

# OTR-EDGE

OTR-EDGE can be downloaded from <http://www.otr-edge.com>. There is no charge for the program, but it can be used only by subscribers to the OnTrack Report who are also FastTrack subscribers. In order to limit its use, an encrypted software key must be obtained from Investors OnTrack.

There is no affiliation between Investors OnTrack and Investors FastTrack, so FastTrack technical support personnel will not provide technical support for OTR-EDGE.

The OTR-EDGE creates output files in a format that can be read by FastTrack (FNU files) and displayed just like the data that is included in the FastTrack database. It also creates several FastTrack families to facilitate viewing these output files. Without FastTrack, OTR-EDGE serves no useful purpose.

The primary purpose of OTR-EDGE is to create a series of FNU files showing the result of hedging a portfolio with inverse indexes or short funds at various ratios. This allows the user to select a hedge factor visually by reviewing a series of charts in FastTrack.

OTR-EDGE is a DOS program. Its operation is controlled by several text files that can be opened and modified with the Windows text editor Notepad via the OTR-EDGE opening screen.

# Definitions

**FNU** – A file with the extension .fnu that can be read by the FastTrack program and displayed just like the native FastTrack data.

**Synthetic Fund** – The result of combining a mutual fund with one or more funds or indexes, usually a short fund or the inverse of an index.

**Inverse** – The exact opposite. In the case of an inverse fund or inverse index, it refers to a chart that moves in the opposite direction by the same amount of the primary fund or index on a daily basis. The inverse of the Russell 2000, for example, would move up 1% on a day that the Russell 2000 moved down 1%. The net effect of an inverse is the same as a short position in the primary fund or index.

**Hedging** – The addition of a short position to a portfolio to act as a counterweight during down days.

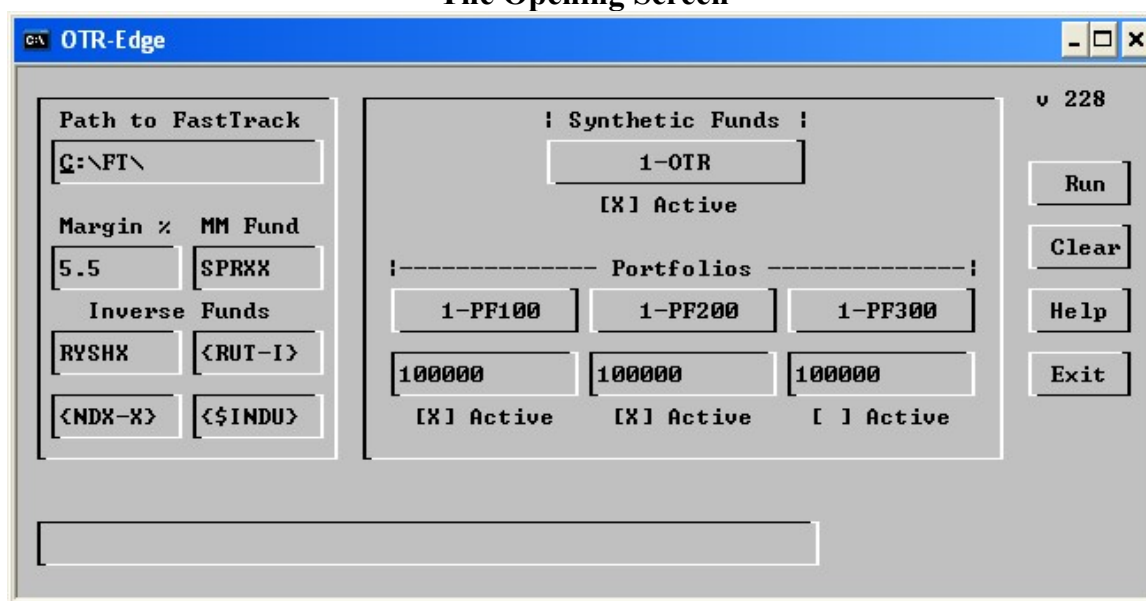
**Portfolio** – Any group of mutual funds or stocks.

## OTR-EDGE Software Key

- A software key must be installed on your computer for OTR-EDGE to function. The software key is specific to a particular FastTrack subscription, so it will only allow OTR-EDGE to operate with the FastTrack subscription for which it was ordered.
- All software keys are generated by Investors OnTrack and are comprised of 2 pieces of data: Your FastTrack account number and an ending date. By using this data, your specific key is generated and will work only on a computer that contains a copy of FastTrack with your corresponding FastTrack account number.
- We do not use your FastTrack password in our encryption scheme, so we will never ask for it.
- New software keys are generated periodically and sent to all current OnTrack Report subscribers.
- You will receive your software key (OTR-Aut.txt) as an attachment to an email message. You must copy the attached file into your OTR-Edge directory to ensure the program will continue operating.

# OTR-Edge

## The Opening Screen



- This is the opening screen of the OTR-EDGE program. The boxes are for data entry, and each button performs a function or opens a data file that can be modified.
- Under the Synthetic Funds and Portfolios buttons are boxes allowing the user to make any or all of these active. A mouse click will place an “X” in the selected box and make it active. Clicking the box again will remove the “X”.
- Clicking on the Run button will cause the program to calculate all the active sections (those with an “X” in the check box).
- Box under path to FastTrack - Input path to your FastTrack directory. Default value is C:\FT\
- Box under Margin % - Input your current margin expense rate. Default is 5.5%.
- Box under MM Fund – Input your Money Market Fund. Default is Fidelity Spartan Money Market (SPRXX).
- Boxes under Inverse Funds – Input (4) short index mutual funds or the inverse of any index bracketed by {} to use as the short positions for the hedging calculations. Any fund or index that is bracketed with {} will become the inverse of its symbol. For example, RUT-I is the FastTrack symbol of the Russell 2000 index. By placing the brackets around the symbol, {RUT-I}, the OTR-EDGE will make calculations based on the inverse of the Russell 2000. Funds such as RYSHX that are already inverse funds do not need the brackets surrounding them. **Each box must contain a valid symbol.**
- Boxes under 1-PF100, 1-PF200, 1-PF300 – Input the portfolio value for any of the portfolios you want to run. Account equity must total at least 25% of the holdings in the corresponding portfolio.

# OTR-Edge

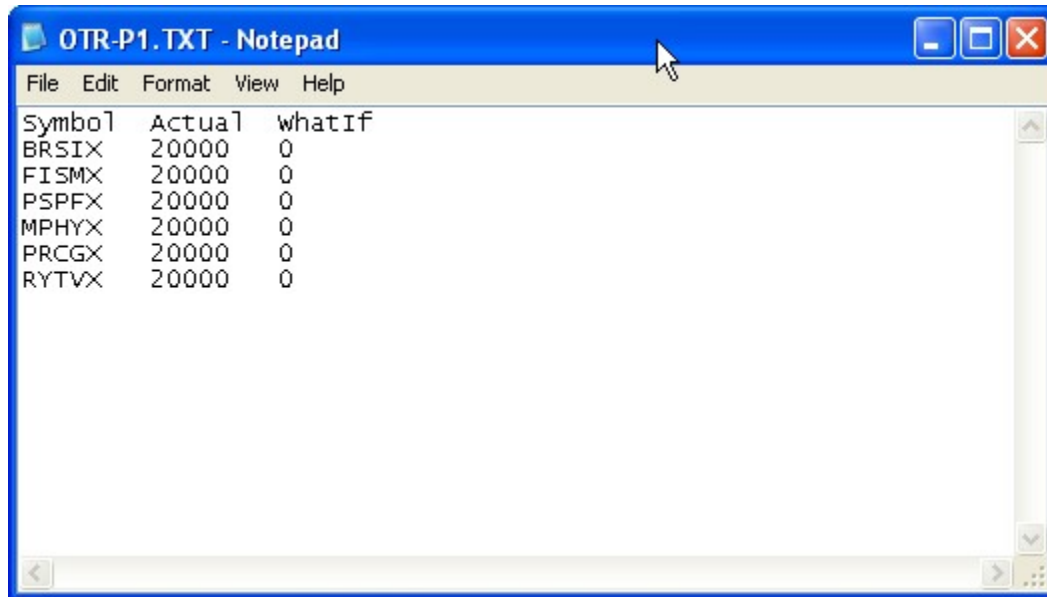
## The Synthetic Fund File

Symbol	Fund1%	Fund1	Fund2
A1A	60	BABEX	{RUT-I}
A1B	55	BJMIX	POSSX
A1C	55	BRSIX	SHPIX
A1D	60	BSCFX	{RUT-I}
A1E	45	HRTVX	{RUT-I}
A1F	75	JAMFX	{NDX-X}
A1G	35	OBMCX	{RUT-I}
A1H	50	PRCGX	RYSHX
A1I	45	PRCGX	UCPIX
A1J	50	XXXXX	XXXXX
A1K	50	XXXXX	XXXXX
A1L	50	XXXXX	XXXXX
A1M	50	XXXXX	XXXXX
A1N	50	XXXXX	XXXXX
A1O	50	XXXXX	XXXXX
A1P	50	XXXXX	XXXXX
A1Q	50	XXXXX	XXXXX
A1R	50	XXXXX	XXXXX
A1S	50	XXXXX	XXXXX
A1T	50	XXXXX	XXXXX
A1U	50	XXXXX	XXXXX
A1V	50	XXXXX	XXXXX
A1W	50	XXXXX	XXXXX
A1X	50	XXXXX	XXXXX
A1Y	50	XXXXX	XXXXX

- The Synthetic Funds section is completely independent of the Portfolios section, and is included in the program for the purpose of allowing subscribers to create an FNU that graphically shows the effect of combining a fund and a short position or any 2 funds.
- If the Synthetic Fund section is active and there are appropriate entries in the Synthetic Fund file, a single FastTrack FNU is created for each line entry along with a family of the fnu's. The name of the fnu corresponds to the symbol in the left hand column (ex. A1A, A1B, etc.) and the family name is 1-OTR as it appears on the Synthetic Funds button.
- Pressing the 1-OTR button under the Synthetic Funds header will open up the Synthetic Fund text file. Each synthetic fund symbol (which should not be changed) has three columns assigned to it: Fund1%, Fund1 & Fund2. By entering a percentage for Fund1, the program allocates the remaining percentage to Fund2 automatically. Enclosing a symbol in curly braces { } will cause the program to use the inverse of that fund or index in the calculations. The program is limited to 25 synthetic funds.
- While the Symbols can be changed by the Notepad program, doing so will generate an error when the program is run.
- Most subscribers will not need to use the Synthetic Fund function.
- Unused lines must have a placeholder symbol (XXXXX) for Fund1 and Fund2. There must also be a figure in the Fund1%column for each line.

# OTR-Edge

## The Portfolio File



- There are three Portfolio sections. The design and use of each is exactly the same.
- The portfolio button launches Notepad and loads a file that allows the user to input an entire portfolio of up to 15 funds, along with the amount invested in each fund.
- If you prefer to work with percentages, set the portfolio value to 100 on the opening screen and use percentage values on this screen (without the % symbol).
- To use the Portfolio function, enter your portfolio symbols, then enter the amount of each position in the Actual column. Just leave the WhatIf column with values of 0 initially.
- After you have made the appropriate entries, save and close the file.
- In this case, the sum of all the positions adds up to 120K, but the portfolio equity for 1-PF100 on the opening screen is just 100K. The program assumes the difference is borrowed, charges the margin rate shown on the opening screen on the balance in excess of the portfolio equity in the appropriate calculations, and takes the effect of margin into account for the appropriate calculations. If the sum of the positions were less than the equity value shown on the opening screen, the program would have assigned the difference to the money market listed on the opening screen and taken that into account in the appropriate calculations.

# FastTrack 1-PF100 Family

## A Family of Synthetic Funds



- If 1-PF100 is active on the opening screen, clicking on the Run button will cause the program to create a series of FNU files and to combine these files into a FastTrack family named 1-PF100.
- The chart above shows a FastTrack screen display of a few of the FNU's in the 1-PF100 family that was created from the 1-PF100 portfolio. The family contains a total of 79 synthetic funds. One of the funds is the return of the unhedged portfolio (PF100) that does not include the effect of margin or cash in the portfolio. The other 78 funds are combinations of the portfolio, hedged with short funds that were inputted on the front panel under the "Inverse Funds" section in ratios ranging from 95/5 to 5/95.
- The only purpose of these FNU's is to allow the user to select a hedge that limits the historical volatility and drawdown to an acceptable level during periods of market weakness. Portfolio margin or cash is not considered in these FNU's since their purpose is simply to aid in the selection of an appropriate hedge factor.
- If the market environment deteriorated to the point that you wanted to reduce market exposure, you could choose to hedge the 1-PF100 portfolio rather than selling the positions. Illustrated above are 6 of the output fnu's with their composition detailed next to the symbol. Based on recent market history, a blend of 50% of the portfolio and 50% RYSHX (represented by PF110) would significantly reduce the downside risk in this portfolio (represented by the blue line above). In order to achieve that ratio, you would multiply the hedge factor that is given in the description of the blue line (1.00) times the total dollar amount of the portfolio longs to determine how much of a short position is required. In this case 1.00 x 120K equals 120K. The 1.00 ratio could also be achieved by buying 60K of RYSHX and selling 60K of the portfolio funds.
- In addition to the 79 FNU's in the 1-PF100 family, two other FNU's are created (PF1A and PF1W). These FNU's are discussed later, and are not placed in the 1-PF100 family.

# FastTrack Spreadsheet

## Sorted by UPI

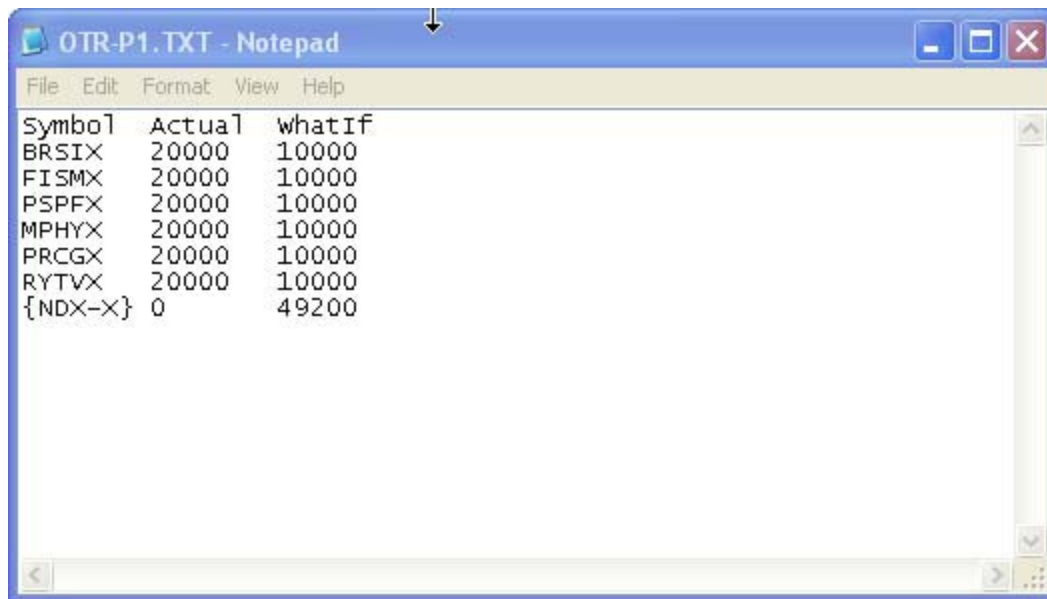
Symbol	Name	Shares	Market	CP	Num	Return	MaxDr	UPI	MaxDr
PF149	55.0% PF100 + 45.0% {NDX-X} (HF= 0.82)	0.00	0.00	1261.9	18	9.17%	-3.69	4.04	-3.69
PF150	50.0% PF100 + 50.0% {NDX-X} (HF= 1.00)	0.00	0.00	1208.8	19	8.92%	-4.00	4.00	-4.00
PF109	55.0% PF100 + 45.0% RYSHX (HF= 0.82)	0.00	0.00	1312.6	36	6.89%	-2.91	3.86	-2.91
PF148	60.0% PF100 + 40.0% {NDX-X} (HF= 0.67)	0.00	0.00	1316.7	15	9.41%	-4.69	3.78	-4.69
PF108	60.0% PF100 + 40.0% RYSHX (HF= 0.67)	0.00	0.00	1363.4	32	7.39%	-3.86	3.58	-3.86
PF151	45.0% PF100 + 55.0% {NDX-X} (HF= 1.22)	0.00	0.00	1157.4	22	8.65%	-4.43	3.50	-4.43
PF147	65.0% PF100 + 35.0% {NDX-X} (HF= 0.54)	0.00	0.00	1373.0	13	9.63%	-5.69	3.42	-5.69
PF107	50.0% PF100 + 50.0% RYSHX (HF= 1.00)	0.00	0.00	1263.1	40	6.36%	-2.75	3.33	-2.75
PF107	65.0% PF100 + 35.0% RYSHX (HF= 0.54)	0.00	0.00	1415.4	28	7.88%	-4.87	3.13	-4.87
PF146	70.0% PF100 + 30.0% {NDX-X} (HF= 0.43)	0.00	0.00	1431.2	11	9.84%	-6.81	2.99	-6.81
PF152	40.0% PF100 + 60.0% {NDX-X} (HF= 1.50)	0.00	0.00	1107.6	24	8.37%	-5.15	2.76	-5.15
PF106	70.0% PF100 + 30.0% RYSHX (HF= 0.43)	0.00	0.00	1468.9	25	8.35%	-6.13	2.73	-6.13
PF145	75.0% PF100 + 25.0% {NDX-X} (HF= 0.33)	0.00	0.00	1491.0	9	10.03%	-7.95	2.62	-7.95
PF105	75.0% PF100 + 25.0% RYSHX (HF= 0.33)	0.00	0.00	1523.5	20	8.80%	-7.47	2.40	-7.47
PF144	80.0% PF100 + 20.0% {NDX-X} (HF= 0.25)	0.00	0.00	1552.6	6	10.21%	-9.12	2.34	-9.12
PF104	80.0% PF100 + 20.0% RYSHX (HF= 0.25)	0.00	0.00	1579.5	17	9.23%	-8.89	2.16	-8.89
PF143	85.0% PF100 + 15.0% {NDX-X} (HF= 0.18)	0.00	0.00	1615.9	5	10.37%	-10.31	2.11	-10.31
PF153	35.0% PF100 + 65.0% {NDX-X} (HF= 1.86)	0.00	0.00	1059.4	27	8.07%	-5.87	2.11	-5.87
PF103	85.0% PF100 + 15.0% RYSHX (HF= 0.18)	0.00	0.00	1636.8	12	9.64%	-10.33	1.97	-10.33
PF142	90.0% PF100 + 10.0% {NDX-X} (HF= 0.11)	0.00	0.00	1680.9	3	10.51%	-11.75	1.92	-11.75
PF111	45.0% PF100 + 55.0% RYSHX (HF= 1.22)	0.00	0.00	1214.9	44	5.82%	-3.35	1.92	-3.35
PF102	90.0% PF100 + 10.0% RYSHX (HF= 0.11)	0.00	0.00	1695.3	8	10.03%	-11.76	1.83	-11.76
PF126	70.0% PF100 + 30.0% {RUT-I} (HF= 0.43)	0.00	0.00	1335.5	38	6.66%	-6.47	1.79	-6.47
PF125	75.0% PF100 + 25.0% {RUT-I} (HF= 0.33)	0.00	0.00	1407.7	33	7.38%	-7.75	1.77	-7.75
PF127	65.0% PF100 + 35.0% {RUT-I} (HF= 0.54)	0.00	0.00	1266.3	43	5.92%	-5.27	1.77	-5.27
PF141	95.0% PF100 + 5.0% {NDX-X} (HF= 0.05)	0.00	0.00	1747.6	2	10.64%	-13.17	1.76	-13.17
PF124	80.0% PF100 + 20.0% {RUT-I} (HF= 0.25)	0.00	0.00	1483.0	26	8.09%	-9.13	1.73	-9.13
PF101	95.0% PF100 + 5.0% RYSHX (HF= 0.05)	0.00	0.00	1755.1	4	10.40%	-13.17	1.72	-13.17
PF123	85.0% PF100 + 15.0% {RUT-I} (HF= 0.18)	0.00	0.00	1561.4	21	8.78%	-10.51	1.70	-10.51
PF122	90.0% PF100 + 10.0% {RUT-I} (HF= 0.11)	0.00	0.00	1643.0	14	9.46%	-11.88	1.67	-11.88
PF121	95.0% PF100 + 5.0% {RUT-I} (HF= 0.05)	0.00	0.00	1727.9	7	10.11%	-13.23	1.65	-13.23
PF128	60.0% PF100 + 40.0% {RUT-I} (HF= 0.67)	0.00	0.00	1200.0	47	5.17%	-4.32	1.63	-4.32
PF100	100% PF100	0.00	0.00	1816.1	1	10.75%	-14.57	1.62	-14.57
PF161	95.0% PF100 + 5.0% {\$INDU} (HF= 0.05)	0.00	0.00	1747.4	10	10.03%	-13.58	1.59	-13.58
PF154	30.0% PF100 + 70.0% {NDX-X} (HF= 2.33)	0.00	0.00	1012.8	30	7.76%	-6.86	1.58	-6.86
PF162	90.0% PF100 + 10.0% {\$INDU} (HF= 0.11)	0.00	0.00	1680.8	16	9.30%	-12.58	1.54	-12.58

Portfolio families can be ranked and sorted using any of the columns that are available in the FastTrack spreadsheet. In this case, the spreadsheet is sorted by UPI, a measure of risk-adjusted return. In the example above, the combination that produced the best UPI during the calculation period was 55% long the portfolio plus 45% short the NASDAQ 100 (HF 0.82).



# OTR-Edge

## The 1-PF100 Portfolio Text File



Symbol	Actual	WhatIf
BRSIX	20000	10000
FISMx	20000	10000
PSPFX	20000	10000
MPHYX	20000	10000
PRCGX	20000	10000
RYTVX	20000	10000
{NDX-X}	0	49200

- We can now return to the 1-PF100 Portfolio file in OTR-EDGE and complete the WhatIf column to create an FNU that shows the exact hedged portfolio that we have selected.
- For this example, we reduced the amount of the long positions in the WhatIf column and added the appropriate short position {NDX-X}.
- As before, save and close the file after you have made the changes, then click the Run button on the opening page of OTR-EDGE to process the active files.

# PF1W

## The Final Result of the Process



This chart shows the relationship of PF100 to PF1A and PF1W. To recap:

PF100 (the red line) is the plot of the portfolio listed in the Actual column of the 1-PF100 family. It ignores portfolio cash and margin, as if the positions listed constitute 100% of the portfolio. This is necessary so we can review the hedged versions of PF100 to select an appropriate hedge factor for the portfolio.

PF1A (the green line) is the plot of the portfolio listed in the Actual column of the 1-PF100 file. It includes the effect of portfolio cash or margin to provide a realistic plot of the portfolio if it were rebalanced each day. The purpose of this file is to show how margin or cash will affect the portfolio volatility. In this case, the green line has greater returns and drawdowns than the red line (and greater volatility and risk) because the portfolio is margined.

PF1W (the black line) is the plot of the portfolio listed in the WhatIf column of the 1-PF100 file. It also includes the effect of portfolio cash or margin to show the effect of the short position added as a result of the hedge factor analysis. In this case we added a large short position in the NASDAQ 100. When the portfolio was trending up strongly, the hedged position would have acted a drag on performance but would have reduced volatility and risk. However, when the portfolio turned to the downside, the hedged position kept a relatively neutral posture while continuing to reduce volatility and risk. Obviously, we don't really want to hedge in an uptrending market, but hedging can be used to buy time by reducing market risk when market conditions are uncertain or deteriorating.

## Using OTR-Edge to Determine a Portfolio Hedge

- Enter the appropriate information on the opening screen.
- Select one of the portfolio buttons on the opening screen of OTR-Edge (for example, 1-PF100) to open the appropriate Notepad file
- Enter your portfolio positions (long positions only) along with the position size for each long position in the Actual column, then save and close the Notepad file
- Make sure the ACTIVE checkbox under the portfolio name is checked
- Click on the RUN button
- Open FastTrack
- Load the portfolio family, which will have the same name as the portfolio button in OTR-Edge (for example, 1-PF100)
- Review the synthetic funds in the family to select the one that best serves your needs
- Note the hedge factor (HF) listed in the synthetic fund title
- Multiply the HF times the \$ value of your portfolio (longs only) to determine the \$ value of the short position that you need to add to your portfolio to achieve the HF of the synthetic fund you selected
- Open the 1-PF100 file and add the short position. Enter the size of all positions (including the short position) to the “WhatIf” column, and run the calculations again to see the effect of the short by reviewing the PF1W FNU in FastTrack. Adjust holdings as necessary until you determine an appropriate hedge for your portfolio.
- Adjust your hedge as market conditions change

# FAQ

**Q: I get the following error message: “Error Reading Portfolio 1-PF100 Equity Value. The value must be a number greater than 1 which represents the total equity in the Actual Portfolio. A typical entry would be: 100000 The actual value contains: 0 (Message ID = V3 – Peq)”. What is the problem?**

*A: The Account Equity input area must contain a dollar amount that represents the actual account equity of the corresponding portfolio. As a parameter, that number must equal at least 25% of the sum of the portfolios holdings. At 25%, the program would make its calculations at a 4x margin. For example, if the individual holdings of the portfolio are equal to \$100,000, the portfolio equity must be at least \$25,000, representing a 4X margined position. [Any amount in the portfolio equity area that exceeds the \$100,000 would be calculated as belonging to the money market fund specified on the control panel].*

**Q: I went through the install procedure and selected the D drive as the destination for the OTR-Edge program. When I tried to start the program from the desktop icon, I got an error message. What should I do?**

*A: To install the program on your D drive, you will need to complete an extra step to get the path correct. These are the steps to making the change:*

- 1. Right click on the START button at the bottom left hand corner of your screen and select EXPLORE*
- 2. Navigate to D:/OTR-Edge or the directory you chose to install the program in.*
- 3. In the OTR-Edge folder, you will have the file OTR-osNT.BAT. Right click this file and select EDIT*
- 4. Notepad will open the file and allow you to edit the file. You will replace the two references to C:\ with D:\ The first line below is the unchanged entry and the one below it has the changes. You can see that only two characters need to be changed.*  
*cmd /c "start "OTR-Edge" /low /dc:\otr-edge c:\otr-edge\otr-edge.exe"*  
*cmd /c "start "OTR-Edge" /low /dd:\otr-edge d:\otr-edge\otr-edge.exe"*
- 5. Click on the FILE selection at the top of the screen and SAVE. Close the window by pressing the "X" in the upper right hand corner and you should be ready to open your OTR-Edge program.*

# FAQ

**Q: Can I install the OTR-Edge on more than one computer?**

**A:** *You can install on 2 machines as long as they both have FastTrack with the same user number. Should be no problem if this is the case. Be sure to install the authorization file to both OTR-Edge directories.*

**Q: My mouse does not work properly with the program. I can see the mouse cursor, but it will not press the buttons. What should I do?**

**A:** *Although we're not sure why this happens, there is a fix for it. Follow these steps to change your settings:*

- 1. Right Click the OTR-Edge icon on your desktop and select Properties.*
- 2. Select the OPTIONS tab at the top of the open window.*
- 3. There is a small box next to "QuickEdit mode". Click in the box to remove the check mark. Press the APPLY button at the bottom of the screen.*
- 4. Press the OK button at the bottom of the screen.*

*This should allow your mouse to operate properly from now on.*

**Q: When I run a 1-OTR file, and look at the fnu output files in FastTrack (A1A, A1B, etc), the title that appears with a particular fnu is something like "40% BRSIX + 60% {RUT-I}". If I leave FT open and rerun the 1-OTR file with a different mix, and I reload the particular fnu that I am looking at, the values change, but the title remains the same. I have to close FT and reopen it to get the title to change.**

**A:** *This is a function of FastTrack. FastTrack only reads the descriptions when the program starts. FastTrack will reread the data each time you load the fnu, but the label will not change. Therefore, it is advisable to close FastTrack after making changes to the 1-OTR synthetic funds and then reopen FastTrack once the calculations are complete. This only applies to changes in the synthetic funds as the labels for the Portfolio fnu's do not change since they reflect the portfolio name, not the holdings.*

# FAQ

**Q: Are there any additional uses for the Synthetic Funds section other than simply combining two funds of varying percentages?**

*A: The Synthetic Funds portion of the OTR-Edge was meant to be a simple tool that allowed the user to see the results of combining a mutual fund with a short position. However, you can take that a step further by adding the 100% long portfolio output from any of the three portfolios (PF100, PF200 or PF300) into the Fund1 column in the Synthetic Funds and then choosing any short fund or inverse index for Fund2. This will allow you to use any short fund of your choosing and will also allow you to vary the percentage of the short fund.*

**Q: Am I limited to mutual funds or can I use stocks also?**

*A: You can use either mutual funds or stocks, however, you must be a subscriber to the FastTrack stocks database to have access to the data.*