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Performance Evaluator Shows Its Value

A frustrated investor recently called our office, puzzled by the conflicting results of simulated trading, actual trading and a TSPE evaluation. He wanted to know why TSPE's rating of his trading system was poor, when simulated trading results were quite good. He was hoping for some insight on why he was losing money with a system that appeared to be very profitable. How could actual trading be so far off from simulations? How did TSPE accurately predict an outcome that cost him real dollars to discover?

The discrepancy between hindsight analysis and real-time trading results has plagued technical analysts for years. An understanding of the Trading System Performance Evaluator can help investors cope with (and perhaps avoid) this trading pitfall.

The explanation we gave this investor may help our readers find a better understanding of trading systems. In our caller's case, he had introduced a string of about 55 simulated trades into TSPE. He then correctly identified about a dozen parameters as general information on the trading system. His software had come pre-optimized and, in fact, the developer regularly sup-

plied him with new parameter settings. These were intended to keep his system finely tuned for profits.

In explaining why TSPE's evaluation proved accurate in the marketplace, we had to search for the trading system's main weakness. In our frustrated investor's case, this was obviously the excessive number of parameters used in

optimization. Without an enormous sample, an 11- or 12-parameter system exercises great control over the trading process. This leaves little freedom to produce profits beyond the simulation period. If the

system developer would set more constants and reduce the number of parameters, there might be a greater chance of future success.

Here's why—before TSPE calculates probability curves and computes capital stake requirements, it determines if the system has a positive mathematical expectation. This involves degrading profits by factoring the key elements of parameter count and sample size. In our example, the heavy parameter count made the degradation so great that even large simulated profits could not prevail. TSPE's evaluation did not extend into full probability studies because the trading system was predicted

“TSPE provides an important service to prospective system purchasers because it can validate a system before accepting market risk”

What's News

Performance Evaluator Shows Its Value	1
Trader's Money Manager Nears Completion	2
Computer Corner Dos 5.0-Its a Winner	3
Product Summary	4
Customer Service	5

to produce a negative mathematical expectation. The analysis indicated that it was not possible to produce a profit after TSPE's routine degradation exercise. The losses generated in actual trading corroborated TSPE's conclusion, which was determined without costly market exposure.

TSPE provides an important service to prospective system purchasers because it can validate a system before accepting market risk. System developers should consider applying it before offering a product for sale to verify that sample size and parameter counts are within acceptable ranges.

We plan to offer systems-oriented trading software ourselves, but we will test each product exhaustively with TSPE before release. This is why TSPE was developed prerequisite to introducing system software to our customers. In the meantime, our users can benefit by evaluating trading systems regardless of product source. □

Trader's Money Manager Nears Completion

We have finally solved the complex problem of calculating optimal levels of investment risk for unique trading systems. This is a significant breakthrough in the area of money management because it can guide investors in attaining wealth with minimal risk. The precise programming code took several months to write, but it represents significant progress in the Trader's Money Manager (TMM) software.

A couple of months ago we discussed our work in the money management area, but our preliminary findings were flawed. Because we had not fully solved the problem, we made the false assumption that the chance of success decreased as risk and profits increased. Through additional analysis, we found the reverse to be true.

The evolving TMM is a recursive Monte Carlo Simulation model that can base judgement on either actual or simulated trading results. It accepts any profit-and-loss trading record to compute the optimal time to increase (or decrease) the number of shares or contracts invested. The accumulation of profits (or losses) is a key factor in determining appropriate market exposure.

TMM is not a pyramiding process that increases risk without regard to the level of potential gains. TMM is a sophisticated tool which allocates risk exposure based on achieved levels of profit while simultaneously decreasing the probability of going broke.

Much of the work we did in creating the Trading System Performance

Evaluator (TSPE) has been used in TMM. When we developed TSPE, we solved a couple of important problems. First we answered the question of how much capital is necessary to finance a given trading system. Then we computed the probability and the 95% confidence level of attaining a pre-specified dollar goal at differing capital stake levels.

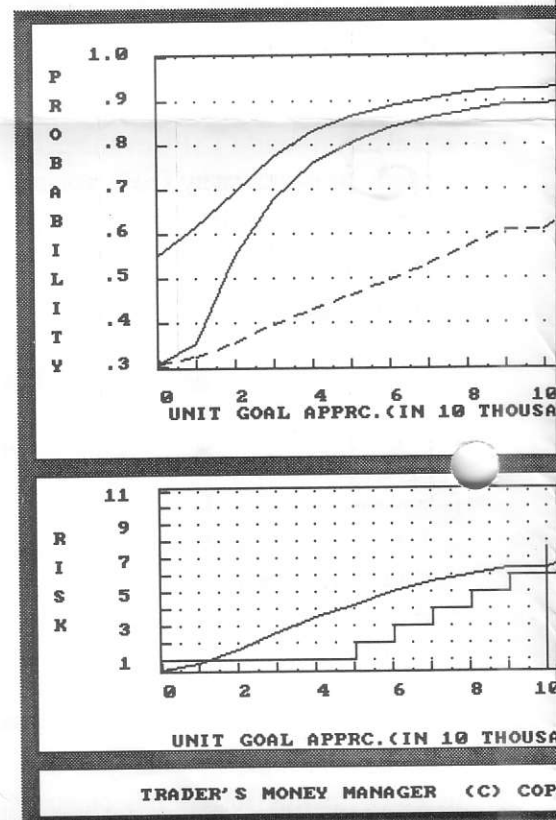
TSPE requires an input string of profits and losses (P&L) and an estimate of the parameter count that was used to create the simulated P&L string. The parameter count and the P&L string length (sample size) combine in TSPE to degrade the performance record so unbiased input is exposed for analysis. The degraded results become the basis for determining whether the system has a positive mathematical expectation. Following this effort, the simulation framework manufactures the capital stake and probability outputs. TSPE then produces a table and a graphic image of capital stake requirements versus the probability of reaching a given goal.

TMM has the same data requirements as TSPE, but TMM allows you to select any capital stake level as a starting point for money management analysis. It then goes a giant step further than TSPE by calculating proposed levels of risk as a profit goal is reached.

This very significant addition is what makes TMM a true money management tool. If you ever wondered what money management is all about, a hands-on experience with TMM will enlighten you in a whole

new way.

Below are some charts which show how TMM can maximize wealth in the fewest number of trades. (A trade is defined as one round trip market transaction with single step changes in the number of

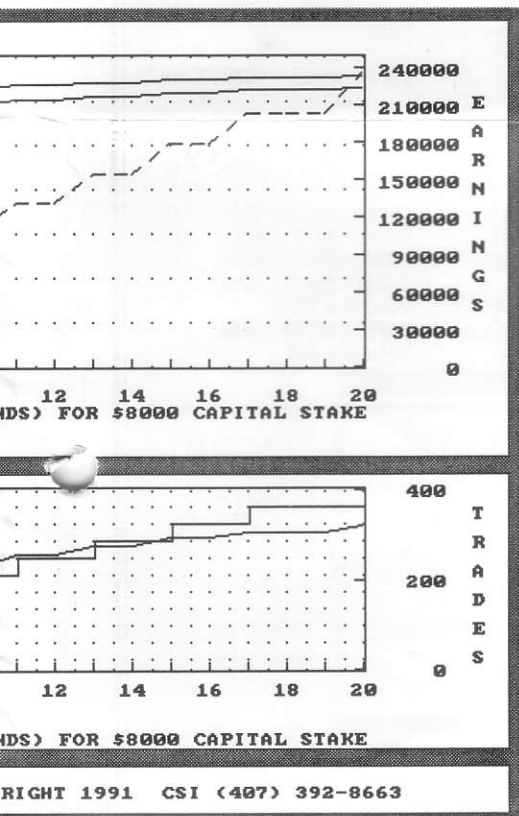


contracts invested.)

The X axis on each chart defines profits on a single-contract basis, whereas the Y axis on the probability chart defines profit on earnings on a multiple-contract basis. The example shows a two-window screen image of a TMM exercise for a given capital stake. It has three curves. The top window's solid line is the probability of success as a function of the dollars earned, based on units of the horizontal X axis. The bottom

solid line is the 95% confidence level. The dotted line shows how capital for multiple-contract trading increases when compared to single-contract trading.

The bottom window has two curves and a vertical spike. The spike shows the number of trades required to achieve the X scale's midpoint profit



(\$100,000) with single-contract trading. The step-function plot shows when to add to contract risk as a function of single-contract profits, as defined by the X scale. The solid line shows how the number of trades in multiple-contract trading increases over time as a function of single-contract trading performance.

These charts tell the trader of this system many things. For example, from the Risk-Trades chart he learns that once he clears \$50,000

in profits on an \$8,000 investment, he should move to two-contract trading. After \$80,000 in profits on a one-contract basis, he should move from four-contract trading to five-contract trading. When applying this tool, all decisions are based on one-contract trading profit progress regardless of the user's position on the step-function risk curve. This chart also tells him that in one-contract trading, 268 trades would have produced \$100,000 in profits (*see spike*). More significantly, 318 trades log nearly \$225,000 in profits assuming the money management mode (*see top chart*). Once the money management progression begins taking effect, fewer and fewer additional trades are necessary to sustain profit growth. Please notice also that as profits are accumulated, the chances of sustained success improve.

Naturally, this example applies to the unique trading system we analyzed for demonstration. Results vary with each system introduced as a simulated or actual trading record. TMM allows each trader to apply money management techniques designed for his own unique trading system.

The Trader's Money Manager is now nearing the end of its developmental stage and is being tested rigorously. We expect to release the program sometime within the next several months. We'll keep you informed on its progress through future issues of the CSI News Journal. □

Best wishes for prosperous trading,

Bob Pellatier

Computer Corner

DOS 5.0

It's a winner!

Microsoft's new MS DOS version 5.0 is earning well-deserved kudos from our programming staff and from reviewers around the world. Since the average investor doesn't spend much time reading computer magazines, we felt a small review of our own was in order.

For starters, version 5.0 includes a file management program called SHELL that is very much like Windows' file manager. Through on-screen views of your disk organization, it offers simple file moves, copies and deletions. This utility also lets you easily swap between active programs. A broker might switch back and forth between QuickPlot for analyzing data and WordPerfect for writing trade recommendations. An investor might compare signals generated with a pair of programs by switching back and forth between the two.

An on-screen help prompt is another nice new feature of version 5.0. Users can simply type what they want to do, followed by */?* to view information on the topic. Common applications and correct syntax are given. This feature and an improved manual make 5.0 the friendliest DOS ever.

Certain DOS commands have been improved dramatically in version 5.0. DIRectories, for example, can now sort by name, extension or date - in ascending or descending order. All files with (*or without*) certain attributes may be included

(or excluded) from directory listings as desired.

What about compatibility? That may be the best part of all. Microsoft went to great lengths to make sure this version of DOS would not interfere with existing programs. This is true of application software as well as network environments.

DOS 5.0 is right at home with any of our Quick System software and with TSPE. The one minor problem we have found with compatibility lies in its super-efficient use of extended memory for DOS applications. While this frees up computing space for application programs, it can interfere with TraDesk's high-memory functions. Not to worry - DOS 5.0 includes a program called LOADFIX.EXE that will correct the problem. TraDesk users can include LOADFIX in their TD batch file for a permanent solution.

There is more, of course, including a nifty quick format command and features that let you restore files you have accidentally deleted. In short, MS DOS version 5.0 offers some innovative, well executed programs that make the software well worth the \$99 upgrade fee. We heartily recommend it. □



To find out more about DOS 5.0, see your local computer dealer or contact:

Microsoft Corp.
(800) 426-9400
or
(206) 882-8080

Holiday Schedule

CSI will be closed for voice communication on Wednesday, December 25th for the Christmas holiday and the following Wednesday, January 1st for the New Years holiday. World

markets have always been closed on these days and this holiday season will be no exception. As always, the CSI computer will be accessible 24 hours a day throughout the holidays. □

CSI Software Product Summary

	Unrestricted Use	Daily Data User
<input type="checkbox"/> QuickTrieve®/QuickManager®..... To retrieve, manage and edit data Includes Alert Calendar	\$ 99	\$ 39*
<input type="checkbox"/> QuickPlot®/QuickStudy®..... Charting and analysis software (requires QT/QM)	\$156	\$156
<input type="checkbox"/> Trading System Performance Evaluator™ Computes your system's capital requirements	\$199	
<input type="checkbox"/> TraDesk™ (Price varies with # of accounts) Starting @ Traders' complete accounting system 12-month lease starting @	\$446	\$299* \$22/MO
<input type="checkbox"/> Seasonal Index Value Pack Three years of history for 33 popular commodities	\$444	
<input type="checkbox"/> CSI News Journal August 1990 to present	\$35/Yr. \$5/Reprint	
<input type="checkbox"/> CSI Mailing List 1,000 NAMES	\$200	

*A Free non-expiring copy is provided upon request that is not tied to the daily service after 12 months use.
All prices subject to change without notice.

CHECK MASTERCARD VISA AMOUNT ENCLOSED \$ _____

CARD # _____ EXP. DATE _____

NAME _____ DAY PHONE (____) _____

ADDRESS _____

SIGNATURE _____ 5¼" DISK 3½" DISK

Ask Customer Service:

Last month this column discussed the important year-end file maintenance required for updating continuous contracts into 1992. This topic grows more timely as the new year approaches. We are repeating a series of common questions and answers about file extension to assure that the transition goes smoothly for everyone.

Q. *Lately when I distribute my daily updates from CSI, my data listing includes a message that some of my files may need extending. What is this all about?*

A. Since QuickTrieve always posts prices to pre-created data files, there must be a pre-defined ending date for each file. To save on disk space, the end of the current year is usually used. Everyone updating Perpetual Contract® data, cash prices or nearest futures series with ending dates of 1991 should see this message toward the end of the year. It is simply a reminder that something must be done by January to avoid lost data. This message will disappear when you have extended your files properly as explained next.

Q. *1992 is fast approaching and I'm concerned about my stock files. They all have ending dates of December 31, 1991. How can I continue to update my stocks next year?*

A. This question applies to all continuous data files including indexes, cash, nearest futures and Perpetual Contract data. QuickTrieve's Move/Split a Data File (*Move a contract file on version 3.1*) will help you extend your files.

The file extension process is much easier with QuickTrieve 4.01 or 4.02 than with previous versions. These later releases can autocreate all necessary files in a single run. They can also automatically create new data directories when the limit of 120 files is reached.

To begin, select <H> from the QuickManager Menu. A list of your files will be displayed. Press the letter designator of each continuous file ending in 1991. When finished, press <F3>*.

You will be asked if you want to create files for all items or just those not existing on your target path. Say All. You will be shown each selected file and will be asked if you want to change the beginning or ending date of each. Answer Yes. Change the ending year for each item to 92. You may substitute 93 or 94 as desired to avoid doing this next year, but be aware that this practice tends to waste disk space.

When finished, check your new files to see that the data was transferred properly. If the new files are O.K., you'll probably want to delete the original files using Delete data file from disk.

You can do this any time before

the end of December, as long as your new files are ready by January 2, 1992.

*The <F3> feature is included in version 4 series QuickTrieve only. Users of prior releases must move each file individually as directed through screen prompts.

Q. *What will happen if I don't extend my continuous files by the first business day in January?*

A. This will not be a major problem for users of QuickTrieve 4.01 or 4.02 who request autocreation of new files with each update. QuickTrieve will simply create a new file for each continuous series, using the ending date you specify. The new files will hold only 1992 data, however, so they won't be very useful for charting. We would still recommend combining your 1992 data into a larger file with past data using the procedure described above.

Users of QuickTrieve 4.0 or earlier versions will have a greater problem. Since new files aren't created automatically during daily distribution, 1992 data could be lost. Be sure to print a data listing on January 2 to make sure everything is posting correctly. A NOFL (*no file*) status indicates that a contract was not posted. If your data listing shows NOFL for any of your contracts, go through the file extension process described above to create a larger file. Then distribute your update again. □