

# LDB RISK BASED MARGIN

VERSION 5.0



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## Risk Based Margin Overview

The Risk Based Margin program, developed by LDB, computes margins as defined in SEC releases 34-54918 and 34-54919. At the user's option, the system will produce basket composition reports, margin baskets in excess of hedging futures/options as unhedged stock, and margin convertible securities as common stock applicable.

The user is responsible for providing positions in risk based format (as defined in this manual). The user will also obtain the required profit/loss files from OCC (via THEORETICAL INFORMATION ONLINE (TIO) or CPU to CPU transmission) or from another approved source. If the optional basket functionality is desired, the user will also provide basket composition files.

The system is written in Visual FoxPro Version 9.0. Once installed on the computer in the directory selected, the RBM system will build sub-directories:

- 1) DATA where all data base files are stored
- 2) IMPORT where position, basket composition and PL files to be imported are stored
- 3) PRINT where all print files are placed
- 4) DATA\TEMPLATE where backup structures for all DBF files are stored
- 5) BACKUP where copies of reports can be archived
- 6) HELP where an HTML copy of the manual resides
- 7) RBMDOC where a Word copy of the manual resides
- 8) WRAP for use by the Wrapper™ add-on

By using the INI file, described in the MAINTAIN section, the user may alter the locations for the DATA, PRINT, BACKUP, HELP and IMPORT directories.

When started, the system will present a bar menu containing pads for import, calculate, view, print, maintain, simulate, help and quit. The user may choose a pad by moving to it with the arrow keys, by clicking on the pad with a mouse, or by pressing the ALT key plus the underlined letter for the appropriate pad, such as ALT+Q for quit. When a pad has multiple selections, each selection will have a key letter underlined. The user may choose a selection by typing the underlined letter for that selection, clicking on the selection with the mouse, or by hitting the down arrow to the selection and hitting the ENTER key. Some menu selections are marked with an arrow to the right. This indicates a cascading menu with additional items. You may move into the cascading menu as discussed above and make your final selection there.

Each menu pad and its optional selections are discussed below.

The user may interrupt execution of the system at any time by hitting ALT+F4.

## TO RUN...

### ***Interactively:***

Click on the RBM icon. You MAY have to go to the MAINTAIN menu to: alter locations and names of input files in the INI file; add special securities information; or alter RBM functionality in the Switches menu. Most often you will NOT have to go here.

Go to the IMPORT menu and select Position File Import. Then do RBM P/L File Import. Alternatively you may import All Production Files.

Go to CALCULATE menu and select Entire Position File.

You may then VIEW and/or PRINT report files.

QUIT.

### ***In Batch:***

In the INI file set BATCH equal to a non-zero value. Examine and alter any other batch parameters (GRPACCT, GRPBATCH and SWITCHFILE) in the INI file. Ascertain that switch settings in the indicated switch file are proper.

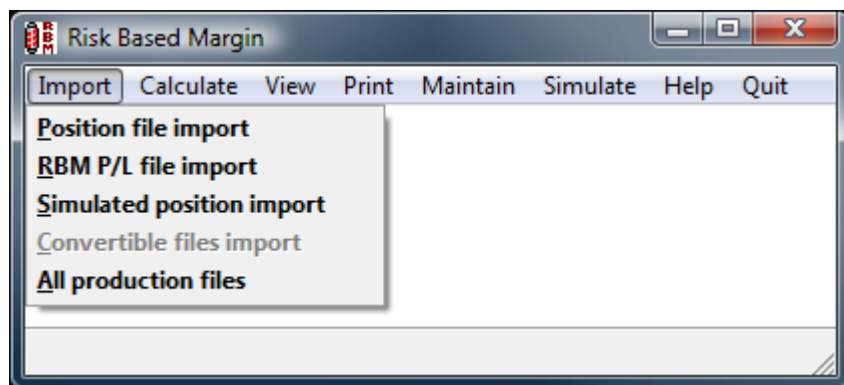
Create all required import files and the batch semaphore file (RBHBATCH.TXT in the import directory). The application may be launched when all files are present or may be launched prior to that time. If launched prior to the files being ready, the program will look for the existence of the semaphore file before commencing.

When finished, RBM can launch a user-supplied application. Depending on the value of the BATCH parameter, RBM will either exit or return to looping and looking for the semaphore file. IF RBM aborts, it will create BADBATCH.MEM in the Print directory.

Please refer to the BATCH parameter in the INI file section below for more information.

## **RBM MENU BAR:**

### ***IMPORT***



The import menu allows the RBM program to bring the position and PL files provided by the user into the system. All files to be imported are expected to be in the IMPORT directory set up during installation or in an alternate directory specified in the INI file, discussed in the MAINTAIN section below.

Unless you use the INI file to specify alternate names for the required files, they must be named as described here. The position file must be named **position.txt**. The PL file must be named **pldata.txt**. The market maker PL file containing parameters for broad based indices must be named **mmdata.txt**. Finally, the basket composition file must be named using the COMPFILE entry in the INI file. Further notes and layouts for these file types are contained in the file layout section of this documentation.

NOTE: You may use the POSFILE entry in the INI file to alter the name and location of the position input file. The MMFILE entry will alter the name and location of the market maker file from OCC; PLFILE will alter the name and location of the OCC PL file.

Each time a margin calculation is required for a new date, all files must be imported. The system will not compute margin requirements if the header record dates on the position and PL files do not match.

Importing a position file deletes all print and position-related files.

### **POSITION FILE IMPORT**

The position file is brought into the system. The user will be warned at the end of the import if any errors have been found. Entries for positions with errors are deleted from the position file and are not included in later processing. **The user should proceed with processing only after all errors have been resolved.** The user may view/print the error log file from the VIEW or PRINT menu pads.

The user may correct errors via 'EDIT position' in the SIMULATE menu pad.

If the Basket Hedge and/or Basket Composition switches are set, the system will automatically import the basket composition file after the position file import.

If the GROUPSFILE INI entry is activated and the file exists, a user supplied GROUPS CSV file will be imported and replace the existing data in the GROUPS file.

**To successfully process positions, the system requires disk storage equal to 12-14 times the size of the original ASCII position file to be imported.**

In the IMPORT phase the system will identify any non-standard RB entries (indicated by a security type matching an entry in the NonRB security type file and a transaction ID of 800) and move them to a non-RB work file for inclusion in the NonRB report.

## RBM PL FILE IMPORT

The OCC RBM PL files are brought into the system. **Once imported, the PL files will occupy 1.5 -3.0 times the space required by the ASCII PL file to be imported.**

The minimum hedge file MAY be updated for new baskets identified in the PL file. You must update the Cash Index field to make use of the new entries. In addition, if your minimum hedge value in the minimum hedge file disagrees with the value in the PL file, it will be replaced by the PL value and you will be notified of the change. Basket Ids in the Hedge file but NOT in the P records will be deleted. Set UPDHEDGE = Y in the INI file to enable the Hedge file update functionality. If you want the system to add new entries but RETAIN entries no longer in the P records, set DELHEDGE = N to the INI file.

Each time the PL file is imported, the system will create a file named NEEDSYMBOL.TXT in the print directory. It includes all basket Ids that have blank Cash Index entries.

## SIMULATED POSITION IMPORT

This item will import the simulated position that the user has modified (see SIMULATION section below). When doing a normal position file import, all entries are copied to the simulation file for possible modification by the user. SIMULATION import preserves the latest simulation file so the user may go back and add to the simulation.

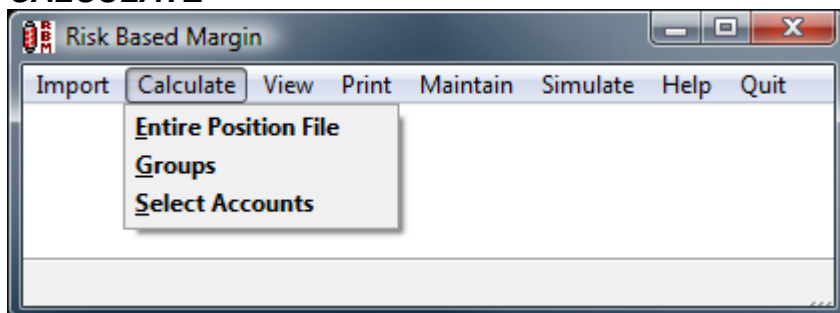
## CONVERTIBLE FILES IMPORT

CONVERTIBLE FILE will import an ASCII file of conversion information, overlaying the previous contents of the convertible file. The file layout is described at the end of this document.

## ALL PRODUCTION FILES

This allows the user to import position, convertible and PL files via one menu selection.

## **CALCULATE**



This menu pad performs the Risk Based Margin calculation. A progress window is opened and the user is informed as various tasks are performed. Positions are matched to the PL file, margin charges are computed, and the summary report is created.

**NOTE: IF YOU ARE GOING TO RE-MARGIN A POSITION, YOU MUST IMPORT IT AGAIN BEFORE EACH MARGIN RUN. VARIOUS FUNCTIONALITY ALTERS ORIGINAL QUANTITIES. THE SYSTEM WILL NOT LET YOU MARGIN MORE THAN ONCE WITHOUT AN INTERVENING POSITION IMPORT!!!**

The user may compute margin requirements on the entire position file, on all customized groups defined in the Maintain/Other Files/Group files menu pad or on selected accounts.

## BASKETS:

In order to perform basket hedging and basket composition functions, the system requires an entry for minimum capitalization in the HEDGE file discussed in the MAINTAIN section. Without this entry, no basket hedging or basket composition will be performed.

RBM will check the position file for equity positions within a basket class (such as an ETF). If the Basket ID for this class is not in the Minimum Hedge file, or it is in the Minimum Hedge file, and Cash Index is left blank, RBM will make an entry in the hedgeentries.txt file. This file can be found in the PRINT directory. The purpose is to inform users when the Minimum Hedge file may be lacking valuable information.

During basket hedging processing, the system assures that there are no more baskets than hedging securities and that there is no extra stock in the basket. Any excess positions are removed from the basket ID and included in the margin as non-basket positions.

When removing excess stock from baskets, the resultant basket may have one too many or one too few shares in each stock due to rounding. This normally results in basket quantities very slightly above or very slightly below the quantity we are hedging.

Basket composition reports are created at this time. The composition report will **warn the user if a basket has inadequate composition, but, depending on the value of the UNDO switch in the Maintain Switches menu selection, will either margin the basket as it stands or convert all stock in the basket to non-basket stock.**

Without a basket composition file, no composition report is created and no basket hedging analysis is performed. In addition, if the price of the index (contained in the first record of the composition file) is zero, the system does NOT create a composition report or perform basket-hedging analysis.

**NOTE: IF BASKETHEDGE IS NOT CHECKED IN THE MAINTAIN SECTION, THE BASKET COMPOSITION REPORT LOSES SOME OF ITS VALUE. THE COMPOSITION REPORT, RUN WITHOUT BASKET HEDGING, MAY INCLUDE EXTRA STOCK AND MAY HAVE MORE BASKETS THAN THERE ARE HEDGING SECURITIES. IN ADDITION, THE BASKET COUNT MAY BE INCORRECT.**

**IT IS SUGGESTED THAT YOU ALWAYS HAVE BASKETHEDGE CHECKED WHEN BASKETCOMPOSITION IS CHECKED.**

If you have positions in basket stocks which ARE NOT in the composition file, you will be warned and the positions in question will appear in the error log. **These positions WILL be margined, but not as part of a basket.**

SSF should be priced at the daily settlement as defined in the July 2002 margin rules issued by the CFTC/SEC. The system will **WARN** if the price in your position file for an SSF in a basket differs from the OCC provided price by more than \$1.00. **The position WILL be margined using your price. Alter the price using the Simulate menu to avoid this warning.**

## NON-OCC BASKETS:

Users may define baskets which are not included in the OCC file.

The symbol of the ETF hedging the user defined basket MUST appear in the basket id field of the Minimum Hedge preceded by 5 (to indicate a 5% minimum charge) or 7 (to indicate a 7.5% minimum charge).

Where baskets are created the hedging and haircut will be shown in the non-rb report.

Note: The basket to be created cannot use a cash index that already exists (such as SPY), it may not be based on a class that contains options, and the user may not create a 5% and a 7.5% basket that share the same cash index. The user MUST NOT create a 5 and a 7 basket that share the same ETF.

## UBIT™

When analyzing stock baskets, RBH (the precursor to RBM) has historically taken the stock holding with the greatest market value and used that stock to determine the target number of baskets contained in a position. RBM now allows the user to select the Universal Basket Identification Technique (UBIT™) and to use it as the method for determining a position's target number of baskets.

UBIT™ will keep the largest number of stock shares within the basket. Although this may NOT generate the lowest margin, it will most closely comply with the basket identification employed by the user in populating the position file. UBIT™ may be selected via the Switch submenu in the Maintain menu.

## ANALYZING CONVERTIBLES:

If you check Convertible in the Maintain Switches menu, the system will look for any convertible tickers defined in the convertible file and convert them to common stock.

**IT IS UP TO YOU TO ASSURE THAT THE CONVERTIBLES ENTERED INTO THIS FILE ARE ELIGIBLE FOR CONVERSION TO COMMON AS STIPULATED IN RULE 15c3-1 OF THE SECURITIES EXCHANGE ACT OF 1934 AND ANY OTHER APPLICABLE RULES AND OPINIONS.**

**The system will convert ALL convertibles, both long and short, to common and take the loss on conversion as an additional charge. The resultant common stock position will pass through the system and be margined at the proper rate for stock.**

Any loss on conversion is added to the summary report as class ~CONVE and has a CV footnote next to it. Any gain on conversion is ALSO added to the summary report as a separate line item IF GETCREDIT = Y in the INI file.

If RBM cannot determine the proper common stock price, it will use zero for the common price. This will result in a large loss on conversion. It is suggested that convertibles NOT be passed to the system unless the underlying common is an optionable stock (and is in the OCC PL file) and/or a position in the underlying common is held in the same account.

In the position file, convertible BONDS should have a security type of S. The Price field should contain the unaltered price, such as 101.25. The Quantity field, however, should contain the par quantity divided by 100. Since RBM values positions by multiplying the Quantity field by the Price field, this alteration allows RBM to properly compute the value of the bond holdings. If you have \$1 million of par bonds, the quantity should be entered as 10000.

Because of this quantity alteration for convertible BONDS, entries in the Cash and Factor fields in the convertible file MUST be divided by 10.

## MATCHING POSITIONS AND PL:

If any required elements of the RBM PL file are missing, the user will be informed at this time. Without these elements, the system cannot compute a proper margin requirement.

Other than the position import function, this is the only other function that will write fatal errors to the error log. Any securities that are not found in the PL file are labeled an INVALID SERIES and are not moved to the Extended Position File for later processing. **The user should proceed with processing only after all errors have been resolved.** Watching the record counts in the lower left section of the screen gives an idea of progress.

Any basket ID's entered which are not found on a P record in the PL file will be flagged as an INVALID BASKET and stocks in those baskets will not be margined.

## MARGIN CHARGES:

The system follows the risk based margin methodology and produces a detailed report for all positions to be margined. Counts and values for calls, puts, and futures are also included for each security.

NOTE: When computing the minimum on a long option, the system uses the extended mark price in the RBM PL file as the option mark. The detail report, however, shows the mark included in the position file and computes value based on that position file mark.

NOTE: The Detail and Error Log report now shows the Symbol MMDDY Strike for options included in the haircut

i.e. OEX C12217 123.12

## SUMMARY REPORT:

A summary report of charges for each account is created.

## EXPORTING FILES:

If the CSV Export List file in the Maintain/Other Files menu is populated, the files contained in that list will be exported to comma delimited ASCII files in the print directory.

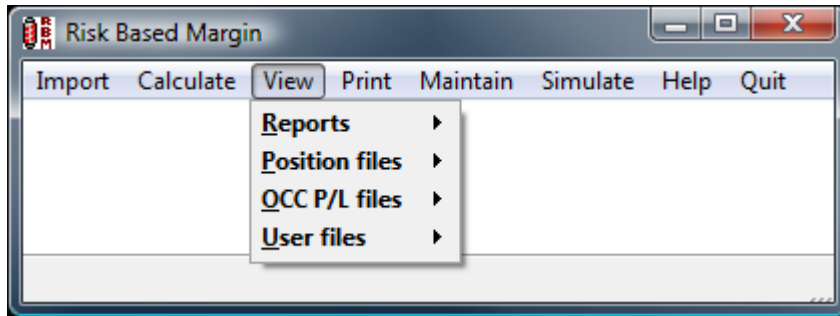
Note that other products, such as Microsoft Access, can read the Fox Pro dbf files containing this data.

## NYSE Required File:

Note: the system creates 2 files in the print directory: YYYYMMDD.OCC and YYYYMMDD.LDB. YYYYMMDD indicates the trade date of the margin calculation. The YYYYMMDD.OCC file is in pure OCC form and contains the user input plus modifications made via simulation. This file has been mandated by the NYSE in Interp /01 of Rule 17a-3(a) (11), 'Electronic Record For Theoretical Options Pricing Methodology'. YYYYMMDD.LDB is the same file, but it also contains user-supplied values for shares per contract, mini leap divisor, origin, and cap. This should allow the user to exactly replicate a margin calculation from the past. If importing the LDB file, do not check BASKETHEDGE, BASKETCOMPOSITION, and SETBASKET ID in the Maintain Switches menu to replicate past results.

If the user has entered non-standard security types in the NonRB security type file, those entries will be copied to a file named YYYYMMDD.NON in the print directory.

## VIEW



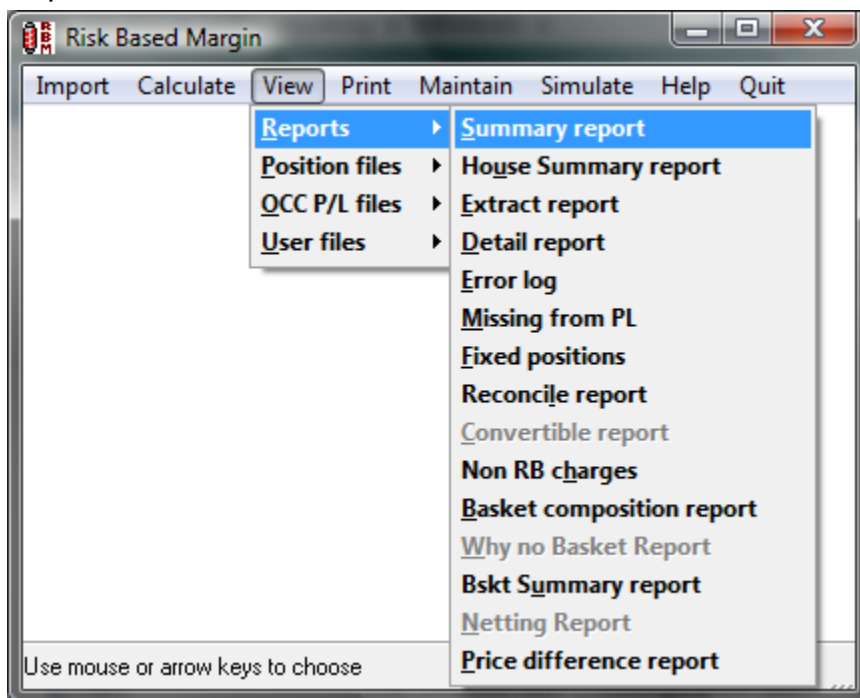
The user may view all reports as well as system data files. The ability to view the data files exists primarily as a tool to be used if problems develop. The user is most apt to view reports and those files that can be maintained via the system, such as the INI file.

When viewing, the viewer may expand the view window and alter the order in which the fields appear in the window by dragging fields to new areas in the window. **No data can be altered in the view section.**

The user ends a view by clicking on the upper right corner of the view window or by hitting the ESCAPE key.

The view menu consists of four cascading menus: Reports, Position files, OCC P/L files and User files.

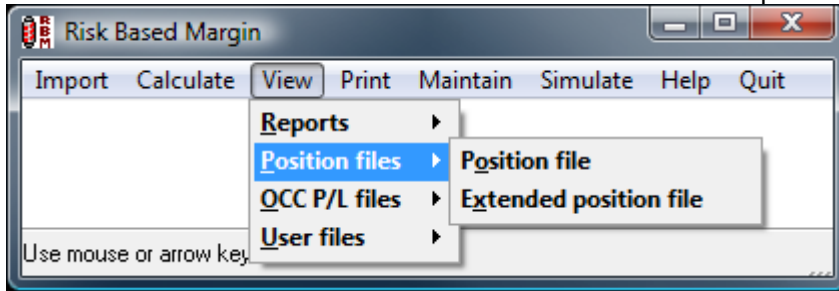
## Reports



Reports are viewed using two panes, with the left-hand pane containing descriptive data that pertains to the corresponding line in the right hand pane. The user may horizontally scroll in the right pane while preserving the description info in the left pane. As in any window, the user may vertically scroll using scrolling keys or the elevator button.

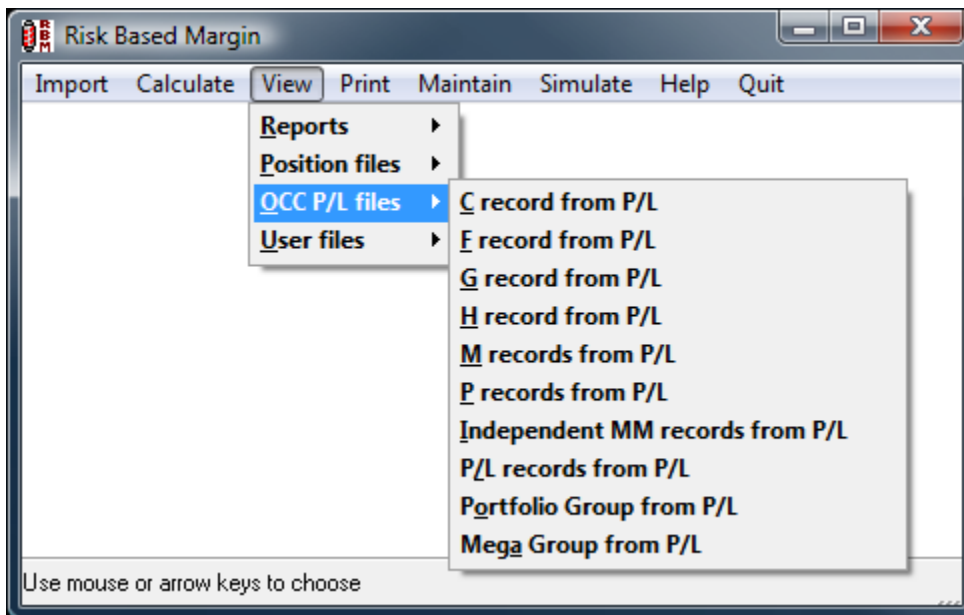
## Position Files

The second section of the menu allows the user to examine the position and extended position files.



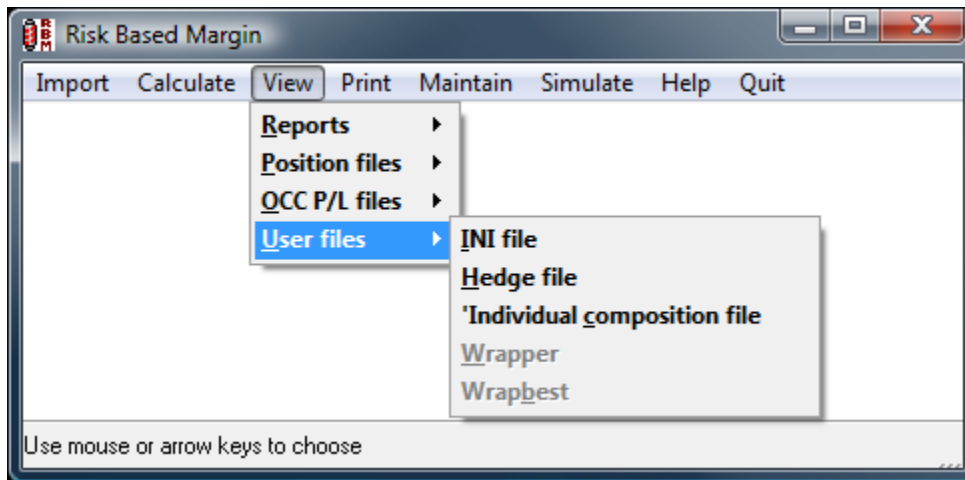
The Position file contains information imported from the ASCII position file and is altered throughout the margin process. The Extended Position file contains additional data, including risk and minimum charge data, and is the source for the detail report. The Fractional QTY position file may be used in calculations and allows for fractional quantities.

## OCC P/L Files



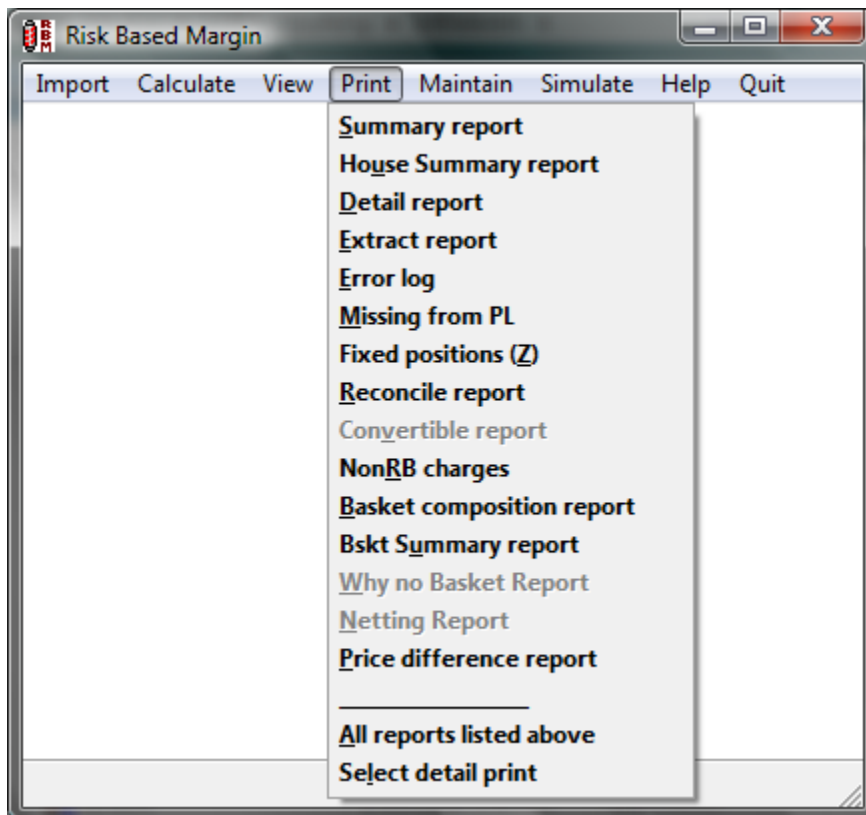
These files are derived from the OCC P/L file and may be useful in investigating problems.

## User Files



The fourth section allows the user to view the INI file (with special user configuration data), the HEDGE file (containing minimum capitalization requirements for baskets) and individual basket composition files.

## PRINT



The reports are printed in typical Windows fashion. The user is presented with a printer prompt dialog box and may alter the printer and certain printer parameters. All reports are produced using Courier New font.

The default printer orientation and font sizes for each are listed in the following table.

<i>Report</i>	<i>Font Size</i>	<i>Orientation</i>
Summary	10	Portrait
House Summary Report	10	Portrait
Detail	6	Landscape
Extract	6	Landscape
Missing from PL file	6	Landscape
Error log	6	Landscape
Fixed Positions	10	Portrait
Reconcile	6	Landscape
Convertible Report	7	Landscape
Non RB Charges	10	Portrait
Basket Composition	9	Portrait
Basket Summary	9	Portrait
Why No Basket	10	Portrait
Netting	8	Landscape
Price Difference	10	Portrait

The text files stored in the print directory are created at the time the margin calculation is run and contain that date and time. When a text file is brought into RBM and printed via a FoxPro report, it contains the date and time of the printing.

PDF reports may also be created based on the PDFREPORT setting in the INI file. See the PDF Reports Section for further information.

By clicking on the ALL selection, all of the reports listed above this selection will be printed. The user will see a single printer prompt box.

The 'Select Detail Print' menu allows individual accounts to be printed from the detail report. When selected, this item will display the entire detail report in a browse window. Move the cursor to a line containing a position for the account you wish to print. Hit CTRL+END to print the account you have located. You will be returned to the browse window and may select other accounts to print. When finished, hit ESCAPE.

The Extract report is a summary of the detail report that shows only the totals for classes, products, and groups.

The Missing from PL report contains all positions that are in the position file but are not found in the OCC PL file.

The Reconcile Report combines security quantities and values from the reports (detail, convertible, netting, error log and Non RB) that contain these figures and presents them in a single report to assist in reconciling the RBM results with starting inventory.

If the same security occurs in multiple position records with different market prices, the value columns will NOT match inventory.

The Price Difference report will list all stock and future positions that occur within the position file with multiple prices. The user will be warned during the position import if any securities have multiple prices. If the PRICEPCT entry in the INI file is set to something other than zero, this report will contain a second section that lists all basket stocks whose price differs from the OCC PL price by more than the tolerance indicated in PRICEPCT.

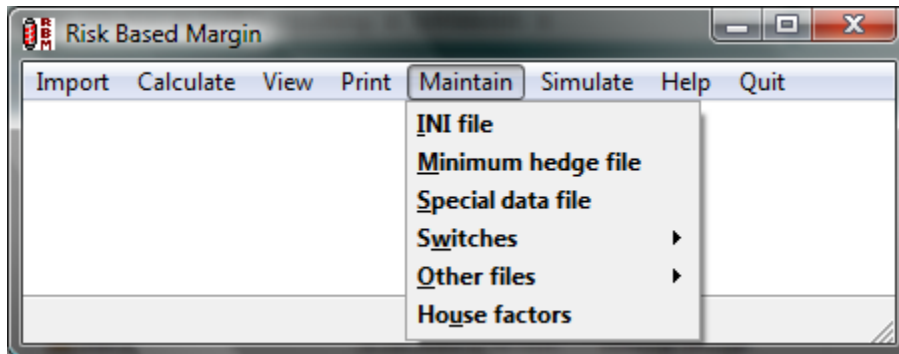
The Basket Summary report extracts data from the Basket Composition report and presents it in a more concise and more easily read format.

NOTE: The Detail and Error Log report now shows the Symbol MMDDY Strike for options included in the haircut

i.e.

OEX C12217 123.12

## MAINTAIN



MAINTAIN sessions contain informal messages regarding data in the last line on the screen. Records may be inserted by typing CTRL+Y; records may be deleted/undeleted by toggling CTRL+T. **When ending an edit session, the user should click on the close button in the upper right corner of the window. Hitting ESCAPE may discard changes.**

### INI File

The INI file contains entries that the user may modify to configure his system as desired. After editing the file, click on the Close button in the upper right hand corner of the window. You may then decide to retain or discard your changes.

**The default INI file is RBM.INI located in the working directory for the RBM application. If you wish to use a different INI file, you may add the path and file name as an argument to the command line in the application's properties box. Switch settings are saved in RBM.MEM unless a different INI file is used. Then Switch settings will be named in a similarly named file with MEM as the extension.**

All INI parameters (items on the left side of the equal sign) are case insensitive and should be entered without spaces. The parameter is followed by an equal sign and the appropriate value is entered to the right of the equal sign. Explanations and examples of valid entries follow:

ADDSTOCK functionality to report (addstock.txt in PRINT directory) the optimal amount of long/short stock to add to a CLASS. Currently, this will not work on Products or Product Groups (USIDX).  
ADDSTOCK = Y (Default = N)

ADOBEPOR = Adobe PDF print directory  
ADOBEPOR = C:\Program Files\100LDBRBH\PDFPRINT

ADOBEPRN defines the Adobe printer name  
ADOBEPRN = Adobe PDF (Default = Adobe PDF)

BACKUPDIRECTORY define directory in which daily report files are saved as YYYYMMDD.XXX (e.g., 19970301.dtl); if not defined, files are retained in print directory as XXXXXX.TXT until next time the system is run  
BACKUPDIRECTORY = .\BACKUP\

BASKNET nets long and short securities within the same basket created by the Weaver™ when  
POSTNET = Y.  
BASKNET = Y (default = N)

BATCH number not equal to zero indicates a batch run which will commence when existence of a semaphore file (RBHBATCH.TXT in the import directory) is detected. Upon completion, a user-supplied routine (DOS: RBHFINI.EXE or RBHFINI.BAT; WINDOWS: RBHFINIW.EXE) may be executed. Program messages are placed in batchmsg.txt in the print directory. If the parameter is greater than zero, RBM remains open, waiting for another semaphore file. If the parameter is negative, RBM will close upon completion. Users may want to set the SWITCHFILE parameter to point the batch run to the proper switch settings. Since batch mode does NOT allow any user interaction, it will be impossible for a user to set switches and save them in a switch file with the same name as the INI file. Hence, the user may want to set the SWITCHFILE parameter.

BATCH = 3

BBDLTICKER displays the Bloomberg Index field in the Minimum Hedge edit screen for user editing and exports the file to ~HEDGE.EXP in the Print Directory for use by user applications

BBDLTICKER = Y (default = N)

BROWSEFONT allows user to pick font size for VIEW windows; 6 is the default size

BROWSEFONT = 6

BROWSER defines location and name of Internet browser if NOT Internet Explorer in default location

BROWSER = C:\WINDOWS\MYEXPLORER.EXE (Default is %Program Files%\Internet Explorer\iexplore.exe)

COMPFILE name and location of single source basket comp file containing info for all required baskets

COMPFILE = F:\BASKETS\COMPOS.FIL

CLEARING indicates if this is a clearing firm run; see CLEARING section at end of manual

CLEARING = Y (default = N)

DATADIRECTORY the full DOS path for all data base files

DATADIRECTORY = D:\RBM\DATA\

DELHEDGE retains basket info in minimum hedge file for baskets NOT in the OCC PL file

DELHEDGE = N (default is Y)

DIVISOR default mini leap divisor used if 0 in position file

DIVISOR = 1

DONOTHING allows only View/Print and Quit; no execution or file modification is allowed

DONOTHING = Y (default = N)

DOOPT will skip optimization of equity margins entirely within Weaver™ if set to N.

DOOPT = N (default = Y)

DOREG will run regular wrapper runs only

DOREG = Y (default = N)

DOSPLIT will run narrow based and broad based wrapper runs only

DOSPLIT = Y (default = N)

EXPDAYON allows use of expiration day when in both position and pl file.

EXPDAYON = Y (default = Y)

FIRMNAME the name the user wishes to appear on reports

FIRMNAME = LDB

FIXSTRIKE will attempt to match a strike with the OCC file by multiplying it by 10

FIXSTRIKE = Y (default = N)

GROUPSFILE name and location of groups CSV file  
GROUPSFILE = F:\DATA\GROUPS.CSV

GRPACCT margin accounts not in groups file as single account Group when doing GRP Batch run  
GRPACCT = Y (default = N)

GRPBATCH tells Batch mode to run groups only; see GRPACCT and DO\_CCC also  
GRPBATCH = Y (default = N)

HELPDIRECTORY defines the full DOS path for the online manual  
HELPDIRECTORY = D:\BOND\HELP

HOUSEFACTORFILE = This file contains the multiplicative factors used to adjust the standard haircut requirement to house requirements.  
HOUSEFACTORFILE = .\IMPORT\HFACTOR.TXT

INTRADAY This turns on the Intraday/House processing logic.  
INTRADAY = Y (default = N)

IDMRECIN defines the default equity rates and all rates not equal to the default equity rates.  
IDMRECIN = .\IMPORT\IDMRECIN.CSV

IDMRECTVIN This file contains the TV values that the system will use for updating the OCC data file.  
IDMRECTVIN = .\IMPORT\IDMRECTVIN.DAT

IDMRECOUT This CSV exception file is built from the OCC file for Intraday/House requirement TV processing by the client  
IDMRECOUT = .\IMPORT\IDMRECOUT.CSV

IMPORTDIRECTORY the full DOS path for all files to be imported  
IMPORTDIRECTORY = D:\RBM\IMPORT\

MMAFFILE name and location of the enhanced return ETF file (used to update MMAF in special data)  
MMAFFILE = C:\Program Files\LDB\100ldbrbh\import\rbh\_enhanced\_return\_etfs.csv  
MMFILE name and location of market maker OCC PL file  
MMFILE = C:\OCC\PL\MMINFO.DAT

NETDERIV allows derivatives that are not in a class that allows baskets to be netted in the Weaver run  
NETDERIV = N (default = Y)

NSPB default shares per contract to be used if 0 in position file  
NSPB = 100

NYSE allows system to ignore shares per contract and divisor info from position file  
NYSE = Y (default is N)

OTCFILE name and location of the client supplied OTC file  
OTCFILE = .\IMPORT\OTCRBM.TXT

PDFERASE deletes all of the previously created PDF reports within the Adobe port directory.  
PDFERASE = Y (Default = N)

PDFREPORT creates PDF reports in addition to the text files automatically created with each run.  
PDFREPORT = Y (Default = N)

PDIFF defines the smallest difference to check for when preparing the Price Difference report.  
PDIFF = 1.00 (0.01 is the default)

PLFILE name and location of the firm OCC PL file  
PLFILE = C:\OCC\PL\PLINFO.DAT

PLIMPBATCH allow PL file import in batch  
PLIMPBATCH = N (Default = Y)

PLIMPORT speed up the import process when using INTRADAY = Y.  
PLIMPORT = Y (Default = N)

POSFIL name and location of ASCII position file to import  
POSFIL = F:\DATA\OURPOS.DAT

POSTNET passes positions that are NOT netted to the Weaver™ and nets after the Weaver™ has run.  
POSTNET = Y (default = N)

PRICEPCT indicates the allowable price discrepancy between OCC PL stock prices and user prices for stocks in basket; anything outside this tolerance is reported in the expanded Price Difference report; enter the value as a percent: 1.25 indicates 1.25%  
PRICEPCT = 2.00 (default = 0 indicating NO price checking)

PRINTDIRECTORY the full DOS path for all print files  
PRINTDIRECTORY = D:\RBM\PRINT\

SSFBASKET activates logic to include single stock futures in baskets  
SSFBASKET = Y (default is Y)

SWITCHFILE name and location of switch file; BATCH RUNS MAY REQUIRE THIS  
SWITCHFILE = SWITCHES.MEM

TEMPLATEDIRECTORY the full DOS path for archiving data base files  
TEMPLATEDIRECTORY = D:\TEMP\RBHTEMPLATE\ (default is the directory inside of DATA)

UPDHEDGE will allow automatic update of the Minimum Hedge file from the OCC P records  
UPDHEDGE = Y (default is N); see also DELHEDGE

WARNING to suppress NSPB and MINI LEAP Divisor warnings by setting to N  
WARNING = N (default is Y)

WVLIMIT will allow the Wrapper™ to feed the Weaver™ the maximum number of baskets that should be created in basket classes to generate the smallest class charge.  
WVLIMIT = Y (default is N)

WVLMTMIN Wrapper will ignore baskets that can't reach/exceed the threshold in terms of market value. The goal is to improve speed during Wrapper runs without having a material effect on the haircut.  
WVLMTMIN = 2000000 (default is 0)

WVNET will net stock positions after creating narrow based baskets and performing equity class optimization but before making any broad based baskets. POSTNET = Y must be set.  
WVNET = Y (default is N)

WVOPTLAST will perform optimization on equity margin classes AFTER creation of narrow based baskets.  
WVOPTLAST = Y (default is N)

WVSPLITBB will create broad based baskets not in product 9 before creating those in product 9.  
WVSPLITBB = Y (default is N)

## Minimum hedge file

The minimum hedge file contains OCC basket ID's, the minimum capitalization required, an optional basket description field and the 3 character Cash Index that appears in the basket composition file. The system will add new basket records to this file when the PL file is imported if UPDHEDGE = Y in the INI file. However, the system CANNOT fill in the Cash Index field. If the minimum hedge value in the file is not the same as the minimum hedge value in the PL file, it will be replaced by the value from the PL file and you will be warned. In addition, any basket IDs NOT contained in RBM P records will be deleted

If BBDLTICKER = Y in the INI file, the user may also use this screen to maintain the symbols required to interface with their chosen source for basket composition information. Upon exiting the screen, the contents of the file are exported to ~HEDGE.EXP in the Print Directory for use by user applications.

## Special Data file

The **Special Data** file allows the user to handle certain symbols whose entries in the position file do not include values for fields used in properly computing position values. The fields in question are Shares per Contract, Mini Leap Divisor, and MMAF. The Cap Indicator field may be ignored.

When an entry in the position file has 0 for Shares per Contract, the system will search for the ticker symbol in the Special Data File. If the symbol is found and the entry contains a non-zero value for Shares per Contract (SPC), the SPC value from Special Data is inserted into the position record. If the symbol is not found or the SPC value is zero, the system uses the NSPB value from the INI file as the default.

When an entry in the position file has 0 for Mini Leap Divisor, the system again goes to the Special Data file. If the symbol is found and the Mini Leap Divisor is not zero, the Mini Leap Divisor from Special Data is used; otherwise, the Divisor entry from INI is used.

When an entry in the position file has 0 for MMAF, the Special Data File is searched. If the symbol is found and MMAF is not 0, the MMAF value from Special Data is used. If the symbol is not found or the MMAF value is zero, the system uses a default of 1.

**NOTE: The Special Data file is used only when the position file has 0 entries for the fields in question. It is suggested that these fields contain proper values in the position file and that the Special Data file only be used to handle exceptions.**

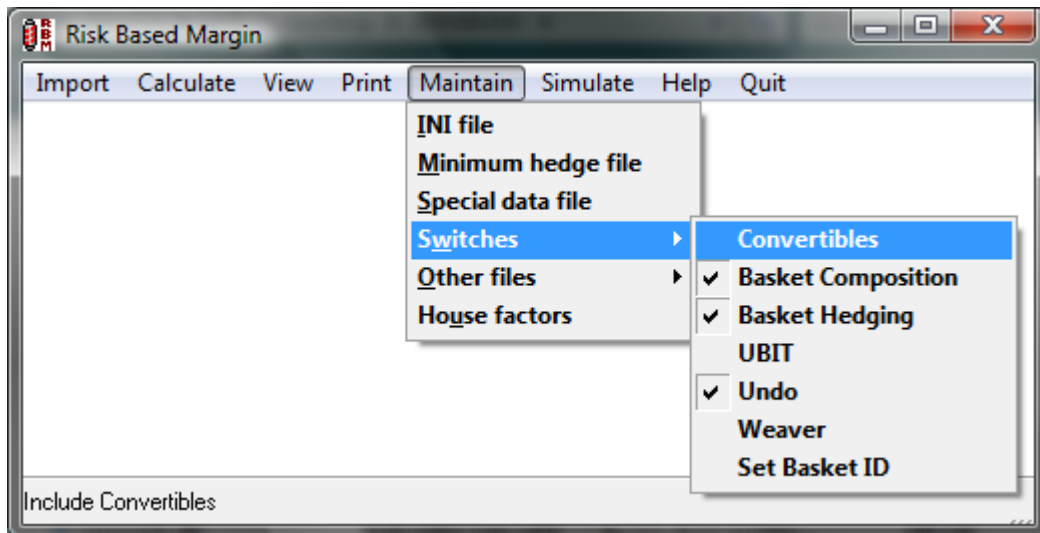
**It is the responsibility of the user to verify the data in the Special Data file in order to ascertain its accuracy.**

**If the user populates the optional Security Type field in this file, the system will only use the Special Data values, as described above, when the Special Data type matches the type in the position file. If this field is left blank in the Special Data file, the system will match on symbol without regard to security type.**

## House Factors

The factor file is imported with the OCC PL file. This will allow users to adjust factors, import the position file again, and then recalculate using the adjusted factors. Whenever the PL file is imported any changes made through the Maintain menu will be replaced with factors from the factor import file. The factor import file is defined in the INI file as HOUSEFACTORFILE.

## Switches

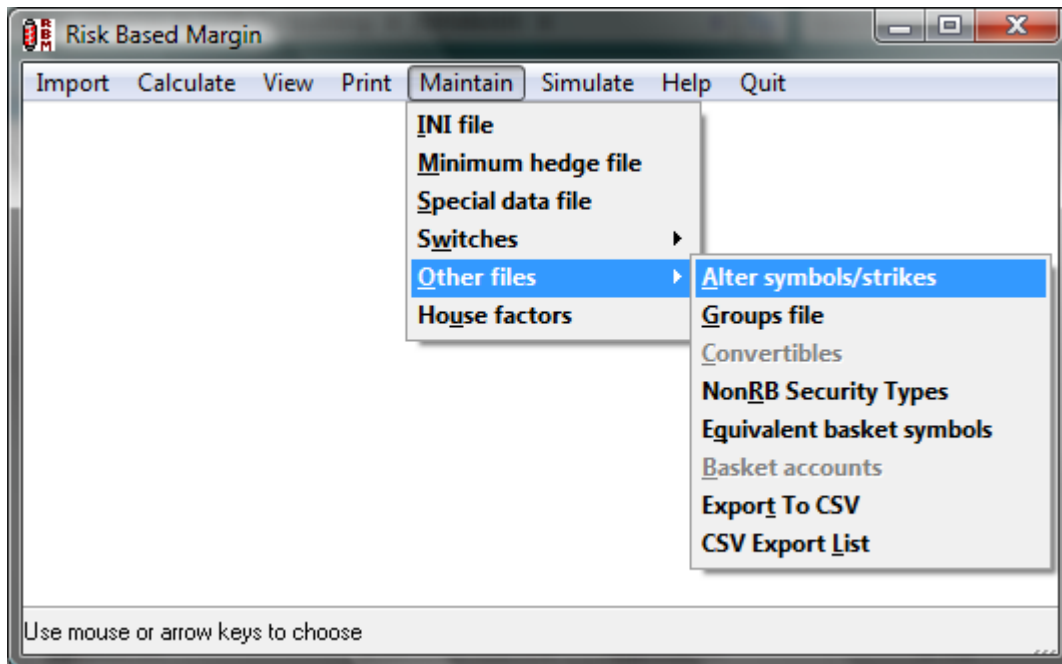


Values may be toggled on/off by clicking on the check box next to each parameter. User settings are retained across sessions. **The user should review this menu and set those items that are required.**

**Switch settings are saved in a file with the same name as the INI file and having an extension of .MEM file. Batch users will have to set the SWITCHFILE parameter in the INI file to point to a switch file with their desired settings.**

<i>Switch</i>	<i>Functionality (if on/checked)</i>	<i>Default</i>
Convertibles	Enable Convertible arb relief	Off
Basket Composition	Generate basket composition report	On
Basket Hedging	Perform basket hedging analysis	On
UBIT™	Universal Basket ID Technique	On
Undo	Undo poorly capitalized baskets	On
Weaver	Run the Basket Weaver™	Off
Set Basket ID	Set Basket ID by account	Off

## Other Data Files



### Alter Symbols/Strikes

The Alter symbols/strikes menu selection allows the user to maintain a list of securities whose symbol or strike must be modified. Users occasionally cannot obtain correct OCC tickers or correctly formatted strikes for their position file. This mechanism allows users to enter the symbol, expiration year, expiration month, whole \$ strike, and fractional strike for an entry which needs correction. The user may then enter the OCC symbol and OCC whole \$ strike and fractional strike. **NOTE: fractional strikes are the actual decimal fraction represented as ten thousandths of a dollar, i.e., 1250 for 1/8<sup>th</sup>, 5000 for 1/2.**

During the import, securities matching a user's entry in this file will be altered to the OCC symbol and strike contained in this file.

When the error log shows invalid series entries, the user may view the PL file, which is organized by class, and locate the expected OCC symbol and strike for the rejected entry. The user may then go to MAINTAIN and Alter symbols/strikes. Once the correcting entry has been made here, the position file should be re-imported and the margin calculated again. If the correcting entry was properly made, the previously offending security will no longer be marked as invalid.

### Group Files

The user may define arbitrary groups of accounts via this function. Current firm and account are entered and associated with a new group firm and new group account. The user must enter a C in the OCC market maker interval field for the resultant groups. Margin requirements may be computed by group using the Calculate menu. The Origin field may be ignored.

The user may utilize a wildcard in the Current Account field by placing an asterisk (\*) as the last non-blank character in the account. If ABC\* is entered, all accounts whose first 3 characters are ABC would be placed in the group. Wildcarding only works at the end of the account field.

At the user's option, the file may be populated automatically (from a user supplied CSV file) with each position import. To utilize this functionality, see the GROUPSFILE INI entry and the GROUPS File Format in this manual.

## Convertible file

The Convertible file contains the information required to convert securities into common stock. Enter the convertible ticker, the amount of cash that must be paid at conversion, the number of shares of common that will be obtained for each share of the convertible and the common ticker. You may import this file via the Convertible file Import in the IMPORT menu. If you do that, your previous entries will be overlaid.

You may use the SEC\_TYPE field to indicate a non-standard RB security type for the convertible. The rates contained in the NONRB Security Types file will be used to properly margin short convertibles. **Do NOT place this non-standard security type in the position file security type field for the convertible.**

**IT IS UP TO YOU TO ASSURE THAT THE CONVERTIBLES ENTERED INTO THIS FILE ARE ELIGIBLE FOR CONVERSION TO COMMON AS STIPULATED IN RULE 15c3-1 OF THE SECURITIES EXCHANGE ACT OF 1934 AND ANY OTHER APPLICABLE RULES AND OPINIONS.**

In the position file, the Quantity field for convertible BONDS should contain the par quantity divided by 100. Since RBM values positions by multiplying the Quantity field by the Price field, this alteration allows RBM to properly compute the value of the bond holdings. If you have \$1 million of par bonds, the quantity should be entered as 10000.

**Because of this quantity alteration for convertible BONDS, entries in the Cash and Factor fields in the convertible file MUST be divided by 10 for convertible BONDS.**

## NonRB Security Types

The user may define in this file security types other than the OCC allowed I, F, O, S and X. These non standard types will be extracted from the position file and margined using the long and short percentages or the long and short per contract charges entered here. All Security types are upper case or numeric.

The sixth field in the file (METHOD) indicates how the margin rates should be applied. Method 1 will margin the netted long/short amount. Method 2 indicates the rates are applied to both the long and short amounts with no offsetting relief. Method 3 indicates that rates are applied to the greater of either the long or short amount.

NonRB security type margins are detailed in the NonRB report.

If the LONG\_FIX AND SHORT\_FIX fields have non-zero values, the securities in this type will IGNORE the long and short percentage fields and apply a fixed fee per share/contract to the holdings. You may want to use this for futures that do not belong in RBM.

## Equivalent Basket Symbols

Equivalent Basket Symbols allows you to reconcile differences in the symbols contained in your position file and your default format basket composition file. You may identify a stock as NYTA, but the basket composition file refers to it as NYT/A.

## Basket Account file

The Basket Accounts file contains accounts whose stock positions should be marked as being part of an indicated basket. For instance, account LDB could be matched with basket ID 10013. All positions in that account would have their basket ID set to ID 10013. You must set SETID in the Maintain Switches menu to see this.

## Export To CSV

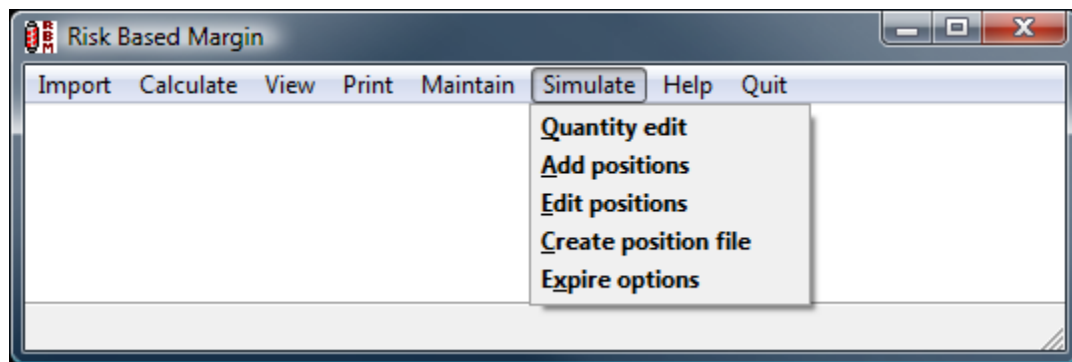
Users may navigate to and select data base files (files with extension .dbf) to export. The newly created CSV file will be placed into the user defined PRINT directory and will have the same name as the selected file. We believe all of the records from the DBF will be contained within the CSV file, although Microsoft Excel has a limit of 65,000 records which may hinder the user's ability to see all of the records when opening the file in Excel.

## CSV Export List

Users may maintain a list of names for database files to export to CSV. The program will look in the user defined DATA directory for the files in this list. The newly created CSV file will be placed into the user defined PRINT directory and will have the same name as the selected file. We believe all of the records from the DBF will be contained within the CSV file, although Microsoft Excel has a limit of 65,000 records which may hinder the user's ability to see all of the records when opening the file in Excel.

**NOTE:** A text file containing the structure of each exported file will be generated and placed into the PRINT directory. In addition, csvdate.dbf.csv, which contains the position date, will be created when using the export list.

## SIMULATE



The system was originally intended to margin only those positions contained in the POSITION IMPORT file. However, it may be necessary for users to alter positions due to out trades or processing errors or to perform simulations to determine the effects on capital of certain potential trades. The simulate menu pad allows for this.

In order to margin the simulated position, return to the IMPORT menu and select SIMULATED POSITION IMPORT. The simulated file will replace the original position database in the system and will also be retained in the simulation database. If the added entries contain errors, **the user may return here and fix the errors or may re-import the position file.**

Erroneous entries are deleted from the position database but are retained in the simulation database. **As stated above, a position should not be margined until all errors are corrected.**

NOTE: Any positions modified/added by the user will contain an asterisk on the far right side of the detail report.

The user may EDIT POSITIONS, ADD POSITIONS, CREATE POSITION, or perform a QUANTITY EDIT.

### Quantity Edit

When doing a QUANTITY EDIT, the user may only alter the fields 'Total Qty', 'Qty to Add', or 'Price'.

Altering the 'Price' field will change the value of the position and the value reflected in the Balance report, although it will not affect the margin.

If the user knows the correct quantity for the position, she may enter it in the 'Total Qty' field. If instead the user knows the amount by which the position should be altered, she may enter the adjusting amount in the 'Qty to Add' field. When the simulation file is imported, the system will margin the quantity represented by the sum of 'Total Qty' and 'Qty to Add'.

**The user may not delete records. Rather the user should adjust the quantity to zero via either the 'Total Qty' or 'Qty to Add' field.**

## Adding Positions

When ADDING positions, the user must supply considerable information in order for the new position to be properly margined. The required fields are:

**Firm:** numeric firm clearing ID

**Account:** account designation

**Symbol:** OCC recognized trading symbol

**PC:** P for put, C for call, blank for other securities

**Exp year:** 4-digit expiration year for options and futures

**Exp month:** 2-digit expiration month for options and futures

**Exp Day:** 2-digit expiration day for OTC options

**Strike:** strike price, 0 for futures and stocks

**Quantity:** quantity

**Price:** market price for security

**I,F,S,O:** security type, I for options on futures, O for all other options, S for stock, and F for futures.

**Basket ID:** basket identifier, 10000 or greater for basket stocks, 0 for all other entries

**Shrs/Block:** shares per contract; 100 for most securities

**MMAF:** 1 for most securities; -1 for inverse, 2 for Ultra, and -2 for Ultra Inverse

**MM (C):** For "customer".

**Leap Divisor:** 1 for most securities; 10 for mini leaps such as LSX and 5 for mini leaps such as OAX

Each field entry is completed by hitting the ENTER or TAB key.

## Edit Positions

The user is shown the entire simulation file and may position herself on the record that needs to be amended, hitting CTRL+F4 to select that record. The edit screen reappears with the selected record. The same data listed for ADD may now be altered. Any record selected for EDITING will be marked as modified.

## Create Position File

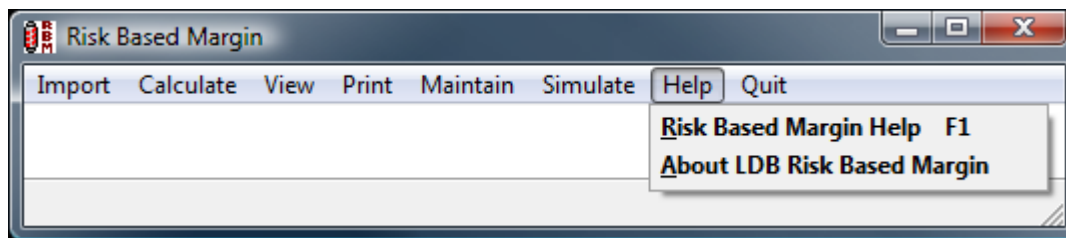
When creating a position file, the user is asked if she wants to continue. If the user opts to proceed, she will be prompted for the date of the position file. The default date will be the previous day. Once the user enters the date, the system creates the position header record and places the user in APPEND mode (see above). The user may now enter position records. When you create positions, you will overwrite all previous simulated positions.

## Expire Options

The user may opt to expire all options expiring in a given month, indicated by entering the expiration date as YYYYMM, where 199906 would expire June 1999 options. **All options with the indicated expiration date are removed from the simulation file, except for Flex options which are denoted by symbols beginning with a number rather than a letter.** All options on indices (indicated by a numeric rather than an alphabetic class in the OCC PL file) are merely expired. This function produces an expiration report (expire.txt in the print directory) listing all expired options that are removed. Counts and values are shown for account and firm. The report is automatically printed at the end of the expire function.

**Some index options now settle in stock (QQQ). However, it is impossible to differentiate these exceptions from those that are cash settled. Therefore, even these index options will be removed and NOT replaced by stock.**

## HELP



Risk Based Margin Help will give the user access to an HTML version of the manual via the default system browser. If the system cannot find the default browser, the user may define its location using the BROWSER parameter in the INI file. Hitting F1 at any time will activate the HTML help manual.

About LDB Risk Based Margin shows version, default directory and creation information for the application.

## ERROR LOG ENTRIES

When a field requires certain valid alpha values and the position record does not contain one of those values, the error message will contain the valid entries within parentheses at the end of the error message.

Account is blank  
Bad P/C indicator (PC)  
Expiration <>0 (NOTE: stock and non-future underlying need 0 for both expiration month and year)  
Invalid basket (NOTE: basket ID not found on P records in PL file)  
Invalid expiration month (NOTE: for options and futures)  
Invalid Interval Distinction (C)  
Invalid long/short indicator (LS)  
Invalid record ID (HT )  
Invalid security type (IOFS)  
Invalid series (NOTE: entry not found in PL file)  
Mini leap divisor = 0  
Not RBM Eligible (NOTE: not marked as eligible in PL file)  
PC blank for option: put call indicator for option is blank  
PC set for sec type...: put call indicator is NOT blank for S or F security type  
Quantity = 0 (NOTE: modified entries with 0 quantity will be retained and not flagged as errors)  
Shares per contract = 0  
Strike <> 0 (NOTE: stock and underlying need 0 for strike)  
Symbol blank  
Transaction ID not 346

## NON-FATAL ERRORS

Shares per contract set to xxxxxx (NOTE: INI default entry used)  
Mini leap divisor set to xxxxxx (NOTE: INI default entry used)  
Not in COMPOS file (Informational warning that stock ticker not found in basket composition file)  
Bad SSF Price [PL Market Value] (Informational warning: SSF price differs from OCC price by more than 1.00)

## File Layouts and Notes

### **RISK BASED PL FILE**

Market maker file name must be MMDATA.TXT. Primary file name must be PLDATA.TXT. The default names may be modified via the INI file entries MMFILE and PLFILE.

Risk Based PL files as described in the 2004 OCC documentation for risk-based margins/haircuts is required. These files may be obtained from OCC via TIO (Theoretical Information Online) service or via CPU-to-CPU transmission. PL records for all classes in which positions are held are required. In addition, all special records (types C, M, P, H, F, G, etc.) are required.

### **RISK BASED POSITION FILE**

File name must be position.txt unless there is an entry in the INI file for POSFILE.

The position file may or may not contain netted positions. **The risk based margin system does not net positions.** For baskets, an account may have both long and short baskets for a given index, and have both long and short positions in the hedging securities. However, **there should be no more than one long entry for a stock in a given basket in a given account and no more than one short entry for a stock in a given basket in a given account.**

The program requires all fields as laid out and defined in the latest OCC Risk Based Margin documentation.

#### **Header record:**

FIELD NAME	START	END	SIZE	FMT	JUSTIFY/FILL
Trans ID	1	3	3	N	Always '346'
Record ID	4	4	1	X	H for header
Firm Number	5	8	4	N	R/Zero fill
Date	9	16	8	N	Date in YYYYMMDD format

#### **Detail records:**

FIELD NAME	START	END	SIZE	FMT	JUSTIFY/FILL
Trans ID	1	3	3	N	'346'
Record ID	4	4	1	X	Blank
Firm	5	8	4	N	Right/Zero
Account/Desk/Book	9	18	10	X	Left
Put/Call	19	19	1	X	P=Put, C=Call, blank=underlyer
Trading Symbol	20	25	6	X	Left;
Expiration/Delivery Year	26	29	4	N	Right
Expiration/Delivery Month	30	31	2	N	Right/Zero
Expiration/Delivery Day	32	33	2	N	Right/Zero; Fill for ALL options/futures; See Note 6
Strike Dollar	34	38	5	N	Right/Zero
Strike Fraction	39	42	4	N	Right/Zero See Note 0 below
Long/Short indicator	43	43	1	X	L for long position, S for short
Security Type	44	44	1	X	See Note 1 below
Price	45	56	12	N	Right/Zero See Note 2 below
Quantity	57	65	9	N	Right/Zero
MM Indicator	66	66	1	X	C
Basket ID	67	71	5	X	Left: Identify stocks in basket
Filler	72	80	9	X	Filler

Note 0: Strike fraction is show as ten thousandths of a dollar: 1250 for 1/8, 5000 for ½.

Note 1: S for Stock, F for future, I for option on future, O for other options

Note 2: Implied decimal point between 6<sup>th</sup> and 7<sup>th</sup> digits. 123456789012 represents 123456.789012. This field only affects margins for Basket stocks, futures in a basket, stock not in the PL file and NON RB securities. Values shown on the detail and reconcile reports are also affected.

Note 3: No Note 3

Note 4: Implied decimal point between 4<sup>th</sup> and 5<sup>th</sup> digits. 1234567890 represents 1234.567890.

Note 5: MMAF used for inverse, Ultra and Ultra Inverse positions. Default is 1. Format xxxx.xxxx

Note 6: Use Saturday on Type O and Friday on types F and I

Consult OCC Green book for further discussion of input format.

**Optional additional fields in the RBM position file:**

FIELD NAME	START	END	SIZE	FMT	JUSTIFY/FILL
SHARES PER CONTRACT	81	86	6	N	Right/Non Zero; See Note 5
FILLER	87	87	1	X	
Filler	88	88	1	X	
Filler	89	94	6	X	
MINI LEAP DIVISOR	95	100	6	N	Right/Non Zero
FILLER	101	117	17	X	
MMAF	118	126	9	N	Right; see Note 5
CAP INDICATOR	127	127	1	X	LEFT/BLANK

Shares per contract: sometimes referred to as contract multiplier or nspb. Used in determining if there are too many or too few securities to offset a basket. Options on non-split stocks usually have 100 shares per contract; S&P 500 futures have shares per contract of 250. NOTE: this field must be filled in. Use 100 if in doubt and if not concerned about basket hedging.

Mini leap divisor: mini leaps on indices are often priced at 1/5th, 1/10th, or 1/20th of the underlying index. The program requires 5, 10, or 20 entered in this field for these examples. It is used in determining proper offsets for baskets, ETFs and related instruments. For example, OLX is a mini leap traded at 1/5th the value of the OEX index. All OLX options would have 5 in this field.

NOTE: this field must be filled in. Use 1 if in doubt and not concerned about basket hedging.

Cap indicator: set to Y to indicate this is a cap. Caps should not be used to hedge baskets. If this indicator is not set, the program will assume the security is not a cap.

NOTE: Shares per contract and mini leap divisor are pertinent for proper basket hedging. Origin is required to generate a naked stock report.

NOTE: this system does not balance quantity counts against T trailer record counts as described in OCC documentation.

**NOTE: the security price placed in the position file (columns 45-56 as described in OCC documentation) is used to compute margins for convertibles, and stocks with no option positions in the position file, basket stocks and futures in a basket. Other prices are NOT used in computing margins.**

## **BASKET COMPOSITION FILE**

A basket composition file is required to produce a basket composition report and to determine that baskets and their hedging securities are in proper proportions. All indices to be examined must be included in the composition file.

Basket analysis will only be performed for those positions that contain a basket ID in excess of 09999. (See RBM Position File Layout.)

Refer to OCC Risk Based Haircut/Margin documentation for a list of valid basket codes.

### **Default format Basket Composition File:**

Data layout for header line:

Field Name	Start	End	Size	Format	Justify/Fill
INDEX TICKER SYMBOL	1	3	3	X	L
TRADE DATE	4	9	6	N	YYMMDD
INDEX CLOSING PRICE	10	21	12	N	NNNNNNNNN.NN

Note: It is strongly suggested to use the Index price for broad based indices and the ETF price for narrow based indices.

Data layout for component lines:

Field Name	Start	End	Size	Format	Justify/Fill
INDEX TICKER SYMBOL	1	3	3	X	Left
STOCK TICKER SYMBOL	4	9	6	X	Left
FILLER	10	21	12	X	Not used
WEIGHT	22	31	10	N	NN.NNNNNNN
FILLER	32	38	7	X	Not used
STOCK CLOSING PRICE	39	47	9	N	NNNNN.NNN

Decimal points are explicitly entered in the data fields. The weight field shows 1% as 0001.00000.

### **Convertible file layout:**

File must be convert.txt in the import directory unless the CONVFILE entry is in the INI file.

FIELD NAME	TYPE	Width	Dec	
CONVERT	Character	6		Convertible ticker
CASH	Numeric	8	2	Cash required for conversion
FACTOR	Numeric	10	5	Number of common per convertible
COMMON	Character	6		Underlying common ticker
SECURITY TYPE	Character	1		Non Standard security type or blank
DESCRIPTION	Character	24		Optional convertible description

The CASH and FACTOR fields must contain an explicit decimal point, i.e., 123.567890 for FACTOR, 12345.78 for CASH.

In the position file, the Quantity field for convertible BONDS should contain the par quantity divided by 100. Since RBM values positions by multiplying the Quantity field by the Price field, this alteration allows RBM to properly compute the value of the bond holdings. If you have \$1 million of par bonds, the quantity should be entered as 10000.

**Because of this quantity alteration for convertible BONDS, entries in the Cash and Factor fields in the convertible file MUST be divided by 10 for convertible BONDS. These values are multiplied by the ENTIRE bond quantity in the position file to determine required cash and created common.**

## Groups File Layout

This file is optional. Users importing a GROUPS file must define the name and location of the file in the INI, and the file must be in CSV format. Each time a new file is imported, the current data in the user maintained groups file will be deleted.

FIELD NAME	TYPE	Width	Dec	
Current Firm	Numeric	4		Current Firm Number
Current Account	Character	10		Current Account
Group Firm	Numeric	4		New Firm Number
Group	Character	10		New Account
MM	Character	1		C
Origin	Character	1		Origin

## Enhanced Return ETF (MMAF) File Layout

This CSV file is optional. Users importing the ENHANCED RETURN ETF file must define the name and location of the file in the INI, and the file must be saved in CSV format. Each time a new file is imported, the current data in the user maintained special data file will be updated with the new MMAF values for all records in this file. All existing records in special data having a symbol match in the enhanced return MMAF file will be updated to reflect the new MMAF (regardless of the security type indicator in the special data file).

FIELD NAME	TYPE	Width	Dec	
Description	Character	40		Description
Symbol	Character	6		Symbol
MMAF	Numeric	9		See NOTE 1 below

Note 1: MMAF used for inverse, Ultra and Ultra Inverse positions. Format xxxx.xxxx

## OTC File Layout

This file is optional. Users importing an OTC file must define the name and location of the file in the INI, and the file must be in SDF format. After processing a file will be generated in the OTC PL file format in the print directory named yyyyymmdd.otcpl. This file can be used to give to NYSE for examinations.

FIELD NAME	START	END	SIZE	FMT	JUSTIFY/FILL
Class	1	6	6	N	See Note 3 below
Put/Call	7	7	1	X	P=Put, C=Call, blank=underlyer
Unique Trading Symbol	8	13	6	X	Left; see Note 5
Strike Dollar	14	18	5	N	Right/Zero
Strike Fraction	19	22	4	N	Right/Zero See Note 0 below
Security Type	23	23	1	X	See Note 1 below
Expiration/Delivery Year	24	27	4	N	Right
Expiration/Delivery Month	28	29	2	N	Right/Zero
Expiration/Delivery Day	30	31	2	N	Right/Zero; see Note 5
Minimum	32	39	8	N	Right/Zero Minimum per contract charge. See note 7 below (*multiplier see Note 6 below)
Extended Mark Price	40	51	10	N	Right/Zero See Note 2 below (*multiplier see Note 6 below)
Underlying Price	50	61	12	N	Right/Zero See Note 2 below
Profit Loss -5 sign	62	62	1		Blank for + and – for negative
Profit Loss -5 value	63	72	10	N	Right/Zero See Note 4 below
Profit Loss -4 sign	73	73	1		Blank for + and – for negative
Profit Loss -4 value	74	83	10	N	Right/Zero See Note 4 below
Profit Loss -3 sign	84	84	1		Blank for + and – for negative
Profit Loss -3 value	85	94	10	N	Right/Zero See Note 4 below
Profit Loss -2 sign	95	95	1		Blank for + and – for negative

Profit Loss -2 value	96	105	10	N	Right/Zero See Note 4 below
Profit Loss -1 sign	106	106	1		Blank for + and – for negative
Profit Loss -1 value	107	116	10	N	Right/Zero See Note 4 below
Profit Loss +1 sign	117	117	1		Blank for + and – for negative
Profit Loss +1 value	118	127	10	N	Right/Zero See Note 4 below
Profit Loss +2 sign	128	128	1		Blank for + and – for negative
Profit Loss +2 value	129	138	10	N	Right/Zero See Note 4 below
Profit Loss +3 sign	139	139	1		Blank for + and – for negative
Profit Loss +3 value	140	149	10	N	Right/Zero See Note 4 below
Profit Loss +4 sign	150	150	1		Blank for + and – for negative
Profit Loss +4 value	151	160	10	N	Right/Zero See Note 4 below
Profit Loss +5 sign	161	161	1		Blank for + and – for negative
Profit Loss +5 value	162	171	10	N	Right/Zero See Note 4 below

Note 0:

Strike fraction is show as ten thousandths of a dollar: 1250 for 1/8, 5000 for 1/2.

Note 1:

S for Stock, F for future, I for option on future, O for other options

Note 2:

Implied decimal point between 7<sup>th</sup> and 8<sup>th</sup> digits. 1234567890 represents 1234567.890. This price will only be used to compare to the minimum if the security is a long derivative. The minimum will be the lesser of this field or the minimum field..

Note 3:

If blank, Class will be filled from OCC PL file by matching characters 2-4 from symbol field + security type to the OCC PL file. User MUST supply class for equity swaps.

Note 4:

Implied decimal point between 7<sup>th</sup> and 8<sup>th</sup> digits. 1234567890 represents 1234567.890. Must be presented multiplied by proper contract multiplier.

Note 5:

Symbol must start with ~ followed by 3 character symbol then expiration day. Format is ~IBM31(~+XXX+31). Symbols for equity swaps must be generated in a way that each swap is distinct from every other swap to avoid the possibility of netting two dissimilar swaps that both possess the same symbol.

Note 6:

These values must have multiplier applied to them. PL values must also have multiplier applied to them. In other words, a security with a value of 10.23 in a given field and possessing a multiplier of 100 would be included as 1023.00 with the proper implied decimal point.

Note 7:

Implied decimal point between 5<sup>th</sup> and 6<sup>th</sup> digits. 12345678 represents 12345.678.

### **Foreign Stock Cross-Hedging Relief**

Users may now take advantage of foreign stock hedging. For example, a user has UK45, FR77, GER90, and DUBAI4 stock that she wants hedged against an existing class (SLB) for cross hedging purposes. The user must provide a Theoretical Value stress numbers file for these stocks. These stock symbols must be unique in relation to the OCC P&L file entries to be eligible for relief.

Note: if it is known that the Underlying Symbol is not in the OCC PL file and the user wishes to create a fully artificial class, the user may wish to add an odd character to differentiate it from other OCC classes (For example: ~XXT5). Do NOT start the Underlying Symbol with a number.

The following INI entries must be set:

- OTCFILE = the name and path of the user TV file (I.E. OTCFILE = .\IMPORT\OTCFILE.TXT)
- OTC = Y
- OTCFORM = FGN

## OTC File Layout – Foreign Stock Format

This file is optional. Users importing an OTC Foreign Stock File must define the name and location of the file in the INI, and the file must be in TAB delimited format.

Data layout for header line:

Field Name	Start	End	Size	Format	Justify/Fill
TRADE DATE	1	9	8	D	MM/DD/YY

Data layout for component lines:

Field Name	Start	End	Size	Format	Justify/Fill
Cusip	1	9	9	C	Left
Symbol	10	15	6	C	Left
Security Type	16	18	3	C	Left; S for stock
Underlying Symbol	19	24	6	C	Left
CP	25	26	2	C	Left
Expiration	27	36	10	C	Left
Strike	37	48	12	N	Right/Zero
NSPB	49	58	10	N	Right/Zero
Underlying Price	59	73	15.6	N	Right/Zero
Extended Mark Price	74	88	15.6	N	Right/Zero
Profit Loss -15 value	89	106	18.10	N	Right/ Blank for + and – for negative; See Note 0 for all profit loss entries
Profit Loss -14 value	107	124	18.10	N	Right/ Blank for + and – for negative
Profit Loss -13 value	125	142	18.10	N	Right/ Blank for + and – for negative
Profit Loss -12 value	143	160	18.10	N	Right/ Blank for + and – for negative
Profit Loss -11 value	161	178	18.10	N	Right/ Blank for + and – for negative
Profit Loss -10 value	179	196	18.10	N	Right/ Blank for + and – for negative
Profit Loss -9 value	197	214	18.10	N	Right/ Blank for + and – for negative
Profit Loss -8 value	215	232	18.10	N	Right/ Blank for + and – for negative
Profit Loss -7 value	233	250	18.10	N	Right/ Blank for + and – for negative
Profit Loss -6 value	251	268	18.10	N	Right/ Blank for + and – for negative
Profit Loss -5 value	269	286	18.10	N	Right/ Blank for + and – for negative
Profit Loss -4 value	287	304	18.10	N	Right/ Blank for + and – for negative
Profit Loss -3 value	305	322	18.10	N	Right/ Blank for + and – for negative
Profit Loss -2 value	323	340	18.10	N	Right/ Blank for + and – for negative
Profit Loss -1 value	341	358	18.10	N	Right/ Blank for + and – for negative
Profit Loss 1 value	359	376	18.10	N	Right/ Blank for + and – for negative
Profit Loss 2 value	377	394	18.10	N	Right/ Blank for + and – for negative
Profit Loss 3 value	395	412	18.10	N	Right/ Blank for + and – for negative
Profit Loss 4 value	413	430	18.10	N	Right/ Blank for + and – for negative
Profit Loss 5 value	431	448	18.10	N	Right/ Blank for + and – for negative
Profit Loss 6 value	449	466	18.10	N	Right/ Blank for + and – for negative
Profit Loss 7 value	467	484	18.10	N	Right/ Blank for + and – for negative
Profit Loss 8 value	485	502	18.10	N	Right/ Blank for + and – for negative
Profit Loss 9 value	503	520	18.10	N	Right/ Blank for + and – for negative
Profit Loss 10 value	521	538	18.10	N	Right/ Blank for + and – for negative
Profit Loss 11 value	539	556	18.10	N	Right/ Blank for + and – for negative
Profit Loss 12 value	557	574	18.10	N	Right/ Blank for + and – for negative
Profit Loss 13 value	575	592	18.10	N	Right/ Blank for + and – for negative
Profit Loss 14 value	593	610	18.10	N	Right/ Blank for + and – for negative
Profit Loss 15 value	611	628	18.10	N	Right/ Blank for + and – for negative
MMAF	629	638	9.4	N	Right/ Blank for + and – for negative

Note 0:

- a) The Profit Loss fields represent the theoretical gain or loss for each position when the underlying security moves by a given percent (for example *Profit Loss -15* value is how much the position gains or losses when the underlying security moves down 15%). The user must compute the proper theoretical gain or loss for each position for each movement of the underlying security. These values represent the theoretical value itself NOT the difference between the security price and its theoretical value.
- b) For each Profit Loss field, the price of the underlying security is stressed by a percentage equal to the number in the field name. In other words, the price is stressed by +12% in the Profit Loss 12 value field and by -9% in the Profit Loss -9 value field. THE EXCEPTION IS FOR SECURITIES THAT ARE BROAD BASED, HIGH CAPITALIZATION SECURITIES. FOR THEM, THE FOLLOWING PERCENTAGES ARE USED IN THE RESPECTIVE FIELDS:

Profit Loss -8	-8%
Profit Loss -7	NA
Profit Loss -6	-6.4%
Profit Loss -5	NA
Profit Loss -4	-4.8%
Profit Loss -3	-3.2%
Profit Loss -2	NA
Profit Loss -1	-1.6%
Profit Loss 1	1.2%
Profit Loss 2	2.4%
Profit Loss 3	3.6%
Profit Loss 4	4.8%
Profit Loss 5	NA
Profit Loss 6	6%

### **House Requirement Factor File Layout**

The system will lookup Class, Product, or Group defined in the OCC PL file for each symbol supplied. It will then apply that factor to the standard industry charge to generate the House Requirements.

Most PM charges are generated by class. A class consists of a stock and all of its derivatives. There are also a number of products that produce charges. Products consist of highly correlated classes and will contain multiple stock symbols. The Portfolio Group USIDX consists of products 8, 9 and 22.

NOTE: If different factors are supplied for stocks within a multi-stock class, product, or group the system will use the first symbol found in alphabetical order for that class, product or group.

The factor file is imported with the OCC PL file. This will allow users to adjust factors, import the position file again, and then recalculate using the adjusted factors. Whenever the PL file is imported any changes made through the Maintain menu will be replaced with factors from the factor import file. The factor import file is defined in the INI file as HOUSEFACTORFILE.

Each line of the file will contain a symbol and factor. The first line of the file will contain the default factor to be used for any symbols not included in the factor file as well as the data date. Enter asterisks for the symbol on this first line.

The rest of the detail records will contain symbols and factors that will not use the default factor defined in the first record.

\*This file must be in CSV format.

FIELD NAME	TYPE	Width	Dec
SYMBOL	Character	6	
FACTOR	Character	10	5
DATE(only on first line)	Character	10	

Sample file:

\*\*\*\*\*2.5,20090130

ABB,1.2

AEQ,1.5

### ***Intraday Margin/House Requirement OCC File Layout***

Please check the notes below. The system will match put/call, symbol, strike dollar, strike fraction, security type, expiration year, and expiration month with the OCC file and will overlay the minimum, extended mark price, underlying price and 10 PL numbers with the data from this file. If no match, the record will be added with Product 999 and with the Class indicated in the Class field from the input file.

FIELD NAME	START	END	SIZE	FMT	JUSTIFY/FILL
Class	1	6	6	N	See Note 3 below
Put/Call	7	7	1	X	P=Put, C=Call, blank=underlyer
Trading Symbol	8	13	6	X	Left; see Note 5
Strike Dollar	14	18	5	N	Right/Zero
Strike Fraction	19	23	5	N	Right/Zero See Note 0 below. First character should be a decimal.
Security Type	24	24	1	X	See Note 1 below
Expiration/Delivery Year	25	28	4	N	Right
Expiration/Delivery Month	29	30	2	N	Right/Zero
Expiration/Delivery Day	31	32	2	N	Right/Zero; see Note 5
Minimum	33	40	8	N	Right/Zero Minimum per contract charge. See note 7 below (*multiplier see Note 6 below)
Underlying Price	41	52	12	N	Right/Zero See Note 2 below (*multiplier see Note 6 below)
Extended Mark Price	53	64	12	N	Right/Zero See Note 2 below
Profit Loss -5 sign	65	65	1		Blank for + and – for negative
Profit Loss -5 value	66	75	10	N	Right/Zero See Note 4 below
Profit Loss -4 sign	76	76	1		Blank for + and – for negative
Profit Loss -4 value	77	86	10	N	Right/Zero See Note 4 below
Profit Loss -3 sign	87	87	1		Blank for + and – for negative
Profit Loss -3 value	88	97	10	N	Right/Zero See Note 4 below
Profit Loss -2 sign	98	98	1		Blank for + and – for negative
Profit Loss -2 value	99	108	10	N	Right/Zero See Note 4 below
Profit Loss -1 sign	109	109	1		Blank for + and – for negative
Profit Loss -1 value	110	119	10	N	Right/Zero See Note 4 below
Profit Loss +1 sign	120	120	1		Blank for + and – for negative
Profit Loss +1 value	121	130	10	N	Right/Zero See Note 4 below
Profit Loss +2 sign	131	131	1		Blank for + and – for negative
Profit Loss +2 value	132	141	10	N	Right/Zero See Note 4 below
Profit Loss +3 sign	142	142	1		Blank for + and – for negative
Profit Loss +3 value	143	152	10	N	Right/Zero See Note 4 below
Profit Loss +4 sign	153	153	1		Blank for + and – for negative
Profit Loss +4 value	154	163	10	N	Right/Zero See Note 4 below
Profit Loss +5 sign	164	164	1		Blank for + and – for negative
Profit Loss +5 value	165	174	10	N	Right/Zero See Note 4 below

Note 0: Strike fraction is show as ten thousandths of a dollar: .1250 for 1/8, .5000 for 1/2.

Note 1: S for Stock, F for future, I for option on future, O for other options, X for currency underlying positions.

Note 2: Implied decimal point between 6<sup>th</sup> and 7<sup>th</sup> digits. 123456789012 represents 123456.789012. This price will only be used to compare to the minimum if the security is a long derivative. The minimum will be the lesser of this field or the minimum field.

Note 3: Class will be obtained from OCC file by matching on the fields mentioned above. If no match in the OCC file, we will assume an equity class (product 999) and use the CLASS value from this file.

Note 4: Implied decimal point between 7<sup>th</sup> and 8<sup>th</sup> digits. 1234567890 represents 1234567.890. Must be presented multiplied by proper contract multiplier and shares per contract. User must determine proper intervals at which to compute 10 PL numbers. Those stress intervals are contained in the M records within the OCC file. These entries represent the difference between the security price and it's theoretical value NOT the theoretical value itself.

Note 5: Symbol must match an OCC recognized symbol

Note 6: These values must have multiplier applied to them. OCC file values must also have multiplier applied to them. In other words, a security with a value of 10.23 in a given field and possessing a multiplier of 100 would be included as 1023.00 with the proper implied decimal point.

Note 7: Implied decimal point between 5<sup>th</sup> and 6<sup>th</sup> digits. 12345678 represents 12345.678.

### ***Intraday/House Requirement Rates File Layout (CSV Format)***

Each line of the file will contain a symbol, security type, and up/down percentages.

The first line of the file will contain the default percentages to be used for all symbols NOT explicitly included in the Exception Rate File.

\*This file must be in CSV format.

FIELD NAME	TYPE	Width	Dec
SYMBOL	Character	6	
TYPE	Character	1	
UP 5 %	Numeric	4	1
UP 4 %	Numeric	4	1
UP 3 %	Numeric	4	1
UP 2 %	Numeric	4	1
UP 1 %	Numeric	4	1
DOWN 1 %	Numeric	4	1
DOWN 2 %	Numeric	4	1
DOWN 3 %	Numeric	4	1
DOWN 4 %	Numeric	4	1
DOWN 5 %	Numeric	4	1

Sample file:

```
~~~~~,~,15.0,12.0,9.0,6.0,3.0,3.0,6.0,9.0,12.0,15.0
xzSPX,O,8.0,6.4,4.8,3.2,1.6,1.2,2.4,3.6,4.8,6.0
CB,S,10.0,8.0,6.0,4.0,2.0,2.0,4.0,6.0,8.0,10.0
ER,F,10.0,8.0,6.0,4.0,2.0,2.0,4.0,6.0,8.0,10.0
```

## ***Intraday/House Requirement Workflow***

RBM RUN - Intraday/House Requirements

- 1 - RBM creates M RATES file in initial run
- 2 - User may alter RATES file.
- 3 - TV engine processes RATES file and produces new TV files
- 4 - RBM reads new TV and RATES in Intraday calculation run

RBM will create a single file from the OCC file. It will contain the default equity rates from the RBM OCC C record as well as entries for all symbols NOT handled per the default equity rates in the RBM OCC file.

It is anticipated that users may alter this file to reflect different default rates, different exception rates for the symbols already in the file and new symbols to be added to the exception file. This file is used when new data is fed to the application and data contained in it will be posted to various records in the OCC file that require it.

This file may serve as input to the TV (theoretical value) Engine to indicate what percentages are to be used for symbols being requested. LDB does NOT provide a TV engine. Users may provide properly formatted values from whatever source they choose.

The altered Exception Rate File (or the original unaltered one if the user does not change it) should be passed back to the RBM module via the IDMRECIN INI parameter when being run with Intraday/House requirement files.

**The user must verify that all securities NOT in the unaltered OCC file are RBM eligible. The system has NO way to determine this eligibility on NEWLY added securities.**

For Intraday/House requirement processing the following entries will need to be defined in the INI file. Two INI files will be used for Intraday/House requirement processing. One file used for updating the TV values and running Intraday/House requirements and the other one for exporting the rates from the original OCC PL file..

**Note: if the IDMRECIN parameter is NOT defined, the system assumes it is creating IDMRECOUT and WILL NOT read the user supplied IDMRECIN and IDMRECTVIN files**

**If IDMRECIN is defined, the system assumes it is reading user TV's and will NOT create IDMRECOUT. The system is in either IDMRECOUT creation mode or IDMRECIN/IDMRECTVIN read mode.**

### **INTRADAY = Y**

This turns on the Intraday/House requirement processing logic.

Reporting for Intraday margin runs will be identified as IDMargin in the header of all reports.

Reporting for non Intraday margin runs will be identified as Margin in the header of all reports.

### **PLIMPORT = Y**

Speed up the import process when using intraday logic.

### **IDMRECIN = .IMPORT\IDMRECIN.CSV**

This CSV rate file is supplied by the client. It defines the default equity rates and all rates not equal to the default equity rates. If this entry is defined in the INI file, IDPRECOUT should not be.

RBM will always use the entry defined in IDMRECIN for determining what rates to use.

### **IDMRECTVIN = .IMPORT\IDMRECTVIN.DAT**

This is the sdf TV file we read from client for the House requirement TV (Theoretical Values). This file contains the TV values that the system will use for updating the OCC data file. It is critical that the IDMRECTVIN file contains an entry for every record in the position file.

## **IDMRECOUT = .\IMPORT\IDMRECOUT.CSV**

This CSV exception file is built from the OCC file for Intraday/House requirement TV processing by the client. This file contains the default rate and all entries that do not follow the default equity rate. If not defined it will default to IDMRECOUT.CSV. If this entry is defined IDMRECIN should not be defined.

### ***Exported file formats:***

Files used to generate reports can be exported to the print directory in comma delimited ASCII form.

Maintain/Other Files has two selections which will export files: Export to CSV and CSV Export List. Both functions will create a comma delimited file containing data as well as a text file containing the structure of each exported file in the PRINT directory. In addition, csvdate.dbf.csv, which contains the position date, will be created.

### ***SUGGESTED MINIMUM BACKUP PROCEDURES:***

After installation, the following directories should be backed up:

40LDBRBM

40LDBRBM\DATA

40LDBRBM\DATA\TEMPLATE

Once the system is operational, you need to back up 40LDBRBM only when you have altered the INI file.

The 40LDBRBM\DATA\TEMPLATE directory contains empty versions of all dbf (database) and cdx (index) files. If you get an error message indicating that a table or index has been corrupted, you should retrieve the appropriate files from your system backup or from the template directory. Files that you alter via the MAINTAIN menu are copied to the template directory when you access them. This assures that the TEMPLATE directory will have the latest versions of all files.

**You may copy (DO NOT MOVE) the entire contents of the template directory to the data directory. If this is done, re-import all position and PL files.**

You may want to establish a program item that executes the file TEMPLATE.BAT in the RBM default directory. It will copy all files from the default data template directory to the default data directory. If you choose to install RBM with a different configuration of data and template directories, alter TEMPLATE.BAT accordingly.

If you encounter difficulty in retrieving files, contact LDB

## **Find Potential Baskets**

The world of baskets and ETFs is expanding almost daily. It is a challenge to determine which potential baskets may exist in your positions. RBM 4.0 creates the file HEDGEENTRIES.TXT in the print directory. It informs you if you have an ETF position and the system has insufficient information to create a basket, such as Not in Hedge, No Cash Index or Not in Compos.

## **The Basket Weaver™: Notes**

The Weaver is a separately priced option to the RBM system.

The Weaver consists of two Fortran modules (RBMPLMAKE.EXE and WEAVER.EXE) and an additional Fox Pro module. The Fortran modules are installed in the Fortran subdirectory off the RBM root directory. Normally, C:\PROGRAM FILES\LDB\50LDBRBM is the root. All Weaver work files are placed in the FWORK directory, defined in the INI file.

RBMPLMAKE.EXE reformats the OCC PL file for use by the Weaver. WEAVER.EXE is the Weaver program.

The Weaver™ analyzes the entire position of stocks, equity options, and index options and futures. It first allocates stocks to equity options to reduce margins and then, using the basket composition file provided by the user, constructs as many baskets as possible. Since sector baskets require greater capitalization than do the broad based baskets, they are made first. Lastly, it constructs broad based index baskets. The baskets will have proper capitalization and will be properly hedged by options and futures.

**The Weaver™ will net all stock positions in a security within a firm down to a single long or short position. In other words, multiple long and short IBM stock positions in an equity option strategy and in S&P 500, Dow Jones and OEX baskets will be netted to a single long or short position. Unless the user sets the NETDERIV parameter to N in the INI file, the Weaver will also net all option and futures positions that are not part of a class that allows baskets.**

**If POSTNET = Y in the INI file, the netting of securities will take place AFTER baskets are created by the Weaver™. The user may also net long and short basket stocks in the SAME index by setting BASKNET = Y in the INI file. POSTNET must be set equal to Y for BASKNET to function.**

**If WVNET and POSTNET are set to Y, netting of stocks will be done AFTER equity optimization and narrow based basket creation but BEFORE the creation of any broad based baskets.**

The Weaver requires a basket composition in default format. See notes on Basket Composition Layout for proper format.

To run the Weaver, you must have the following entries in the INI file:

```
FORTRANDIRECTORY = C:\PROGRAM FILES\LDB\50LDBRBM\FORTRAN
FWORK = C:\PROGRAM FILES\LDB\50LDBRBM\FORTRAN
WINXMAX = 400
WTKRMAX = 55000
WETFMAX = 240
WELMMAX = 90000
```

In addition, you must set Weave in the Maintain Switches menu.

The Weaver currently handles a maximum of 6000 potential basket indices consisting of a maximum of 100,000 stocks. The basket composition file determines the number of potential indices. The more indices in the composition file, the greater the number of different baskets that can be constructed.

The Weaver utilizes more storage than the RBM system. Please make certain that adequate disk resources are available.

The progress windows in RBM will inform the user when Weaver routines are active. During PL file import, the user will see that the system is 'Formatting PL data for Fortran'. This is the RBMPLMAKE module.

During the margin process, the user will be apprised that the system is creating a position file, composition file, and minimum hedge file for the Weaver. The Weaver will then execute and the results will be re-imported into RBM.

Both Fortran modules execute in their own minimized window. The user may ALT+TAB to the window if he desires to watch the progress of the program.

**NOTE: The Weaver uses the composition and minimum hedge file from RBM to determine the universe of possible baskets. If it senses more index entries in one file than the other, it will report the differences as an error. This is merely a courtesy warning that the two files are not in synch. It does NOT affect the running of the Weaver, but indicates that more potential baskets could be considered if the two files were synchronized.**

The Weaver creates 2 additional reports: Why No Basket and Netting. 'Why No Basket' summarizes the greatest possible capitalization that exists in the position for each potential basket at various points of the process. By looking at the report, a user could determine that the MSH basket he thought existed had only 94.2% capitalization. This report may be viewed or printed.

The Netting report summarizes all securities that had both long and short positions and were netted to a single position. Netted quantities and values are displayed.

NOTE: The Weaver cannot track the modified flag that may be set at various points in the program. Hence, user modifications ARE NOT marked with an asterisk in the detail report when the Weaver is used.

## Wrapper™

The Weaver™ nets positions, analyzes the remaining stocks and derivatives and creates as many baskets as possible from the stocks. The Weaver™ can be run utilizing either of two methods to create baskets: the original method of focusing on the largest stock holding OR Target2 which focuses on the holding that can create the greatest number of baskets.

Both the netting of stocks and the method used for creation of baskets can make it difficult to create sector baskets that require 95% capitalization. At times, lower charges can be achieved by running the Weaver™ with Target2 on; other times the best result can be achieved by running with Target2 off; there are also times when it is best NOT to run the Weaver at all.

The Wrapper was developed to address these problems. In short, it divides all securities into 2 files: one file contains all potential sector baskets and their hedges (Sector file) and the other file contains all other securities (All Other file).

The Wrapper then automatically runs a total of 19 scenarios, including each of three scenarios (Weaver™ Target2 off; Weaver™ Target2 on; and no Weaver™) on the Sector file, the All Other file and the original position file. Each scenario for the Sector File is then combined with each scenario for the All Other File. The scenario that results in the LOWEST haircut is then run through one more time to generate final reports and exchange required position files.

The Wrapper must be run with BOTH Weaver™ and UBIT checked on the Maintain\Switch menu. In addition, the following item MUST be included in the INI file:

**Wrapdirectory** = the path for a new directory used by the Wrapper technology

The user may disable any of the scenarios by utilizing any of the following INI entries:

**WVT2** = N disable Weaver on/Target2 on scenario  
**WVNOT2** = N disable Weaver on/Target2 off scenario  
**NOWVNOT2** = N disable Weaver off scenario

The user may also allow the Weaver to make more baskets than hedging securities would normally allow. RBH and UBIT will remove any that are truly in excess. Enter this parameter:

**WVMORE** = Y

Wrapper is now able to tell Weaver the optimal number of baskets for all classes other than those in product 9. Users should set **WVLIMIT** = Y to enable this functionality.

For those users who are unable to provide Basket Ids in the position file, it is suggested that they enter **PREWRAP** = Y. This will perform an initial analysis to identify potential narrow and broad based baskets that can then be split into the Sector and All Other files.

## Clearing Logic

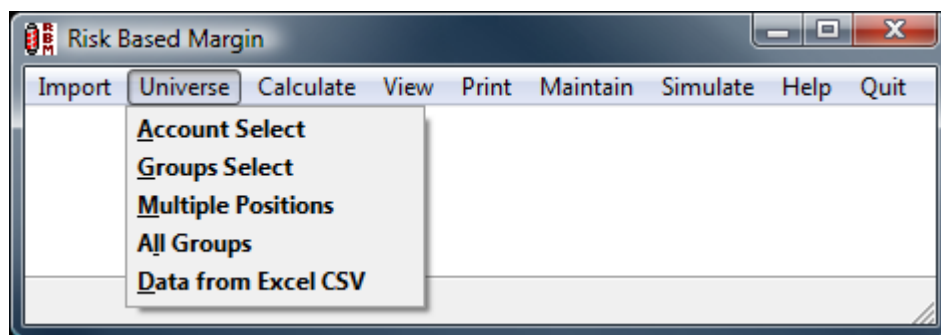
CLEARING = Y in the INI file allows firms with a large position file to deal with it more efficiently. When files are imported in Clearing Mode, the position file goes to a Fox Pro clearing file rather than to the FoxPro position and simulation files. The user then goes to the Universe menu pad to select a subset of accounts with which to work. The user may also create and maintain a Batch file of accounts and groups that may need to be run on a regular basis.

If the user wants to alter data via the simulate menu, she goes to the Universe menu and selects the universe of data. Then she goes to simulate, does what she needs to do and goes back to Import\Simulated Position Import to bring in the changed data. She then goes to Calculate to compute charges.

In short, the user ALWAYS goes to UNIVERSE to select data and then goes about business as usual.

## Universe

The Universe menu allows the user to define the universe of data to be margined. The data are moved from the Clearing file to both the Position and Simulated Position files for use by the user.



### Account Select/Groups Select

The user may select specific accounts or groups via the Account Select and Groups Select items. Data may be added by hitting CTRL+Y or deleted by hitting CTRL+T. The entire file contents may be zapped or removed by hitting CTRL+Z.

### Multiple Positions/All Groups

The user may also select data from the Multiple Position file that is maintained via the Maintain\Other Files\Multiple Position file menu item. Accounts and Groups may be intermixed in the Multiple Position file. Place a Y in the 'Groups?' field to indicate the entry is for a group.

All Groups may also be selected

### Append From Excel CSV File

The user may export data from an Excel worksheet to an ASCII text file with all values separated by commas (a CSV file). This menu selection will ask the user for the complete path and name of the exported CSV file. The file will be added to the simulated position file that was previously created.

These fields must appear IN THIS ORDER in the exported file:

Firm number

Account

PC: P for put, C for call, blank for stock or future

Symbol: OCC matching symbol

Year: 4-digit expiration year for options, settlement year for futures

Month: 2-digit expiration month for options, settlement month for futures

Day: 2-digit expiration day for options, settlement month for futures

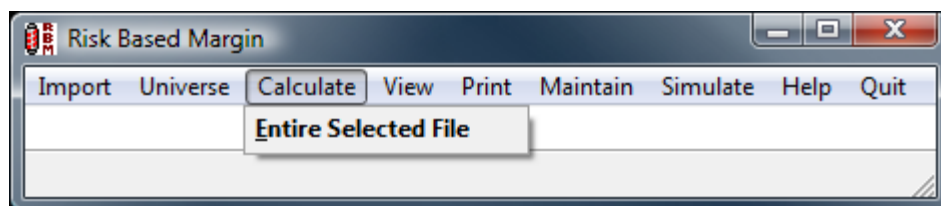
Strike

Quantity: with + or – indicating long or short

Security Type: O for options, S for stocks, F for futures Price

MM: C for customer

## ***CALCULATE***



When in Clearing mode, the CALCULATE menu has only one option: Entire Selected File. This refers to the data selected via the Universe menu.

## ***MAINTAIN***

The Maintain menu has an additional entry under Other Files: Multiple Position file. The user may define accounts and groups in this file and use it via the Universe menu to select data for all these entities. Responding Y in the “Group?” field indicates that the entry is for a Group rather than for an Account.

## **PDF Reports**

PDF report files may be created in addition to the text files automatically created with each run. When this feature is active, the PDF reports will be created in the ADOBEPORT (see below) directory and backed up to the BACKUP directory when the backup functionality is in use.

### ***Adobe Acrobat Setup XP***

1. Adobe Acrobat must be installed.
2. Navigate to the “printers” directory through Windows Control Panel. Right-click on Adobe PDF and select “properties”. Select “printing preferences”.
3. Uncheck “view Adobe PDF Results”, “Do not send fonts to Adobe PDF”, and “Prompt for Adobe PDF Filename”, click “apply”, and click “OK”.
4. Select the “Ports” tab (at top of properties box). Click on “Add Port”. Ensure that the Adobe PDF Port type is highlighted. Click “New Port”, and then navigate to the desired directory to contain the PDF files (C:\Program Files\40LDBRBm\PDFPRINT, for example). Click “close”, then “apply”, followed by “ok”.

## **Adobe Acrobat Setup Vista**

1. Adobe Acrobat 8.0 or later must be installed.
2. Navigate to the "printers" directory through Windows Control Panel. Right-click on Adobe PDF and select "properties". Select "printing preferences".
3. Uncheck "view Adobe PDF Results" and "Prompt for Adobe PDF Filename", click "apply", and click "OK".

If the Adobe PDF port does not exist or you want to create another one -

1. Open "Control Panel".
2. Click "Add Printer".
3. Click "Add a Local Printer"
4. Click "Use an existing port:" and select (Adobe PDF Port)
5. Choose Adobe under manufacturer and Adobe PDF Converter Version X under Printers.
6. Give the port the name "Adobe PDF"
7. Click "Finish".
8. Do steps 1-3 in first section to configure the new port.

**Note:** you may change the output folder to which Adobe prints to

1. Navigate to and open the Control Panel
2. Select Printers
3. Right Click "Adobe PDF"
4. Select Properties
5. Select the "General" tab
6. Click "Printing Preferences"
7. Select the "Adobe PDF Settings" tab
8. Under "Adobe PDF output" type the desired directory to contain the PDF files (C:\Program Files\100LDBRBH\PDFPRINT, for example).
9. Click "OK"
10. In the INI file set ADOBEPORT = the new path

## **Adobe INI Entries**

1. PDFREPORT = Y to turn on the logic. Default is N.
2. PDFERASE = Y to delete all of the previously created PDF reports within the Adobe port directory. Default is Y.
3. ADOBEPRN = Adobe PDF to define the printer name. Default is Adobe PDF.
4. ADOBEPORT = Adobe PDF print directory