In This Issue

Optimal Portfolio Selection and Weighting - An Achievable Task

In 1956 the security market analyst and mathematician, Harry Markowitz, developed a theory on portfolio analysis. It was so spectacular that he won a Nobel prize for his efforts. I believe Mr. Markowitz's work may contain the key to sustaining profits in the commodity markets.

As a major mathematical development, the theory is relatively young. It is so young in fact, that many new additions and significant refinements have occurred in the last year. I hope that my own work in applying this theory to the commodity markets will enhance the collective knowledge base.

Mr. Markowitz's studies, known as Modern Portfolio Theory, have been used by successful mutual fund managers for years. Most commodity or futures traders have not embraced the theory because it is largely designed for the stock and bond markets. This is because it requires a dividend or interest bearing statistic be present for application. Futures, as every trader knows, do not pay dividends or interest. However, I believe that Modern Portfolio Theory can still apply when this requirement is satisfied in another way.

As background, first lets look at the typical investor's idea of portfolio management. Many futures investors arrange diversified portfolios by mixing markets in hopes of minimizing coincident market drawdown. The

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consensus has been to trade a mix of markets from among distinctly different product classes such as a grain, a metal, a livestock, etc... or combinations of the above. The trader might weight the various assets according to dollar value. This is a noble effort that arguably does make some sense. Unfortunately, as traders who have tried it know, it really doesn't work very well.

This type of portfolio diversification doesn't work for at least two reasons: 1) unlike markets traded in the same currency tend to be economically correlated and 2) equal dollar weighting by product class can produce results that are far from optimal.

Modern Portfolio Theory investigates the mixing of products and combinations of weights of products. The result is that portfolio returns are maximized against the portfolio's variance. Variance explains the same market characteristics as drawdown, and the level of drawdown is vitally important to the achievement of a consistent return on investment.
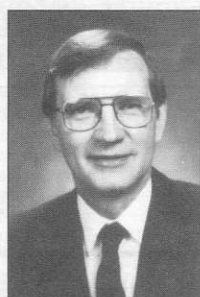
Modern Portfolio Theory adopts an esoteric language of its own. Among other terms, it discusses the "efficient frontier," which is exactly what comes out of an analysis of assets, their returns and their variance. To establish the efficient frontier for a portfolio of assets, plot your portfolio's return
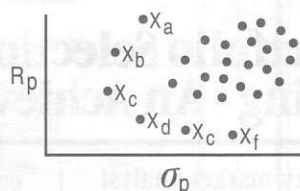
Robert C. Pelletier

"Substantive analysis and hard work, without mirrors and slight of hand, are the only ways I know to prevail in the trading arena."

against its variance. The result will be a scattering of possible outcomes like the following:

The return, Rp, is plotted against the standard deviation of return, σp. The return could be measured in annualized percent. The trader or portfolio analyst would have to weigh the benefit of generating a high return against the uncertainty of risk. One's willingness to accept a low return could translate into a low risk. Accepting a high return might require a high risk. To find the efficient frontier in the above example, choose from the "C zone" choices (those formed by the boundary left arc of the scatter diagram) Xa, Xb, Xc, Xd, Xe, and Xf. All of the other thousands or millions of unlabeled choices are inferior to at least one of the C Zone choices and can be rejected.

The efficient frontier, chosen from among portfolio possibilities is always the "C" or arc-shaped left boundary of the population of portfolio candidates. The portfolio possibilities are governed by the number of assets from which the portfolio will be drawn and the number of combinations required for the portfolio size. They are also heavily governed by the proportional weighting of the selected portfolio assets.

It doesn't take a very vivid imagination to see the vast number of possibilities that should theoretically be studied to arrive at the efficient frontier. Fortunately, there are shortcuts in evaluating the problem, determining the weighting and arriving at a reasonable solution.

You might be surprised to learn that by combining an appropriate group of properly weighted assets, it is

theoretically possible to have a portfolio return that exceeds the return of any member asset. Imagine dividing your resources 50:50 between a 7% yielding S & L and a 3% commercial bank and receiving a 9% overall return. This may not be possible in the banking world, but it is possible through the application of Modern Portfolio Theory principals to the commodity market. When two financial futures market assets that are carefully selected, combined and weighted are used, this scenario is theoretically and perhaps readily possible.

The subject of portfolio weighting and interaction is so significant to every trader's sustained success that I am considering a multi-part series on the subject. I won't commit to a definite quantity of material, but will decide more based on written responses to this initial installment. If you don't care to learn about it, then enjoy our other articles and don't bother giving your reaction. CSI customers who are interested should send questions or comments to my attention. If interest is high enough, I will cover your questions in later CSI News Journals.

If reader apathy suggests we do not go deeper into the above subject, interested parties should consider finding out more on their own. Investigate ways of computing asset returns and variance. Research how to select candidate combinations of portfolios. Look for a quick way to weight portfolio assets, and finally, a workable way to evaluate the end product.

I haven't seen this rewarding area addressed adequately by anyone in the Futures industry. Most analysts are more involved in the smaller scope problem of timing their trades one market or system at a time. I believe we must solve the broad market integration tasks of portfolio selection, weighting and evaluation first. Other-

New Invoices Serve You Better

This month when paying your CSI bill, please take a moment to look it over and see how we've changed.

You'll note that we have allotted space for new addresses and other account information. Simply check the Change of Address box on the front and complete the information on the reverse side. Please include a current telephone number so we can contact you if necessary. Also be sure to type or print the information legibly.

When the contact person is to be changed for a corporate account, please notify us in advance so that we may send a Change of Ownership form. We'll be happy to pass the account on to the next employee as soon as this form is completed.

The reverse side of the invoice has a brief description of our billing policy. It has been updated with the most recent communication modes and time priorities. For an updated price schedule for historical and daily data, please refer to the July '92 News Journal or request one from our office.

If you believe that there is a discrepancy concerning your invoice, please notify our bookkeeping department immediately. You are still responsible for the amount of the invoice, less the disputed item. We will assume your invoice is correct as printed for any dispute over 60 days old.

Please have your user ID and invoice on hand when calling about a problem. If we cannot rectify the discrepancy immediately, we will call you back after researching it. If you prefer to send a letter, please make sure to include the following:

- Your name, user ID, and the invoice number on which the suspected error appears
- The dollar amount and date of the error
- A full description of the transaction and explanation of why you believe it is in error.

The vast majority of our subscribers pay their monthly bills in full each month. We appreciate the conscientious manner in which you handle your accounts. For those few who are habitually late, we have made some revisions to our overdue payment policies. The changes are not all that drastic, but will aid us in cutting down on delinquent accounts.

Customers now have 60 days to pay an invoice before service is suspended for non-payment. If full payment is not made by the end of the 60-day cycle, the account will be placed under "suspension" status. We hope none of our users will ever reach this status, but for a detailed summary of the procedures that follow, you may contact our bookkeeping department.

I am sure you will agree that these changes will help us serve you better. If at any time you have a problem with our service, please contact us immediately. We are eager to rectify the situation and avoid any unnecessary inconveniences. We include a complimentary return envelope with every invoice, so please feel free to include your suggestions, inquiries, or affirmations of good service. ✦

QuickTrieve® Version 4.04 Delayed

We seem to have jumped the gun in announcing QuickTrieve Version 4.04 in a recent News Journal. The major enhancement of version 4.04 is support of historical data files that are automatically prepared as your daily update portfolio changes. This multifaceted task involves not only changes in QuickTrieve, but also major changes on our host computer. Unfortunately, the project has proved more complex than we anticipated.

If you pre-paid for version 4.04, your payment has been applied as a

Ask Customer Service

Q. *When I installed my QuickTrieve software, I responded "Yes" when asked if I wanted to use default directories. I wasn't really sure what I was doing, and now I seem to have a lot of directories and files that I don't want. Would you please explain my current setup?*

A. Accepting "default" directory creation during installation instructs QuickTrieve to automatically create a subdirectory for each of 12 commodity groups. These subdirectories allow QuickTrieve to sort your data by group during file creation and distribution. Page AA15 in the General Appendix of QuickTrieve's user manual shows all the groups, which are within the QTDATA subdirectory. Users who follow a large number of contracts can benefit from this feature because it facilitates file selection during analysis.

Q. *I arranged for "default directories" when I installed QuickTrieve because I update a very large portfolio. I like the arrangement, but I'm puzzled by the presence of empty data files that I did not request. What are these mystery files?*

A. In order for QuickTrieve to properly sort your data into subdirectories by group, there must be one data file from the given group in each corresponding subdirectory. QuickTrieve automatically creates one "dummy" file in each subdirectory to facilitate this procedure. We use the delivery month code 54 and delivery year 90 for these dummy files.

Once the first actual data file has been created in each subdirectory, the "dummy" files are no longer needed. You may delete them if desired.

Q. *QuickTrieve created subdirectories for 12 groups on my hard drive, but I only use the eight groups that apply to U.S. markets. How can I get rid of the extra four directories?*

A. The simplest way to ignore unwanted directories is to erase them from your Master Path file (QPATH) through QuickManager's® Editor Subsystem. Simply erase the line listing each subdirectory you want to remove. This procedure will make the subdirectories invisible to QuickTrieve, but they will still exist on your hard drive.

To clear them from your hard drive, you'll need to use DOS commands. DOS does not allow you to delete a subdirectory unless it is empty, so first delete the "dummy" file and QMASTER from each unwanted directory. To remove the files in your GRAINS-F directory, for example, type:
- DELETE QTDATA\GRAINS-F*.*
- Repeat this command for each unwanted directory.
- Then use DOS' REMOVE DIRECTORY command (RD) to erase each of the unwanted subdirectories. For example: RD QTDATA\GRAINS-F.

Q. *I did not opt for automatic directory creation when I installed QuickTrieve, but I am interested in sorting my data files into groups now. Is it too late?*

A. No, it's not too late, but it will require a little extra work on your part. First, you'll need to use QuickManager's EDITOR SUBSYSTEM to add a subdirectory name to your master path file (QPATH) for each group you wish to use. Page AA17 in the General Appendix of your QuickTrieve manual shows which commodities belong to which groups. QuickTrieve will automatically create the subdirectories once they are listed in your master path file.

Next use QuickManager's MOVE/SPLIT A DATA FILE feature to move your existing data files into the desired subdirectories. If any subdirectory is left empty, create an empty file for one of the group's commodities in the subdirectory. This will allow QuickTrieve to find the proper subdirectory for automatic file creation when the time comes. ✦

Globex and Day-Session Trading

Commodity	CSI #	Symbol
British Pound - combined sessions	26	BP
British Pound - day only	128	B2
Canadian Dollar - combined sessions	64	CD
Canadian Dollar - day only	129	C2
Deutschemark - combined sessions	24	DM
Deutschemark - day only	261	D2
Eurodollar - combined sessions	141	ED
Eurodollar - day only	269	E2
Japanese Yen - combined sessions	65	JY
Japanese Yen - day only	262	J2
Libor Rate - combined sessions	142	EM
Libor Rate - day only	270	M2
Swiss Franc - combined sessions	25	SF
Swiss Franc - day only	127	S2
T-Bills - combined sessions	41	TB
T-Bills - day only	271	T2
T-Bonds - combined sessions	44	TR
T-Bonds - day only	144	TQ
T-Notes - combined sessions	150	TS
T-Notes - day only	250	TT

Optimal Portfolio Selection...
(continued from page 2)

wise, the odds against long-term success will eventually consume the best of us. I hope you will join me in my quest for optimal portfolio selection. As we proceed, I also hope you will avoid the temptation of substituting blood milk consumption and tribal chanting as a means of furthering your trading success. Substantive analysis and hard work, without mirrors and slight of hand, are the only ways I know to prevail in the trading arena. ✦

Bob Pelletier

QuickTrieve Version 4.04...

normal credit to your account. Your account will be debited for the software when it is shipped. We are holding all orders for the new QuickTrieve and expect a release date in October. We regret the delay, but feel it is necessary to assure a quality product. ✦

Holiday Schedule

CSI will be closed for voice communication on Monday, September 7 for the Labor Day holiday. The host computer will be operational, but U.S. exchanges will be closed. Data from other exchanges will be available as usual.

CSI Software Product Summary

- ❑ **QuickTrieve®/QuickManager®** - To retrieve, manage & edit data; includes Alert Calendar $99/Unrestricted use $39/Daily data user
- ❑ **QuickPlot®/QuickStudy®** - Charting & analysis software (requires QT/QM) $156
- ❑ **Trader's Money Manager™** - Introductory price $499 (a $200 savings)
- ❑ **Trading System Performance Evaluator™** - Computes your system's capital requirements $199
- ❑ **TraDe$k™** - Traders' complete accounting system-(price varies with number of accounts) Starting @ $399/Unrestricted use $299/Daily data user or 12-month lease starting @ $22/Mo.
- ❑ **Seasonal Index Value Pack** - Three years of history for 33 popular commodities $444
- ❑ **CSI News Journal** - Aug. 1990 to present $35/Yr. or $5/Reprint
- ❑ **CSI Mailing List** - $200/1,000 names (CSI users omitted)

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NAME _____

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ADDRESS _____

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❑ 5¼" DISK   ❑ 3½" DISK

09/92

All prices subject to change without notice.