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CUSTOM QUICKPLOT® STUDIES BY BOB PELLETIER

My introduction to the commodity markets was during my MBA studies at Syracuse University. At the same time, I was a practicing mathematician modeling the performance of complex electronic systems being developed by GE's aerospace business. As I became more familiar with the commodity markets, I believed because of the knowledge gained from my work at GE, I could successfully develop models of the changing market activity that would enable me to be a successful trader.

As I pursued this challenge, I soon realized I first had to develop an accurate and extensive data base. This effort has taken me years to accomplish to my satisfaction. This is what led to the building of CSI as a data and software vendor.

Along the way, we did a significant amount of trading with the standard public domain studies and indicators achieving a reasonable degree of success. However, I felt better indicators would provide an edge in setting stops, in knowing when a trend is continuing and in the early identification of a trend change. Consequently, necessity being the Mother of Invention, CSI-STOP™, CSI-TREND™ and Probable Direction Index™ (PDI) were developed. These three indicators can provide a definite advantage after you've developed the art and confidence needed to use them.

In this month's News Journal I will explain the Probable Direction Index plus I will include an example screen output of the new Systems

WHAT'S NEWS

Performance Evaluator™ (SPE). CSI-STOP, CSI-TREND, Intermarket Relative Movement™ and details of the Systems Performance Evaluator will be discussed in subsequent articles.

PDI is the heart of a three-element trading system which includes CSI-Stop and CSI-Trend. PDI is the study that is used to determine the direction of the market as well as possible entry and exit points. Differing from most technical indicators, PDI is best described as a complex statistical analysis using price, volume and open interest. It averages the probabilities of these parameters similar to the way that moving average studies use prices to evaluate market movement. The major advantage of PDI is that it is much more reactive to subtle changes in market direction than the moving average or stochastic analysis. This is because of the transformation of a change in the price into a probability which in turn amplifies the effects of any change. To give you an example: assume that commodity X's price has been hovering at around $1.00 per unit and it suddenly jumped to $1.02. A price change of only 2% would be registered, which is a very small effect. A similarly small effect would show up on the short term moving averages and one would not necessarily be moved to take action.

The probability reading is reflected in a number that lies in the interval 0 to 1. If a given event is likely, then readings close to 1 are used. Unlikely readings are supported with measures close to zero. PDI assigns higher readings for situations that appear bullish and lower readings near zero for bearish conditions. In our example, the status quo for commodity X at $1.00 would be computed in the midpoint or 0.5 area of probability. A sudden jump for commodity X to $1.02 could push the probability reading to near 1.0, a 100% increase in probability from the norm. This minor transformation made with respect to the cumulative normal probability distribution, tends to amplify price changes from the norm, which is how the probability averaging process translates into a more sensitive indication.

Similar probability values are assigned to volume and open interest, however, the effects of open interest growth on volume are removed before assigning it a probability value. This action is taken to eliminate the possibility of using two highly correlated values acting as independent variables. (See my comments in the September issue of the News Journal about using non-correlated independent variables.) The price probability, volume probability and Open Interest probability are combined to produce an Index Value ranging from 0.0 to 1.0 for the current day. As the day-by-day data is entered into the system, it learns or becomes adaptive by keeping score of which parameter combination; that is, price with volume or price with open interest, combine to be the more reliable predictor of future market direction. This algorithm then gradually causes an increase or decrease in the weighing factor applied to each of these independent variables based on their ongoing predictability performance. Consequently, the more history used with PDI the more adaptive it becomes.

There are two ways that PDI can be used to establish a trading position. The first, which I would recommend is a simple method of using PDI for what it was designed to do, that is, to predict the PROBABLE DIRECTION OF THE MARKET. The principle is simple: when the index values are higher than normal, prices will tend to increase. When the index values are lower than normal, prices tend to fall. Normal in this case is the range at which the PDI values appear to be most congested and not necessarily the 50% line on the chart. One way to utilize this phenomenon is when prices continue to rise or fall and the indicator starts to diverge, then expect a change in market directions. This provides an alert to tighten up your stops to protect your profits. Experience shows that PDI almost always produces a buy or sell indication three to five days before a stochastic or moving average approach does using solely price as a parameter.

Figure 1 is an example of a QUICKPLOT time series chart of Dec 90 cotton with the PDI study results in the window directly below. The fluctuating line of the PDI is determined by the price, volume and open interest relationships. The horizontal lines represent "significance thresholds" which are guidelines that can be set at varying levels to assist in the timing of trades.
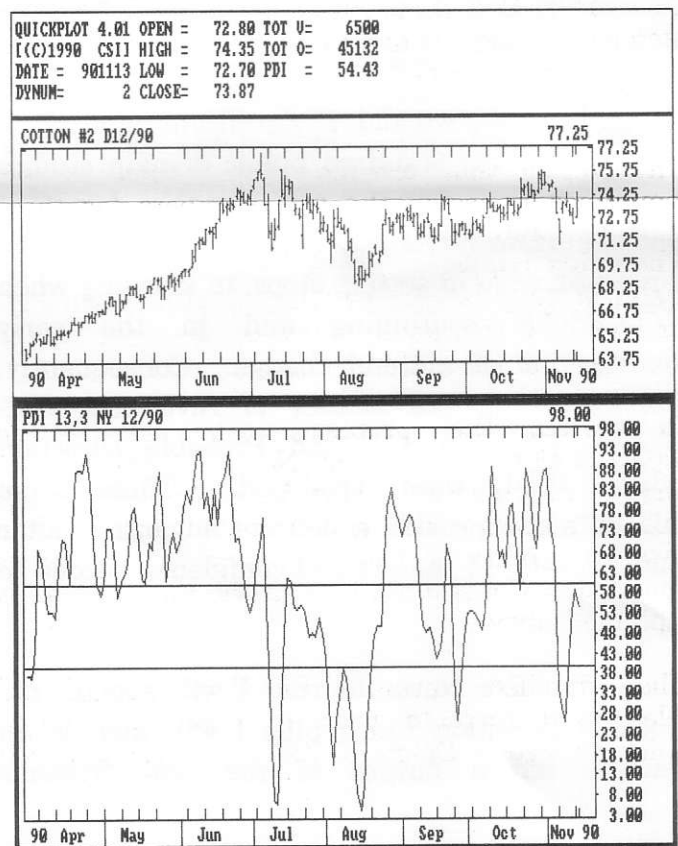
A second way to use PDI, but with more risk, is to use it as an over bought/over sold indicator. This is particularly useful in a market with no particular direction. By placing the significance thresholds near the tops and bottoms of the recent market action you can catch the extreme peaks and troughs. A subsequent penetration of either threshold followed by an abrupt change in index direction is often an early tip-off that the market will turn around and reverse directions. Successful use of PDI requires that you fit the constants to the situation or commodity you are trading and develop an understanding of its characteristics and recognize its indications.

SYSTEM PERFORMANCE EVALUATOR

Last month we introduced the concept of system(s) or product evaluation. We advocated a try-before-you-buy approach as applied to real time or day-to-day commodity trading systems, trading advisor performance, pool operator marketing practices or your own private approach to trading in the markets. (Even if it is seat-of-the-pants!)

A performance evaluator is not to be confused with an actual or simulated net result or expected value that may have been the figure of merit output from your favorite trading system. A simulated approach that produces a positive expected value is only an early step in the evaluation process that may assist you in arriving at a systematic procedure for trading in the markets. A positive expected value has little to do with the likelihood of obtaining consistently profitable results.

CSI's System Performace Evaluator (SPE) was developed to allow you to take the next step in determining the capability of your trading approach. The SPE requires your profit and loss string for its analysis as well as your proposed capital stake, your profit goal, per trade margin cost, average slippage per trade and average commission cost. Using Monte Carlo simulation, random sampling with replacement from the P&L

string takes place. With the output of this process, a curve is generated such as the one below in Figure 2, which will show the probability of reaching your given goal as a function of your capital stake. Also shown, as the dashed line, is the breakeven point which must be exceeded to produce a profitable result. This is how SPE alerts the trader more precisely as to how much capital is necessary to trade the approach being evaluated. No one should trade a system, no matter what the merit, without knowing the ultimate capital needs.

REQUIRED CAPITAL IN THOUSANDS
GOAL = 10,000
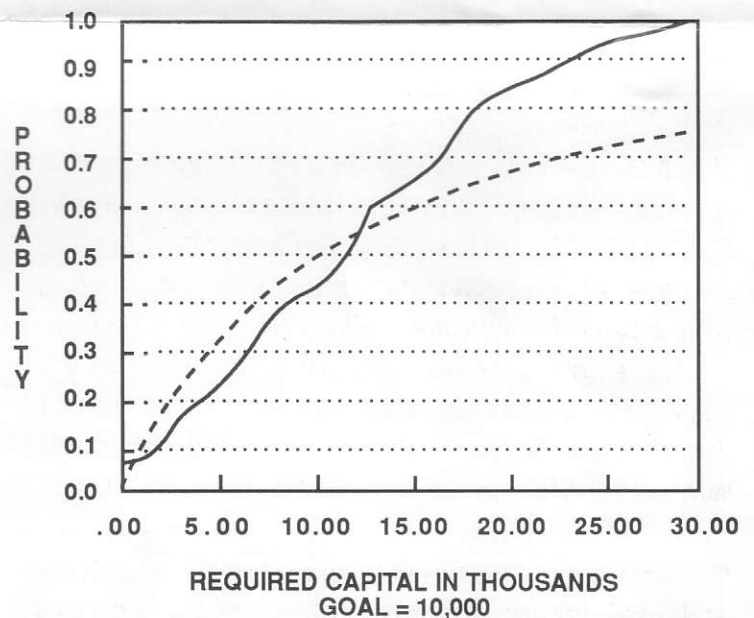
The SPE fulfills a promise to help our customers preserve their capital by avoiding unnecessary risks. Even if you are a casual or undisciplined trader you need to know the ultimate capital needed to remain an active trader.

Best wishes for prosperous trading,

Bob Pelletier

PRE-RELEASE DISCOUNT STILL AVAILABLE FOR QUICKPLOT & SYSTEMS PERFORMANCE EVALUATOR

We have completed work on version 4.01 QuickPlot/QuickStudy and version 1 of System Performance Evaluator. Both systems will be

ready for release before the end of December.

We gave a full rundown on their capabilities in the November News Journal, but we'll list a brief synopsis here as well of the Quickplot/QuickStudy.

Multiple windows, ZOOM IN, ZOOM OUT, ZOOM WINDOW TO FULL SCREEN, plot up to 500 intervals at once, design your own custom charts, save charts to files for printing later, select from over 190 printers - including several laser models, select from VGA, EGA, MCGA, CGA and Hercules Monochrome graphics.

QuickPlot/QuickStudy's technical indicators include: *Average of two or more fields, Call/Put Ratio, Commodity Channel Index, CSI STOP, CSI TREND, Detrend, Directional Movement Index, Herrick Payoff Index, Intermarket Relative Movement, Momentum, Money Flow Index, Moving Average, Moving Average Convergence/Divergence, Non-seasonal Volume, On Balance Volume, Probable Direction Index, Relative Strength Index, Single-Field Detrend, Spread/Ratio, Stochastics, Trend lines, Wilder's Volatility System, Williams %R, and Williams Accumulation/Distribution.*

We are offering a 10% discount for orders received and paid for by December 16, 1990 for both the QuickPlot/QuickStudy and the Systems Performance Evaluator. This software will be shipped on a first come, first served basis.

See last month's News Journal or call Customer Service for complete pricing information. An order card is enclosed. Credit card orders are accepted by phone, fax and subsystem.

NOTICE TO BRITISH CALLERS

QuickTrieve users in London no longer have to call through the Computer Science Corp. for toll-free access via Compunet. The Compunet network now supports direct access with the same passwords used by U.S. callers. To change to direct Compunet access, delete the file name CSC.LOG from your Change User Constants screen and replace it with COMPUNET.LOG. The Compunet phone number for London is (71) 490-8881.

This change was effective as of November 12, but we were not notified by Compunet until after the fact. Tymnet is an alternate toll-free network available from London. This network uses the TYMUSA dialog file which is included in QuickTrieve versions 4.0 and 4.01.

BE PREPARED FOR THE NEW YEAR

We'd like to remind you again that users of continuous data must prepare their files to update through the coming year. Continuous data files include stocks, indexes, cash series, nearest futures, Perpetual Contract and Perpetual Index data. If you use any of these and your files end with December, 1990, see the "Ask Customer Service" column in our November News Journal for easy instructions to extend them into 1991.

HOLIDAY CLOSURES

CSI will be closed for voice contact Tuesday, December 25 for the Christmas holiday and Tuesday, January 1 for New Years. We wish you and yours a happy holiday season.

ASK CUSTOMER SERVICE

Each month in this column, the Customer Service Staff addresses a specific aspect of the CSI service that needs clarification. This month Karen, Ron, Rudy, Susan and Tami will answer some common questions about QuickTrieve's Editor Subsystem. These questions involve editing your software to accommodate new commodities.

Q. From time to time the News Journal lists additions to the commodity data base. These include the commodity name, number, symbol, conversion factor and other technical information. What should I do with this?

A. QuickTrieve uses a file of Commodity Constants (COMCONS) to expedite file creation. This allows QuickTrieve to automatically create data files. When new commodities are added to the data base, you should update your Commodity Constants for future file creation.

This month's News Journal includes the addition

of two commodities. You can add them to your Commodity Constants file with the instructions below.

1. From the QuickManager menu, select <E> Enter Editor Subsystem.

2. Select <C> Edit Commodity Constants File.

3. Enter the CSI number for the new commodity. When you enter commodity #81, you will find information on a defunct 4-Year Treasury Note contract. Replace the entries in the file with those found in the News Journal for the new MATIF ECU Bond. Press <Esc> when finished. Repeat the process for commodity #257, High-Protein Soybean Meal from the Baltic Freight Exchange. You'll find the old commodity #257 was also Soybean Meal, but the file still needs editing. The exact name, symbol and conversion factor should be changed.

We recommend that you add new commodities to your Commodity Constants as they are announced to avoid problems in the future. See question #2 for an example of the problems that can occur.

Q. I recently started updating the CME's new Nikkei 225 Futures contract. QuickTrieve gave the file the wrong name. It says I'm updating Sunflower Seeds! The prices are all wrong too. Can you explain this?

A. As explained above, QuickTrieve uses a Commodity Constants file to store information on each commodity. It must have correct information to create files properly.

COMCONS may include information on commodities that are no longer traded. We sometimes re-assign the CSI numbers for these inactive commodities to new commodity contracts. When this happens, files for the new commodity are incorrectly labeled by QuickTrieve. Price data for the new commodity may be distorted if the two markets use different conversion factors.

To correct the problem, call the service department or refer to our News Journals to get current information. This includes the symbol, unit of measure, conversion factor, etc. for the new commodity. You should then edit your Commodity Constants file with the information as explained above.

When finished editing COMCONS, you should delete and recreate your incorrect file. Use QuickManager's Delete Data File feature if you

have easy access to replacement data.

Then repeat the data distribution process again, manually creating files if necessary. All new files for this commodity will be created properly based on the corrections you entered.

You can use an alternate method to correct an incorrectly labeled file. This involves using the Edit Data Disk Master File feature from the Editor Subsystem menu. See the manual for details. Keep in mind that this feature will correct your current file only. It will not prevent incorrect file creations for this commodity in the future.

THE SPREAD CORNER

Technical analysis efforts are most often directed toward single markets without reference to each markets collection of economically substitutable pairs. We believe that an understanding of the fundamental reasoning behind each commodity's substitutable pairing can lead to more profitable trading with less risk.

We plan to offer some insights into this hypothesis beginning with next months News Journal. We will be suggesting some factual characteristics of commodity pairs that may give you more confidence that your trading practices will be successful.

Intermarket analysis is, in our view, where market analysis becomes most interesting. Spread trading may, on the surface, appear to be rather slow. We contend it isn't slow at all, because, it adds another set of variables to the equation. It is safer and less prone to high risk situations plus it allows you to better view the odds of price movement in order that you can turn them in your favor.

Consider Crude Oil futures and their impact on alternate products such as Natural Gas and other sources of energy. Also, consider their impact on metals such as aluminum and copper (95% of the cost of aluminum is the energy required in the electrolysis process.) Higher crude prices have an impact on housing starts and consequently effect Lumber and Copper prices.

Knowing the relationships of all the major commodities with each other is a significant first step to understanding what to expect from any given products movement in price.

QUICKPLOT/QUICKSTUDY offers a new study known as Intermarket Relative Movement™