD-TYPE	AN,L,BLANK 1	4/4	'H' for header record.
CLEARING MEMBER NUMBER	N,R,ZERO 4	5/8	Clearing Member Number.
DATE	AN,L,BLANK 8	9/16	This field represents the date the file was produced and is in CCYYMMDD format.
UNUSED FIELD	AN,BLANK 64	17/80	For future OCC use.

2. Detail Record

NAME OF FIELD	CHARACTER DESCRIPTION	START/END	DESCRIPTION
TRANS-ID	N,R,ZERO 3	1/3	This field will always be '346'.
RECORD-TYPE	AN,L,BLANK 1	4/4	' ' for detail record.
CLEARING MEMBER NUMBER	N,R,ZERO 4	5/8	Carrying Broker/Dealer identifier
CUSTOMER ACCOUNT ID	AN,L,BLANK 10	9/18	The identifier which has been assigned to a customer account to uniquely identify that customer.
PUT/CALL INDICATOR	AN,L,BLANK 1	19/19	A put or call indicator (P-PUT, C-CALL) will be included for all option products. For future and ETF/stock positions this field will be blank.
SYMBOL	AN,L,BLANK 6	20/25	Option (do not include OPRA code), ETF/stock or futures trading symbol. Included for all products.
CONTRACT EXPIRATION CENTURY	N,R,ZERO 2	26/27	The century in which the option or future expires. The field will be zero for stock and ETF security types.
CONTRACT EXPIRATION YEAR	N,R,ZERO 2	28/29	The year in which the option or future expires. The field will be zero for ETF and stock security types.
CONTRACT EXPIRATION MONTH	N,R,ZERO 2	30/31	The month in which the option/future expires. The field will be zero for stock and ETF security types.
CONTRACT EXPIRATION DAY	AN,BLANK 2	32/33	The day on which the option or future expires.
STRIKE PRICE	N,R,ZERO 9(5.4)	34/42	For an option the strike dollar amount. The field will be zero for future and ETF/stock security types.
FUNCTION	AN,L,BLANK 1	43/43	This represents whether a position is long or short. The valid codes are: 'L' for long, 'S' for short.

Note: the remainder of the record description is on the next page.

NAME OF FIELD	CHARACTER DESCRIPTION	START/END	DESCRIPTION
SECURITY TYPE CODE	AN,L,BLANK 1	44/44	This represents the security type for the position. The valid codes are: 'O' for Option 'I' for Option on Future 'F' for Future 'S' for ETF/stock
MARKET VALUE^	N,R,ZERO 12(6.6)	45/56	The per share closing price for stocks/ETFs. This field is optional as the price will be read from the P/L file.
NET POSITION	N,R,ZERO 9	57/65	The position quantity.
INTERVAL DISTINCTION ID	AN,L,BLANK 1	66/66	Set to 'C' for customer, 'F' for broker/dealer, and 'M' for non-clearing specialist/market maker positions.
BASKET ID*	AN,L,ZERO OR BLANK 5	67/71	This field is used to identify stock positions which comprise a hedging basket.
UNUSED FIELD	ZERO 14	72/80	For future OCC use.

CHARACTER DESCRIPTION LEGEND:

AN - Alphanumeric, the field can be a combination of letters and numbers.

N - Numeric, the field must be a number.

R - Right Justify, the field is justified to the right.

L - Left Justify, the field is justified to the left.

ZERO - The field is padded with zeros.

BLANKS - The field is padded with blanks.

Numeric fields (N) in this user guide are described as Nx(y.z) where x is the total number of digits in the field; y is the number of integer digits; and z is the number of decimal digits. For example, "N18(11.7)" represents an eighteen digit number with eleven integers and seven decimals.

*Refers to Valid Basket Codes which are available at http://www.optionsclearing.com/products/rbh_documentation.jsp

^ This field should be divided by 1,000,000 in order to align the decimal point (i.e. 122.50 = 000122500000)

3. Trailer Record

NAME OF FIELD	CHARACTER DESCRIPTION	START/ END	DESCRIPTION
TRANS-ID	N,R,ZERO 3	1/3	This field will always be '346'.
RECORD-TYPE	AN,L,BLANK 1	4/4	'T' for trailer record.
CLEARING MEMBER NUMBER	N,R,ZERO 4	5/8	Clearing Member Number.
TOTAL LONGS	N,R,ZERO 11	9/19	Total of long net position values found on every detail record.
TOTAL SHORTS	N,R,ZERO 11	20/30	Total of short net position values found on every detail record.
UNUSED FIELD	AN,BLANK 50	31/80	For future OCC use.

Note: Character Description Legend is on the following page

CHARACTER DESCRIPTION LEGEND:

AN - Alphanumeric, the field can be a combination of letters and numbers.

N - Numeric, the field must be a number.

R - Right Justify, the field is justified to the right.

L - Left Justify, the field is justified to the left.

ZERO - The field is padded with zeros.

BLANKS - The field is padded with blanks.

Numeric fields (N) in this user guide are described as Nx(y.z) where x is the total number of digits in the field; y is the number of integer digits; and z is the number of decimal digits. For example, "N18(11.7)" represents an eighteen digit number with eleven integers and seven decimals.

^ This field should be divided by 1,000,000 in order to align the decimal point.

IV. Theoretically Based Capital Charge Calculations

A. Key Components

- Firm Open Positions - Positions to be used in the *theoretically based capital charge* calculations. The description of the position file is in Section III of this user guide.
- Profit/Loss Values - The projected aggregate gain or loss at each of the ten equidistant data points which represent the underlying price move. These values are supplied by the OCC and are documented in Section III of this user guide, see description for record type 6. Two data files are provided based on different intervals: the Broker-Dealer file and the Market-Maker file.
- Scenarios - Scenarios are each of the 10 profit/loss values that are individually multiplied against a single position quantity, resulting in 10 profit/loss scenarios.
- Class Group - A combination of instruments that derive their value from the same underlying security or index.
- Product Group - A combination of class groups that have highly correlated underlying instruments. Gains and losses of included class groups may be offset at a certain percentage.
- Portfolio Group - A combination of product groups whose gains and losses may be offset.
- Offset Percentage - The percentage of offset allowed, across closely related groups of positions, between a position's gain at any one valuation point and another position's loss at the same valuation point.
- Minimum Surcharge - This surcharge is used to account for liquidation risk. It is the minimum haircut per each option or future.
- Basket Minimum - The percentage applied to the value of a stock basket to calculate basket's minimum haircut.
- Risk Haircut Value - The largest projected portfolio loss over the market scenarios at the relevant level of totaling (portfolio, product, or class group).
- Minimum Haircut Value - The sum of each position minimum haircut aggregated at the class, product, or portfolio level.
- Actual Haircut Value - The greater of the Risk Haircut Value and the Minimum Haircut Value.

B. Calculate Profit/Loss Scenarios

1. Options, Futures, and Stocks

For options (equity, index, or future), futures, and stock positions that are not a part of a basket, apply the appropriate profit/loss values to the position quantity to calculate per contract a potential profit/loss scenario:

$$\text{Profit/Loss Scenario}^N = (\text{Profit/Loss Value}^N \text{ times Quantity})$$

Where:

- Quantity is equal to the position quantity, positive for long and negative for short positions.
- N relates to each profit/loss scenario that is calculated based on one of the 10 equidistant projected price moves. (N=1...N=10)
- Profit/Loss Value is equal to each of the ten PROFIT/LOSS VALUE fields found on the PROFIT/LOSS VALUE RECORD (#6). Ten values exist per record.

2. Baskets

For Stock positions that are a part of a basket, the calculation is as follows:

$$\text{Profit/Loss Scenario}^N = (\text{Price times Percentage}^N) \text{ times (quantity)}$$

Where:

- Price is equal to the current market value.
- Percentage is equal to the product group market move per each of the 10 equidistant price moves. See Basket Stock Moves described below.
- Quantity is equal to the position quantity, positive for long and negative for short positions
- N relates to each profit/loss scenario that is calculated based on one of the 10 equidistant projected price moves. (N=1...N=10)

Basket Stock Moves:

- If it is a market-maker position, each individual basket stock profit/loss must be calculated using the corresponding market move percentages of the related index being processed. To accomplish this, match the BASKET ID from the position to the PRODUCT GROUP RECORD (#3) field called PRODUCT GROUP
 - If a match is not found, verify the BASKET ID and contact the OCC to report an error. See Section II for the OCC Contact List.
 - If a match is found use the ORIGINAL PRODUCT GROUP field to match to the MARKET-MAKER PRICE MOVE RECORD (#4) field called PRODUCT GROUP ID.
 - If a match is found the Percentages are equal to the +/- 10 M-M MOVE PERCENTS
- If it is a broker-dealer position, match the BASKET ID from the position to the PRODUCT GROUP RECORD (#3) field called PRODUCT GROUP
 - If a match is not found, verify the BASKET ID and contact the OCC to report an error. See Section II for the OCC Contact List.
 - If a match is found the Percentages are equal to the +/-10 PRODUCT GROUP / BASKET PRICE MOVE values.

3. Currency Spots and Forwards

- Match a position to the PROFIT/LOSS VALUES RECORD (#6) by matching on the SYMBOL field. The position must contain a valid OCC Currency SYMBOL to match to the correct PROFIT/LOSS VALUE RECORD. This record will be used to provide data values required for subsequent steps outlined below.
- If a match is NOT found, contact the OCC to report an error. See Section II for the OCC Contact List.
- If a match is found, the profit/loss calculation for Currency Spots and Forwards is as follows:

$$\text{Profit loss scenario}^N = (\text{price times percentage}^N) \text{ times (quantity)}$$

Where:

- Price is equal to the CURRENT MARKET VALUE divided by the SPOT CURRENCY DIVISOR; both values can be found on the PROFIT/LOSS VALUES RECORD matched in a previous step.
- percentage is equal to the 10 price moves, see special spot/forward information described below
- quantity is equal to the position quantity
- N relates to each profit/loss scenario that is calculated based on one of the 10 percentages corresponding to 10 equidistant projected price moves. (N=1... N=10)

Special spot/forward information:

- Obtain the PRODUCT GROUP ID for the currency spot or forward contract from the PROFIT/LOSS VALUES RECORD #6 and store for use in selecting the appropriate price move percentages.
- If the Broker-Dealer file is being used, match the PRODUCT GROUP ID from the position to the PRODUCT GROUP RECORD (#3) field called PRODUCT GROUP
 - If a match is found, the percentages are equal to the +/- 10 PRODUCT GROUP / BASKET PRICE MOVE values
 - If a match is NOT found, use the default +/- 5 CURRENCY PRICE MOVE percentages contained on CONTROL RECORD (#2).

- If the Market-Maker file is being used, match the PRODUCT GROUP ID from the position to the MARKET-MAKER PRICE MOVE RECORD (#4) field called PRODUCT GROUP ID.
 - If a match is found, the percentages are equal to the +/- 10 M-M MOVE PERCENTS.
 - If a match is not found, match the PRODUCT GROUP ID from the position to the PRODUCT GROUP RECORD (#3) field called PRODUCT GROUP and use the +/- 10 PRODUCT GROUP / BASKET MOVE values. If a match is still not found use the default +/- 5 CURRENCY PRICE MOVE percentages contained on CONTROL RECORD (#2).

4. Unmatched Positions

Special information when no match is found on the profit/loss file:

- If there is no match found on the profit/loss file for an Option or Future product, verify the position and if necessary contact the OCC to report an error. See Section II for the OCC Contact List.
- If there is no match on the profit/loss file for a stock position that is not a part of a basket, the calculation is as follows:

$$\text{Profit loss scenario}^N = (\text{price times percentage}^N) \text{ times (quantity)}$$

Where:

- price is equal to the current market value from the position record
- percentage is equal to the 10 price moves, see special stock info described below
- quantity is equal to the position quantity, positive for long and negative for short positions
- N relates to each profit/loss scenario that is calculated based on one of the 10 percentages corresponding to 10 equidistant projected price moves (N=1, ... , N=10)

Special stock info:

If the stock is NOT a part of a basket:

- product group will be equal to the default value of 00999
- percentage is equal to +/- 5 EQUITY PRICE MOVE values found on the CONTROL RECORD (#2)

C. Haircut Calculations

The explanation of the *theoretically based capital charge* calculations has been segmented into two sections:

1. **Totaling Overview at the Class, Product, and Portfolio Group Levels** - outlines the steps to be taken to calculate the minimum haircut, risk haircut, and actual haircut values.
2. **Totaling Calculations** - outlines the individual calculations that are used in the totaling at the different levels: Class, Product, and Portfolio Group. These calculations use the 10 profit/loss scenarios that were calculated for each position, as outlined in the previous section.

Portfolio and product group offset and minimum values to be used in the calculations can be found in the PRODUCT GROUP AND BASKET RECORD (#3), the MARKET-MAKER PRICE MOVE RECORD (#4) and the PORTFOLIO GROUP RECORD (#5); each of these records is described in Section III.

1. Totaling Overview at the Class, Product, and Portfolio Group Levels

a) Class Group Level Haircut Calculations

These calculation steps are for class groups in product groups that do not have a match on the PRODUCT GROUP AND BASKET RECORD (#3).

- For each Class Group:
 - Calculate Class Group Sum
- At the Class Group Level:
 - Calculate the Minimum Haircut Value
 - Calculate the Risk Haircut Value
 - Determine the Actual Haircut Value
 - Calculate the Product Group Haircut
 - Calculate the Account Gross Haircut Value

b) Product Group Level Haircut Calculations

These calculation steps are for class groups and product groups where the product group does have a match on the PRODUCT GROUP AND BASKET RECORD (#3).

- For each Class Group:
 - Calculate Class Group Sum
- At the Product Group Level:
 - Calculate Product Group Gains
 - Calculate Product Group Losses
 - Calculate Product Group Offset
 - Calculate the Minimum Haircut Value
 - Calculate the Risk Haircut Value
 - Determine the Actual Haircut Value
 - Calculate the Account Gross Haircut Value

c) Portfolio Group Level Haircut Calculations

These calculation steps are for product groups that do have a match on the PORTFOLIO GROUP RECORD (#5).

- For each Class Group:
 - Calculate Class Group Sum
- For each Product Group:
 - Calculate Product Group Gains
 - Calculate Product Group Losses
 - Calculate Product Group Offset
- At the Portfolio Group Level:
 - Calculate Portfolio Group Gains
 - Calculate Portfolio Group Losses
 - Calculate Portfolio Group Offset
 - Calculate the Minimum Haircut Value
 - Calculate the Risk Haircut Value
 - Determine the Actual Haircut Value
 - Calculate the Account Gross Haircut Value

2. Totaling and Offset Calculations

a) Class Group Sum

(1) Class Group Sum

CALCULATION is a straight sum (adding gains and losses together) for each of the 10 profit/loss amounts calculated for each position within the class group.

$$\text{CLASS GROUP SUM}^N = \sum \text{profit/loss scenario}^{X,N}$$

Where:

- X refers to the number of positions within the class group
- N refers to the profit/loss scenario (N = 1,...,10) corresponding up/down price movements
- Profit/loss scenario is defined in Section IV B.

(2) Stock Basket Total

CALCULATION is a straight sum for the 10 scenarios of the profit/loss amounts calculated for each stock within the basket.

- $\text{CLASS GROUP SUM}^N = \sum \text{profit/loss scenario}^{X,N}$

where:

- X refers to each stock position within the index basket
- N refers to the profit/loss scenario (N = 1,...10) corresponding up/down price movements
- profit/loss scenario is defined in Section IV B
- Basket total gains are haircut by 5% prior to offset with class group totals

b) Product Group Gains, Losses, and Offset*(1) Product Group Gains*

CALCULATION is the total of all positive CLASS GROUP SUM values at each of the 10 profit/loss scenarios for each class group within the product group.

$$\text{PRODUCT GROUP GAINS}^N = \text{class group sum}^{N(1)} + \dots + \text{Class group sum}^{N(Y)}$$

Where:

- Y refers to the number of positive class group sum values within the product group at a given profit/loss scenario
- N refers to the profit/loss scenario (N = 1,...,10) corresponding up/down price movements

(2) Product Group Losses

CALCULATION is the total of all negative CLASS GROUP SUM values at each of the 10 profit/loss scenarios for each class group within the product group.

$$\text{PRODUCT GROUP LOSSES}^N = \text{class group sum}^{N(1)} + \dots + \text{Class group sum}^{N(Z)}$$

Where:

- Z refers to the number of negative class group sum values within the product group at a given profit/loss scenario
- N refers to the profit/loss scenario (N = 1,...,10) corresponding up/down price movements

(3) Product Group Offset

Based on the product group gains and losses and the OFFSET value that is found on the PRODUCT GROUP AND BASKET RECORD (#3).

If the $\text{PRODUCT GROUP GAINS}^N \geq (\text{PRODUCT GROUP LOSSES}^N \text{ divided by OFFSET})$:

$\text{PRODUCT GROUP OFFSET}^N = \text{PRODUCT GROUP GAINS}^N \text{ minus } (\text{PRODUCT GROUP LOSSES}^N \text{ divided by OFFSET})$

If the $\text{PRODUCT GROUP GAINS}^N < (\text{PRODUCT GROUP LOSSES}^N \text{ divided by OFFSET})$:

$\text{PRODUCT GROUP OFFSET}^N = (\text{PRODUCT GROUP GAINS}^N \text{ times OFFSET}) \text{ minus PRODUCT GROUP LOSSES}^N$

Where:

- N refers to the profit/loss scenario ($N = 1, \dots, 10$) corresponding up/down price movements
- OFFSET -- match the product group from the positions to the PRODUCT GROUP AND BASKET RECORD (#3) field called PRODUCT GROUP
 - if a match is found, use the OFFSET value
 - If a match is not found, use the OFFSET from the default record.

c) Portfolio Group Gains, Losses, Offset*(1) Portfolio Group Gains*

CALCULATION is the total of all positive PRODUCT GROUP OFFSET values at each of the 10 profit/loss scenarios for each product group within the portfolio group.

$\text{PORTFOLIO GROUP GAINS}^N = \text{product group offset}^{N(1)} + \dots + \text{product group offset}^{N(Y)}$

Where:

- Y refers to the number of positive product group offset values within the portfolio group at a given profit/loss scenario
- N refers to the profit/loss scenario ($N = 1, \dots, 10$) corresponding up/down price movements

(2) Portfolio Group Losses

CALCULATION is the total of all negative PRODUCT GROUP OFFSET values at each of the 10 profit/loss scenarios for each product group within the portfolio group.

$$\text{PORTFOLIO GROUP LOSSES}^N = \text{product group offset}^{N(1)} + \dots + \text{product group offset}^{N(Z)}$$

Where:

- Z refers to the number of negative product group offset values within the portfolio group at a given profit/loss scenario
- N refers to the profit/loss scenario (N = 1,...,10) corresponding up/down price movements

(3) Portfolio Group Offset

Based on the portfolio group gains and losses and the PORTFOLIO OFFSET value that is found on the PORTFOLIO GROUP RECORD (#5).

If the PORTFOLIO GROUP GAINS^N ≥ (PORTFOLIO GROUP LOSSES^N divided by PORTFOLIO OFFSET):

$$\text{PORTFOLIO GROUP OFFSET}^N = \text{PORTFOLIO GROUP GAINS}^N \text{ minus } (\text{PORTFOLIO GROUP LOSSES}^N \text{ divided by OFFSET})$$

If the PORTFOLIO GROUP GAINS^N < (PORTFOLIO GROUP LOSSES^N divided by PORTFOLIO OFFSET):

$$\text{PORTFOLIO GROUP OFFSET}^N = (\text{PORTFOLIO GROUP GAINS}^N \text{ times PORTFOLIO OFFSET}^N) \text{ minus PORTFOLIO GROUP LOSSES}^N$$

Where:

- N refers to the profit/loss scenario (N = 1,...,10) corresponding up/down price movements
- PORTFOLIO OFFSET - match the portfolio group from the positions to the PORTFOLIO GROUP RECORD (#5) field called PORTFOLIO GROUP
 - if a match is found, use the PORTFOLIO OFFSET value
 - if a match is NOT found, use the PORTFOLIO OFFSET from the default record

3. Minimum Haircut

a) Class Group Minimum Haircut

Total of the quantity from each position times the minimum for each option and future position within the class group.

CLASS GROUP MINIMUM HAIRCUT = (quantity¹ times minimum) + + (quantity^X times minimum)

Where:

- X refers to the number of positions within the class group
- quantity is always a positive value for both long and short positions
- minimum is found on the PROFIT & LOSS VALUES RECORD (#6)

There are two minimum requirements on the profit loss record. One is for customer positions (CUSTOMER MINIMUM VALUE) and the other for non-customer positions (RBH MINIMUM VALUE). The Interval distinction id on the position record controls this process.

If the extended option price of a long option position is less than the minimum contract value on the profit/loss file use the extended option price in place of the minimum contract value.

- The basket minimum is equal to the sum of all extended stock underlying values within the basket times the percentage taken from the MINIMUM BASKET field on control record #3, PRODUCT GROUP AND BASKET RECORD.

b) Product Group Minimum Haircut

Equals the total of the CLASS GROUP MINIMUM HAIRCUTs for each class group within the product group.

PRODUCT GROUP MINIMUM HAIRCUT = sum of every CLASS GROUP MINIMUM within the product group

c) Portfolio Group Minimum Haircut

Equals the total of the PRODUCT GROUP MINIMUM HAIRCUTs for each product group within the portfolio group.

PORTFOLIO GROUP MINIMUM HAIRCUT = sum of every PRODUCT GROUP MINIMUM within the portfolio group

4. Risk, Actual, Account, Firm Gross Haircut

a) Risk Haircut

VALUE is equal to the largest negative value calculated as follows:

- if totaling at the CLASS GROUP LEVEL
RISK HAIRCUT VALUE = the largest negative CLASS GROUP SUM value
- if totaling at the PRODUCT GROUP LEVEL
RISK HAIRCUT VALUE = the largest negative PRODUCT GROUP OFFSET value
- if totaling at the PORTFOLIO GROUP LEVEL
RISK HAIRCUT VALUE = the largest negative PORTFOLIO GROUP OFFSET value

b) Actual Haircut

VALUE is the largest value of either the RISK HAIRCUT VALUE or the MINIMUM HAIRCUT calculated at each specific level of totaling.

- if totaling at the CLASS GROUP LEVEL
ACTUAL HAIRCUT VALUE = the largest value of either the RISK HAIRCUT VALUE calculated at this level of totaling or the CLASS GROUP MINIMUM HAIRCUT
- if totaling at the PRODUCT GROUP LEVEL
ACTUAL HAIRCUT VALUE = the largest value of either the RISK HAIRCUT VALUE calculated at this level of totaling or the PRODUCT GROUP MINIMUM HAIRCUT
- if totaling at the PORTFOLIO GROUP LEVEL
ACTUAL HAIRCUT VALUE = the largest value of either the RISK HAIRCUT VALUE calculated at this level of totaling or the PORTFOLIO GROUP MINIMUM HAIRCUT

c) Account Gross Haircut

VALUE is the total of all ACTUAL HAIRCUT VALUEs calculated within the account.

d) Firm Gross Haircut

VALUE is the total of all ACCOUNT HAIRCUT VALUEs calculated within the firm.

V. Calculation Examples

Following are examples of the *theoretically based capital charge* calculations. Numbers in shaded areas are explained below. Calculation names in the shaded areas are described in section IV A.

SHADED AREAS	DESCRIPTION
#1	Position symbol
#2	Put/Call code
#3	Contract expiration month and year
#4	Strike price
#5	Quantity (positive for long and negative for short positions)
#6	Current Market Value
#7 - #16	10 profit/loss scenarios that are based on the 10 percentages corresponding to 10 equidistant projected price moves
#17 - #26	CLASS GROUP SUM totals calculated at each of the 10 price moves, includes totaling for non-Basket Class groups and Basket groups
#27 - #36	PRODUCT GROUP GAINS, LOSSES and OFFSET totals calculated at each of the 10 price moves
#37 - #46	PORTFOLIO GROUP GAINS, LOSSES and OFFSET totals calculated at each of the 10 price moves
#47	TOTAL BASKET VALUE, which is equal to the quantity times the price for each stock in the basket
#48	NET OF 5% GAINS REDUCTION, which is equal to the total of all positive profit/loss scenarios at each projected price move times 95% for all baskets

RBH

USER GUIDE

ACCOUNT NUMBER: ZCYZ

PORTFOLIO GROUP: USIDX

PRODUCT GROUP: 00008

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NDX	P	1195	0600	25	3850.00	29,406	21,853	14,300	10,727	4,714	-3,880	-8,416	-10,572	-15,115	-18,502
NDZ	P	1295	0430	300	125.00	-615	-3,033	-5415	-7,800	-10,185	-13,698	-14,790	-15,885	-16,980	-18,075
CLASS GROUP: 000022						17	18	19	20	21	22	23	24	25	26
CLASS GROUP SUM						28,791	18,820	8,885	2,927	-5,471	-17,578	-23,206	-26,457	-32,095	-36,577

PRODUCT GROUP: 00008

	27	28	29	30	31	32	33	34	35	36
PRODUCT GROUP GAINS	28,791	18,820	8,885	2,927	0	0	0	0	0	0
PRODUCT GROUP LOSSES	0	0	0	0	-5,471	-17,578	-23,206	-26,457	-32,095	-36,577
PRODUCT GROUP OFFSETS	28,791	18,820	8,885	2,927	-5,471	-17,578	-23,206	-26,457	-32,095	-36,577

PRODUCT GROUP: 00009

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
OEX	C	1095	0540	15	1762.50	-20,463	-19,957	-18,536	-15,438	-8,948	8,114	17,349	26,926	35,936	46,279
OEX	C	1095	0545	90	1312.50	-90,711	-89,155	-84,130	-71,754	-41,193	43,531	97,835	149,360	207,025	268,645
OEX	C	1195	0545	-85	1700.00	111,789	107,158	96,836	72,890	43,423	-38,757	-91,394	-134,194	-184,238	-236,668
OEX	C	1195	0550	15	1350.00	-15,084	-14,535	-13,295	-11,040	-5,726	7,090	14,791	22,890	30,588	40,437
OEX	P	1095	0525	11	125.00	22,632	13,923	6,925	3,195	1,077	-591	-630	-881	-1,074	-790
OEX	P	1095	9540	-20	256.25	-65,120	-47,846	-30,412	-17,356	-5,507	2,500	3,172	5,108	5,775	5,810
OEX	P	1095	0545	-92	337.50	-331,750	-251,177	-175,171	-96,220	-43,761	12,837	23,185	30,217	38,387	38,482
OEX	P	1195	0545	57	662.50	192,748	144,083	98,692	58,580	25,946	-8,370	-15,358	-19,769	-27,108	-26,211
CLASS GROUP: 000013						17	18	19	20	21	22	23	24	25	26
CLASS GROUP SUM						-195,959	-157,506	-119,091	-77,143	-34,689	26,354	48,950	79,657	105,291	135,984

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SP		1295	0000	-10	0.00	231,780	185,424	139,068	92,712	46,356	-34,767	-69,534	-104,301	-139,068	-173,835
CLASS GROUP: 000018						17	18	19	20	21	22	23	24	25	26
CLASS GROUP SUM						231,780	185,424	139,068	92,712	46,356	-34,767	-69,534	-104,301	-139,068	-173,835
PRODUCT GROUP: 00009						27	28	29	30	31	32	33	34	35	36
PRODUCT GROUP GAINS						231,780	185,424	139,068	92,712	46,356	26,354	48,950	79,657	105,291	135,984
PRODUCT GROUP LOSSES						-195,959	-157,506	-119,091	-77,143	-34,689	-34,767	-69,534	-104,301	-139,068	-173,835
PRODUCT GROUP OFFSETS						14,048	10,417	6,745	6,998	7,813	-11,048	-25,479	-32,610	-44,306	-51,449
PORTFOLIO GROUP: USIDX						37	38	39	40	41	42	43	44	45	46
PORTFOLIO GROUP GAINS						42,839	29,237	15,630	9,925	7,813	0	0	0	0	0
PORTFOLIO GROUP LOSSES						0	0	0	0	-5,471	-28,626	-48,685	-59,067	-76,401	-88,026
PORTFOLIO GROUP OFFSETS						42,839	29,237	15,630	9,925	-1,564	-28,626	-48,685	-59,067	-76,401	-88,026
RISK HAIRCUT						88,026									
PORTFOLIO GROUP MINIMUM HAIRCUT						18,375									
ACTUAL HAIRCUT						88,026									

PRODUCT GROUP: 00076

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TXX	C	1095	0170	-50	75.00	3,733	3,680	3,494	3,026	2,004	-3,954	-9,858	-18,300	-29,498	-43,418
TXX	P	1095	0170	-50	1800.00	-109,568	-86,775	-64,130	-41,818	-20,243	19,065	35,814	50,088	61,707	70,716
CLASS GROUP: 000077						17	18	19	20	21	22	23	24	25	26
CLASS GROUP SUM						-105,835	-83,095	-60,636	-38,792	-18,239	15,111	25,959	31,788	32,209	27,298
PRODUCT GROUP: 00076						27	28	29	30	31	32	33	34	35	36
PRODUCT GROUP GAINS						0	0	0	0	0	15,111	25,956	31,788	32,209	27,298
PRODUCT GROUP LOSSES						-105,835	-83,095	-60,636	-38,792	-18,239	0	0	0	0	0
PRODUCT GROUP OFFSETS						-105,835	-83,095	-60,636	-38,792	-18,239	15,111	25,956	31,788	32,209	27,298
RISK HAIRCUT						105,835									
PRODUCT GROUP MINIMUM HAIRCUT						2,500									
ACTUAL HAIRCUT						105,835									
ACCOUNT GROSS HAIRCUT						193,861									

ACCOUNT NUMBER: ZC2Z

PORTFOLIO GROUP: BBIDX

PRODUCT GROUP: 00009

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AA				-2342	58.624	10,984	8,787	6,590	4,394	2,197	-1,648	-3,295	-4,943	-6590	-8,238
AVP				-890	75.000	5,340	4,272	3,204	2,136	1,068	-801	-1,602	-2,403	-3,204	-4,005
BA				-4440	70.624	25,086	20,069	15,052	10,034	5,017	-3,763	-7,526	-11,289	-15,052	-18,814
OXY				-4151	22.874	7,596	6,077	4,558	3,039	1,519	-1,139	-2,279	-3,418	-4,558	-5,697
XRX				-1368	129.500	14,172	11,338	8,503	5,669	2,834	-2,126	-4,252	-6,378	-8,503	-10,629

BASKET 10013				47	17	18	19	20	21	22	23	24	25	26
STOCK INDEX BASKET TOTAL				-789,723	63,178	50,543	37,907	25,272	12,635	-9,477	-18,954	-28,431	-37,907	-47,383
48	NET OF 5% GAINS REDUCTION				60,019	48,016	36,012	24,008	12,003	-9,477	-18,954	-28,431	-37,007	-47383

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
OEX	C	1095	0545	10	1312.50	-10,079	-9,906	-9,348	-7,973	-4,577	4,837	10,871	16,596	23,003	29,849
OEX	C	1195	0540	13	2137.50	-21,174	-20,061	-16,983	-13,248	-8,029	6,949	14,376	21,941	29,910	38,645
OEX	P	1095	0545	-10	337.50	-36,060	-27,302	-19,040	-10,459	-4,757	1,395	2,520	3,285	4,173	4,183
OEX	P	1195	0540	-13	537.50	-39,343	-28,582	-18,865	-10,637	-4,095	1,190	2,376	4,171	4,712	5,255
OEX	C	1195	0545	-10	1700.00	13,152	12,607	11,393	8,575	5,109	-4,560	-10,752	-15,788	-21,675	-27,843
OEX	P	1195	0545	10	662.50	33,815	25,278	17,314	10,277	4,552	-1,469	-2,694	-3,473	-4,756	-4,598

						17	18	19	20	21	22	23	24	25	26
INDEX TOTALS						-59,689	-47,966	-35,529	-23,465	-11,797	8,342	16,697	25,732	35,367	45,491

CLASS GROUP: 000013

CLASS GROUP SUM						330	50	483	543	206	-1,135	-2,257	-1,699	-2,540	-1,892
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PRODUCT GROUP: 00009

						27	28	29	30	31	32	33	34	35	36
PRODUCT GROUP GAINS						330	50	483	543	206	0	0	0	0	0
PRODUCT GROUP LOSSES						0	0	0	0	0	-1,135	-2,257	-1,699	-2,540	-1,892
PRODUCT GROUP OFFSETS						330	50	483	543	206	-1,135	-2,257	-1,699	-2,540	-1,892
PORTFOLIO GROUP: BBIDX						37	38	39	40	41	42	43	44	45	46
PORTFOLIO GROUP GAINS						330	50	483	543	206	0	0	0	0	0
PORTFOLIO GROUP LOSSES						0	0	0	0	0	-1,135	-2,257	-1,699	-2,540	-1,892
PORTFOLIO GROUP OFFSETS						330	50	483	543	206	-1,135	-2,257	-1,699	-2,540	-1,892
RISK HAIRCUT						2,540									
PORTFOLIO GROUP MINIMUM HAIRCUT						41,136									
ACTUAL HAIRCUT						41,136									

PRODUCT GROUP: 00999

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AVP				-33	72.250	358	286	215	143	72	-72	-143	-215	-286	-358

CLASS GROUP: AVP						17	18	19	20	21	22	23	24	25	26
CLASS GROUP SUM						358	286	215	143	72	-72	-143	-215	-286	-358
RISK HAIRCUT						358									
CLASS GROUP MINIMUM HAIRCUT						0									
ACTUAL HAIRCUT						358									

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BA				-14	64.750	136	109	82	54	27	-27	-54	-82	-109	-136

CLASS GROUP: BA						17	18	19	20	21	22	23	24	25	26
CLASS GROUP SUM						136	109	82	54	27	-27	-54	-82	-109	-136
RISK HAIRCUT						136									
CLASS GROUP MINIMUM HAIRCUT						0									
ACTUAL HAIRCUT						136									

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BBNK				20	78.625	-236	-189	-142	-94	-47	47	94	142	189	236

CLASS GROUP: BBQ						17	18	19	20	21	22	23	24	25	26
CLASS GROUP SUM						-236	-189	-142	-94	-47	47	94	142	189	236
RISK HAIRCUT						236									
CLASS GROUP MINIMUM HAIRCUT						0									
ACTUAL HAIRCUT						236									

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BOL	P	1095	0300	5	25.00	470	327	212	115	54	-35	-62	-82	-95	-105
CLASS GROUP: BBQ						17	18	19	20	21	22	23	24	25	26
CLASS GROUP SUM						470	327	212	115	54	-35	-62	-82	-95	-105

RISK HAIRCUT	105
CLASS GROUP MINIMUM HAIRCUT	125
ACTUAL HAIRCUT	125
RISK HAIRCUT (PRODUCT GROUP LEVEL)	855
ACCOUNT GROSS HAIRCUT	41,991

ACCOUNT NUMBER: ZZ1M

PRODUCT GROUP: 00004

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
XDM		0000	0000	100000	697.80	-418,680	-314,010	-251,208	-167,472	-83,736	83,736	167,472	251,208	314,010	418,680
XDM	C	1195	0710	160	581.75	-91,976	-91,925	-87,374	-81,0-18	-15,253	-10,851	-21,078	-31,526	-13,066	9,818
XDM	P	1195	0600	3000	6.25	253,740	153,480	141,090	74,190	32,970	-46,050	-50,280	-53,130	-54,810	-55,440
CLASS GROUP: 00004						17	18	19	20	21	22	23	24	25	26
CLASS GROUP SUM						-256,916	-252,455	-197,492	-174,300	-66,019	26,835	96,114	166,552	246,134	373,058

RISK HAIRCUT	256,916
CLASS GROUP MINIMUM HAIRCUT	79,000
ACTUAL HAIRCUT	256,916
RISK HAIRCUT (PRODUCT GROUP LEVEL)	256,916
ACCOUNT GROSS HAIRCUT	256,916
FIRM GROSS HAIRCUT	492,768