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A Priori And Chance vs. Profitable Forcasting

Quite often authors, analysts and even talented engineers can mislead themselves by their own methods or data. Over the years, I've seen many, many trading ideas. Some are plausible and others are not. I can't begin to list all the unusual schemes that I've come across, but a couple deserve comment. Perhaps these schemes can help me to make an important point.

The Odd/Even Trading System

I'll start with a little story about Mr. X from Ft. Lauderdale. He came to my office several years ago and very confidentially explained his original method for trading gold and silver.

The method was simple — You take the closing price of gold at say 384.2 and you sum the digits: 3+8+4+2=17. If you get a two-or three-digit number as in this example, you sum the digits again as necessary until you work your way down to a single digit. In our example you would end up with 1+7=8. The system requires buying or holding long for even digits and selling or holding short for odd digits. Mr. X said all transactions are taken at the next day's opening price.

Now I had this man in my office and he was dead serious about his method. He was totally confident it would work. He even wanted me to offer his method to my customers so he could share in the proceeds from the sale of the advice. The real clincher was that he wanted me to disclose only the signals, not the method.

I sensed that it wouldn't be wise to laugh or even smile, but I had a great deal of trouble reacting seriously to his offer. After some further questioning and polite conversation, I tried to explain tactfully that this wouldn't be something my customers would want. He was very insistent, however, and was quite upset about my decision not to sell his signals. He was especially distressed that I now understood his method and he wouldn't be paid for disclosing the secret.

After that experience and knowing what curiosity does to cats, I vowed I would never again listen to a scheme to get rich quickly!

You may believe (*as I do*) that Mr. X had an absurd idea. If you try it out, you will find that it works about half the time. After all, the market either goes up or it goes down. Mr. X's crazy summing rule makes about as much sense as many of the less-conspicuous methods on the market today.

You should be as suspicious of some seemingly credible trading systems as you would be of Mr. X's method. Industry leaders may be more dangerous than Mr. X because traders are more likely to believe them. There is also little doubt that they believe in what they are selling. The problem is that they may not have the statistical training to realize that their great discovery cannot turn a profit.

Turning Point Trading Systems

Some of the more prominent trading schemes are the so-called turning point prediction tools. I have seen many varieties. Most say they can predict a future market turning point within so many days a certain percentage of the time. The idea

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that they have discovered some mysterious market phenomena is what bothers me about these products.

Before concluding that any turning point prediction is an outstanding fete, compute the a priori (*what could occur by chance*) result first. Most common claims resemble the following: "I can pick a future turning point for an intermediate series on any commodity within two days 50% of the time." When you are presented with this type of statistic, ask these questions before making your value assessment.

1. What is a turning point?
2. How many turning points are there in a year?
3. Are the turning points uniformly distributed?

If a turning point is simply a local peak or trough, and there are 25 turning points per year, and the peaks and troughs are evenly distributed, **WATCH OUT!** Your probability of selecting a turning point on any future date within two days would be 50% BY CHANCE!

I'll clarify: If there are 25 turning points per year and they occur uniformly, you will experience one turning point about every 10 days. (*There are about 251 trading days in one year.*) If you are allowing a two-day error on either side of your prediction, then you are looking at a five-day sample. Therefore, on a random basis, any 5-trading-day period (*today plus or minus two days*) will capture a turning point in any 10-day period 50% of the time.

Given the same conditions, except that your random sample focuses on today plus or minus 3 days (*instead of 2*), the a priori outcome should occur around 70% of the time.

Compare these ideas with your turning-point vendor. Then tell me why you are paying for results that won't occur any more often than by chance.

I am not indicting any particular service or vendor by making these points. Many vendors arrive at their track records through what they consider to be perfectly legitim means. There is usually no intent to defraud. These vendors may be convinced that they can accomplish certain statistical or mathematical feats. Unfortunately, their results often prove worthless to their customers.

Whatever the motive of the software vendor, I offer this suggestion to our readers: Don't pay for something that a dart and a calendar or the flip of a coin will provide for free.□

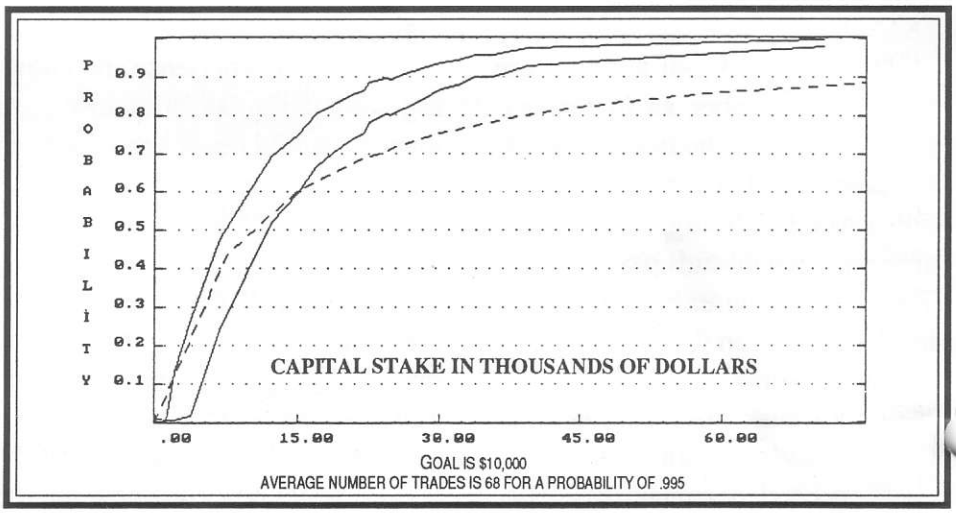
Trading System Performance Evaluator Update

TSPE has been in the hands of at least 70 users for well over a month. I hope I am not speaking prematurely, but we haven't received any notices of product defects. Our Customer Service staff has received several complimentary remarks from customers. Users have raved about the layout, organization and informational value of this product. It is gratifying to receive these comments after all our hard work.

The current version of TSPE provides a realistic assessment of necessary capital to achieve a pre-specified probability of success as shown in the example below. TSPE accepts input from actual trading records or from simulated track records. The distribution of profits and losses, sample size and the parameter count of your trading method are used in evaluating capital requirements. □

Best Wishes for Prosperous Trading,

Bob Pelletier



Using QP/QS to Study the Anatomy of a Trade Decision

Often times as we are trading portfolios of highly active commodities, we let some of the slower but potentially more profitable movers slip by. One such situation is the "old standard" evenly balanced T-Bill/Eurodollar (*TED*) spread. As you know, Treasury Bills or T-Bills are debt securities issued by the U.S. government in minimum $100,000 denominations maturing in 3 or 6 months (90 or 120 days). T-Bills are auctioned every Monday to large financial institutions, banks and individuals. The unique thing about these T-Bills is that they are probably the safest place in the world to invest your money. Since they represent a minimum of risk, the competitive rates bid are reasonably low. T-Bills are very liquid, with futures contract open interest in excess of 50,000 contracts. They are prized as investments particularly during times of world problems.

The Eurodollar, which forms the other part of the TED spread, is simply a U.S. dollar on deposit in a financial institution outside the U.S. These U.S. dollars are loaned to companies and individuals doing business with the U.S. who need dollars or who buy goods denominated in U.S. dollars. These Eurodollars do not offer the same low level of risk as the T-Bills. They are even more liquid, however, with daily open interest for futures contracts at approximately 850,000 contracts. There is no regulation by any U.S. government agency of the Eurodollar, therefore, they are not guaranteed or insured in any way. They consequently comprise a higher risk security than the T-Bill, which is what makes them an attractive spread vehicle. The T-Bill holds a low risk and the Eurodollar offers a higher risk depending much on world conditions. During quiescent periods, interest on the Eurodollar will approach that of the T-Bill, with history indicating the difference could narrow to between .60 to .70 or below. As crises occur in the world political and financial arena, money flows to safety. As a result, investors return to T-Bills and/or require an increase in the interest premiums to stay in Eurodollars. Consequently, the spread widens. In figure 1, this is illustrated with QuickPlot/QuickStudy. On August 1, 1990 the TED spread was .79 and the Middle East crisis began. By November 5, 1990 it was up to 1.54. After the spread retreated in December, but as the invasion began in mid January, the spread peaked at around 1.59. This was an indication that investor fear was at its greatest point. The short "Desert Storm" caused the spread to quickly fall back to the .70 level, where it could repeat as a reasonably safe trade.

If you had entered this spread on August 1, 1990 and exited on January 16, 1991 the spread would have increased by 80 Points or $2,000.00.

Since we know picking tops and bottoms is seldom possible, the profit potential is somewhat less. However, considering the margin requirements and amount of risk involved, this could be an attractive trade.

The four QuickPlot charts illustrate the dynamics of this market opportunity. Shown in the top window are our No.46 T-Bills above the No.46 Eurodollars. The second window shows the difference suggesting a buying opportunity on the TED spread. Before entering this spread look further into the No. 46 S&P 500 Index Contract which is inversely correlated at a very high level with the TED spread itself.

We established in last months News Journal that inverted crude oil prices suggested the S&P should eventually fall in value. To enter into the TED spread we need to confirm on a historical basis, that the TED spread is

oversold with respect to its correlated counterpart. QuickPlot/QuickStudy gives the user the opportunity to take a ratio of a weighted pair. Since the inverted S&P chart had to be shown on a 1:1 basis with the TED spread, it was necessary to normalize the window No.2 Data. Finally a ratio study of windows 2 and 3 is shown in window No.4. The low readings of the ratio study confirm the relative attractiveness of the spread. This process was involved, but demonstrates the flexibility of QP/QS to support decision making. We are certain you won't find this capability elsewhere.

To gain a historical perspective that will supplement the graphic information shown, the investor should examine the full 8-year history of the spread and other pertinent market factors before taking a position. □

Simplifying Our Access Schedule

In the interest of simplifying our price schedule, we have made a 10-minute change in the regular data retrieval access time. This change will require a few users to call 10 minutes later each day. Another change will save some money for those users who normally call during our earliest calling category.

Effective immediately, the beginning time for normal daily updates is 6:01 p.m. An Early Access Surcharge applies when calls are regularly made before that time. Users who have been calling between 5:50 and 6:00 p.m. should wait until 6:01 p.m. to avoid slipping into the lowest-priced Early Access category. This surcharged category now includes the interval 5:30 to 6:00 p.m. and remains as Category C.

We have also eliminated one category of early access surcharges. Categories A and B have been combined. They apply to all calls made before 5:30 p.m. The prices for calling during this time period will be those that formerly applied to category B only. This will result in a savings for some of our earliest callers.

Since so few of our subscribers use toll-free U.S. Rural access (*as opposed to toll-free Tymnet or Telenet*), we have removed this column from our price schedule. Those users currently dialing through the 800-number service may continue to do so.

Anyone wishing to receive a new price schedule showing these changes should request one via the Customer/Order subsystem or by calling our office.

CSI Software Product Summary

	Unrestricted Use	Daily Data User
❑ **QuickTrieve®/QuickManager®** ..... To retrieve, manage and edit data	$ 99	$ 39*
❑ **QuickPlot®/QuickStudy®**..... Charting and analysis software (requires QT)	$233	$156*
❑ **Trading System Performance Evaluator™**..... Computes your system's capital requirements	$199	
❑ **TraDe$k™** (Price varies with # of accounts) Starting @ Traders' complete accounting system	$446	$299*
12-month lease starting @		$22/MO
TraDesk Introductory Offer good thru August 15, 1991		
❑ **Seasonal Index Value Pack** ..... Three years of history for 33 popular commodities	$444	
❑ **CSI News Journal** ..... August 1990 to present	$35/Yr.	$5/Reprint

*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:

We have shipped all outstanding copies of the Trading System Performance Evaluator, and few recipients have called with questions. We normally receive a rash of calls when a new product is released. We hope this non-response means that everything is understood and working well. For those of you who may have been timid about calling Customer Service, we'll present the few questions we have received below.

Q. ***I entered a small file of profits and losses, which I included in a control file and loaded. When I tried to do either type of analysis, the Percent Completed scale immediately jumped to 100 and the graphs would not display. Is there a way for me to find the problem?***

A. To diagnose any problem of this type, start by pressing <F2>. This will display the ENVIRONMENT for the evaluation. This screen lets you see which P&L files are included in the control file and the general information on each. First check to see that at least one P&L file shows a non-zero Percent-in-Market value. Then make sure that a valid response was entered for each of the general information entries, an omission here could result in this problem. Be sure that the type of data used, number of parameters, margin, slippage, commission, goal and capital stake are all correct.

Three additional fields on the ENVIRONMENT screen are calculated by TSPE. These are P&L Sum with Commission & Slippage, Merit Level Goal and Merit Level Capital Stake. The values shown here are based on TSPE's random trading algorithm. If any of these values is 0 or a negative number, you have a negative expectation of success and TSPE cannot make an evaluation.

Q. ***The P&L string I entered adds up to a small profit, yet TSPE shows a negative value for the Merit Level Goal. How can TSPE indicate a loss when the actual data produced a profit?***

A. A discrepancy of this type is related to the degradation of profit by TSPE. All raw input is degraded by the program, which always reduces profits and increases losses. Degradation is amplified even further when sample size is small or the parameter count is large. Degradation is a necessary first step to compensate for potentially biased input that would produce an unreliable outcome.

The user who asked us this question had entered only 25 trades in his P&L file. This small sample size coupled with marginal results were enough to produce a small loss in TSPE's simulation. Entering more data producing a larger sample with less degradation corrected the problem.

Q. ***What about a profitable P&L listing of 50 samples that still shows a negative expectation? Are there any other ways to increase the expected outcome of my P&L file?***

A. Yes. In addition to degradation for sample size, TSPE results are degraded more if simulated trades are analyzed, and even more if simulated results were based on continuous data. Each parameter in a simulated trading system triggers further degradation of profits. The more conservative the type of run, the more TSPE reduces profits and increases losses.

A review of the <F2> ENVIRONMENT screen will tell you if other entries in General Information of your P&L file are degrading profits more than necessary. For example, if the Type of Run is listed as Conservative, consider Moderate or Generous. If your file holds actual trading results, there is no reason not to select ACTUAL for type of run. If you are analyzing actual data, make sure the screen shows that continuous data was not used and 1 for the number of parameters.

If you are analyzing simulated data and TSPE is unable to come up with a positive expectation, perhaps you should reconsider the trading technique. If the system you are attempting to analyze exercises too much artificial control over results, additional degradation must be imposed to obtain a realistic assessment. □