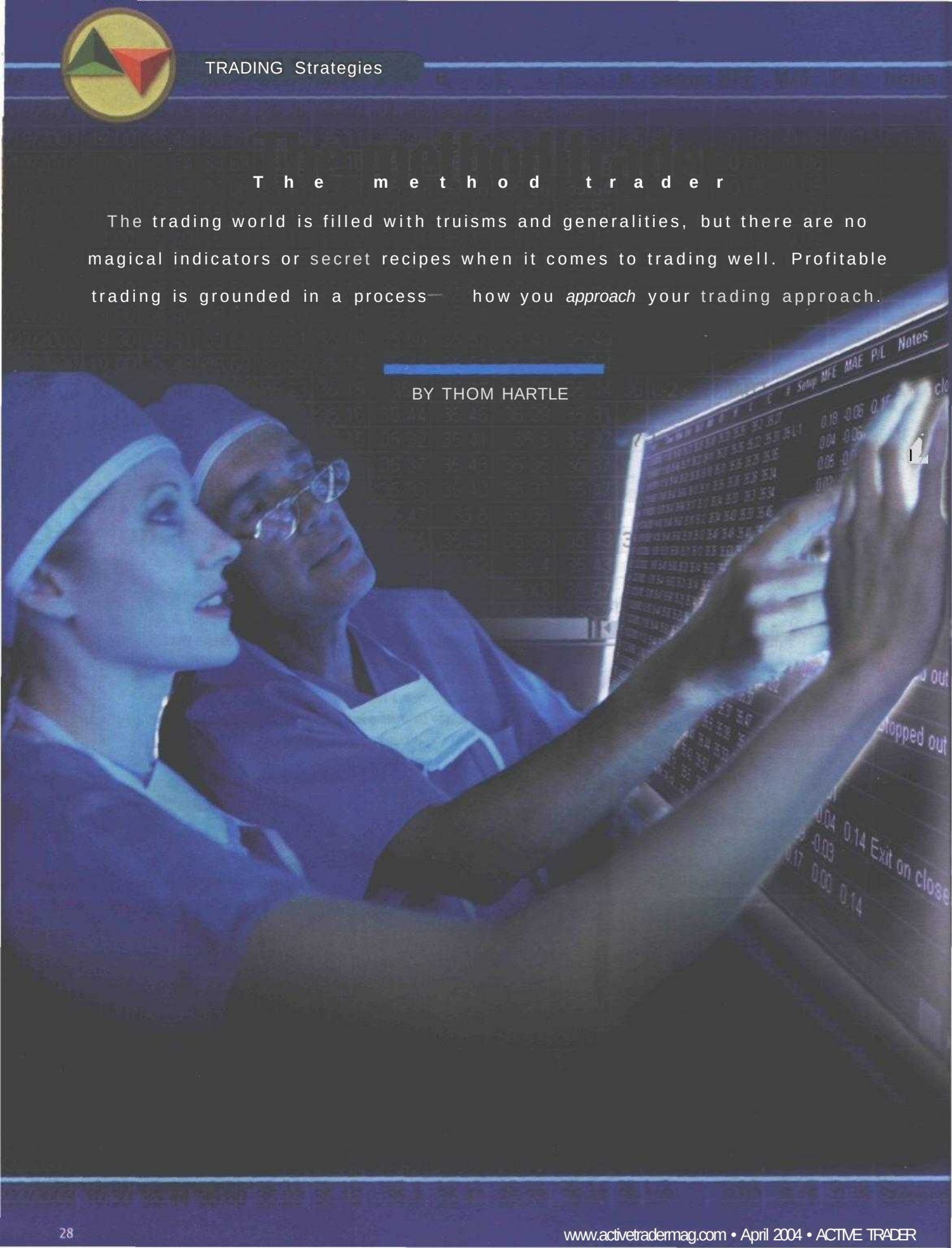
# The method trader

The trading world is filled with truisms and generalities, but there are no magical indicators or secret recipes when it comes to trading well. Profitable trading is grounded in a process— how you *approach* your trading approach.

BY THOM HARTLE



*Knowledge is experience,*

***and the essence of experience it* self-reliance.**

— T.H. White, *The Once and Future King*

When in comes to consistently profitable trading, there are many roads leading to the promised land, but as the saying goes, "Many are called, but few are chosen."

New and struggling traders are always looking for *something*—an elusive insight or technique—that will put everything into focus and allow them to excel. Like virtually any other profession, though, the answer is not some bit of mysterious knowledge or a perfect trading tool. Proficiency boils down to three steps: Specialization, preparation and execution.

This should not come as a surprise. For example, when we need medical attention for an out of the ordinary problem, we seek a physician who specializes in the field of medicine specific to our affliction. The physician will prescribe a set of procedures, be they medicinal, surgical or otherwise, that have shown a high probability of success in curing the disease or treating the symptoms we have presented to them.

We rightfully expect when a physician prescribes a course of treatment he or she has the proper knowledge, training and skills to do so; and that the treatment is not unproven or experimental, unless we agree to it. Unfortunately, we do not set the same high standards for ourselves when we attempt to make money in the markets.

Think about what so many traders and investors do—place a trade based on the latest news event, after reading a newspaper article, or seeing something on television. Compare this to a visit to your doctor's office. What would you think if your doctor, if asked for details about the medication he was prescribing, could not provide any information regarding its efficacy because it was something new he'd just seen on TV the night before?

Part of the problem is trading does not have the relatively uniform education, training and regulation that are the norm in most other professions. But that is not the primary issue. The reality is traders, because they are in an essentially individual and entrepreneurial business, have to take responsibility for everything they do. And the most critical responsibility is knowing the probabilities associated with every trade they make.

Many people believe the key to making money is finding the perfect indicator or pattern. This is not the case. The key is knowing the probabilities of what the market will do in the aftermath of any price pattern or indicator, and having set procedures to make the most of that knowledge.

To do that, you have to work through a great deal of material to find techniques that fit your needs. It's the trading equivalent of putting yourself through medical school and settling on your specialty.

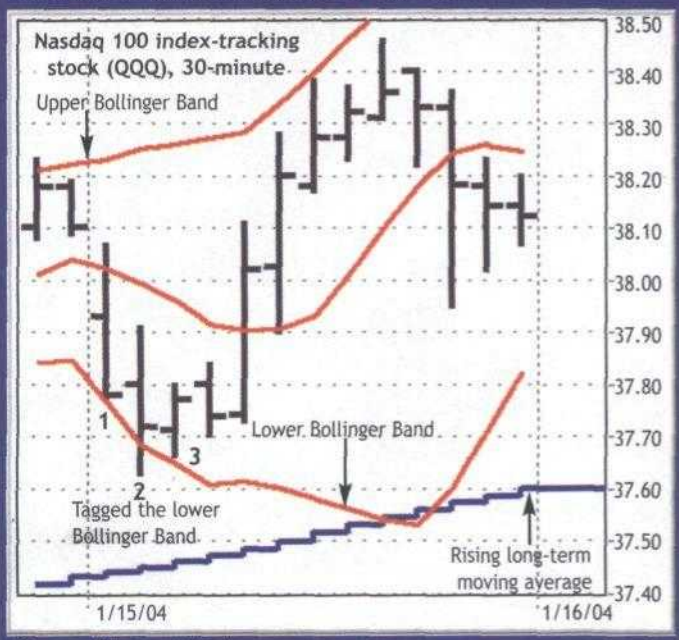
## Determining your expertise

It takes a considerable amount of research before you can make an informed decision about your area of specialization. It is only after having acquired a broad background

*continued on p. 30*

**FIGURE 1** TESTABLE TRADE SETUP

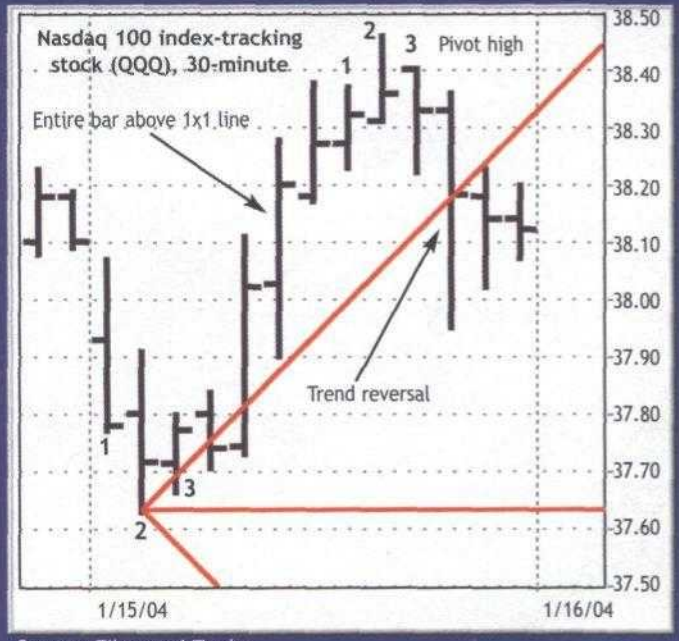
*The trade setup shown here – whether or not it turns out to have merit – has an advantage over many trading ideas because it has specific, quantifiable attributes that can be tested. (The pivot low is labeled "1, 2, 3.")*




Source: Fibonacci Trader

**FIGURE 2** GANN LINE NO.1

*When considering a trading technique, you should always ask yourself if it can be converted into precise, testable rules. This Gann-based technique would not pass the test.*




Source: Fibonacci Trader

that you can narrow your focus and select techniques that fit your risk-reward temperament. This balance is an important issue to consider as you work your way through various trading approaches.

Your tolerance for risk and goals for reward will impact the markets you trade and the time frame on which you trade them. There is no "correct" time frame to trade; the goal is to find the one you are most comfortable with.

Consider the differences between day traders and position traders. Day traders most likely cannot cope with overnight risk and want to be flat at the end of every trading session, starting each day fresh. They do not like to see big profits turn into small profits - or worse, losses - because of overnight events.

Position traders are more likely to consider intraday price action as meaningless noise - the product of the random nature of the market. They are more at ease holding positions and attempting to capture longer-term trends and less comfortable taking multiple positions during a trading day.

Regardless of the time frame, as you study various trading concepts, market tendencies and patterns, you will begin to identify some that appear to have consistently favorable outcomes. In other words, you will recognize certain aspects of market behavior and think, "I've seen this happen before, and the market always seems to rally." Now you're onto something.

For example, you might be studying a technique that combines indicators and price patterns. Perhaps, you've determined if the market is in an uptrend (based on a set moving average value) and price tags the lower 10-day Bollinger Band and forms a pivot low (a three-bar support pattern), there is a tendency for the market to rally (see Figure 1, top). Your goal is to determine the precise probabilities of this tendency and determine whether it merits trading.

There is a subtle but important point to absorb here. This pattern has specific attributes that can be defined and tested (in the preparation phase). This is not always the case with "setups" traders use. There is no lack of vague and ambiguous trading concepts and rules: "Look for a breakout of a tight consolidation," "Buy when a very large bar forms and prices closes near the low," and so on. But without precise definitions of what constitutes a "tight consolidation," a "very large bar" and "near the low," there is no way to identify past examples of these patterns and determine the odds of what will happen after them. And without that information, how can you trade?

In Figure 2 (left) for example, an upward 1x1 "Gann line" (which is a 45-degree trendline that is supposed to represent price moving in equilibrium with time) is drawn off a pivot low (a three-bar support pattern consisting of a low with a higher low on either side). A trader might have a rule that if an entire bar's range is above the upward 1x1 Gann line (signaling a rapidly rising trend), it indicates the trend may be vulnerable to a reversal. Then, if a pivot high (the opposite of a pivot low) forms, go short if the market breaks the rising 1x1 line.

However, a 1x1 Gann line reflects a price-to-time ratio -

**The key to making money is knowing the probabilities of what the market will do in the aftermath of any signal generated by a price pattern or indicator.**

e.g., one point or price movement per one time unit - and this ratio can change simply on the basis of how a chart is constructed. Figure 3 (right) is the same price chart, but drawn on a different scale. There are subtle but critical differences between this chart and Figure 2 - most significantly, the break of the 1x1 line occurs at different points on the two charts because of their different price scales.

As a result, depending on how your software plots charts, different signals would occur using the same trading "rules." (The solution in this case would be an additional rule that requires the price-to-time ratio to always be a fixed number. This way, every chart will always create the same signals.) So, while working through a technique, you must always ask yourself if it is something that can be converted to precise, testable rules.

An example of a testable one-bar pattern is: Today's high is the highest high of the past 10 bars and is at least 1.5 percent above yesterday's high, today's low is below yesterday's low, and today's close is in the lowest 10 percent of the bar.

The ability to convert market patterns into precise definitions, which in turn can be translated into trade setups and procedures, enables you to test their outcomes and determine their value. This determination is the goal of the preparation phase.

### Preparation: Beyond "system testing"

Testing trade setups is hardly a new idea, and there are numerous software programs that expedite the process of designing and implementing trading systems. Sometimes, however, a great deal of computer power can be a bad thing.

We can miss opportunities if we rely on standard system-testing programs to do all our analysis. Many new traders essentially take a trading idea and "ask" the computer to check it out. If the summary test statistics - net profit, maximum drawdown, etc. - indicate poor performance, a trader will likely toss out the idea.

However, if the testing had been a little more hands on - for example, incorporating direct observation of the outcome of trades on charts and extending the performance analysis beyond the confines of a typical analysis program - then, after a little tweaking, a successful trading approach might emerge after all.

All it takes to perform valuable analysis is a spreadsheet such as Excel. First, print out a series of charts with the signals that are the basis for your potential trades. Next, import the same data into Excel, or at least the date, time (if intraday), open, high, low and close. Then you can set up columns to log various trade setups, such as "Setup 1-buy," "Setup 2-buy," "Exit 1," "Exit 2," etc.

Most importantly, you can create a column for the maximum favorable excursion (MFE) and maximum adverse excursion (MAE) for each trade. The MFE is the difference between the setup's entry price and the position's largest open profit; the MAE is the difference between the entry price and the position's largest open loss. With this information, you can determine the typical outcomes of your trade setups.

Figure 4 (p. 32) shows an Excel spreadsheet containing the information for a sample trading approach. The first two columns contain the date and time, the next four contain the setup's indicator values, and the next four show the open, high, low and close prices.

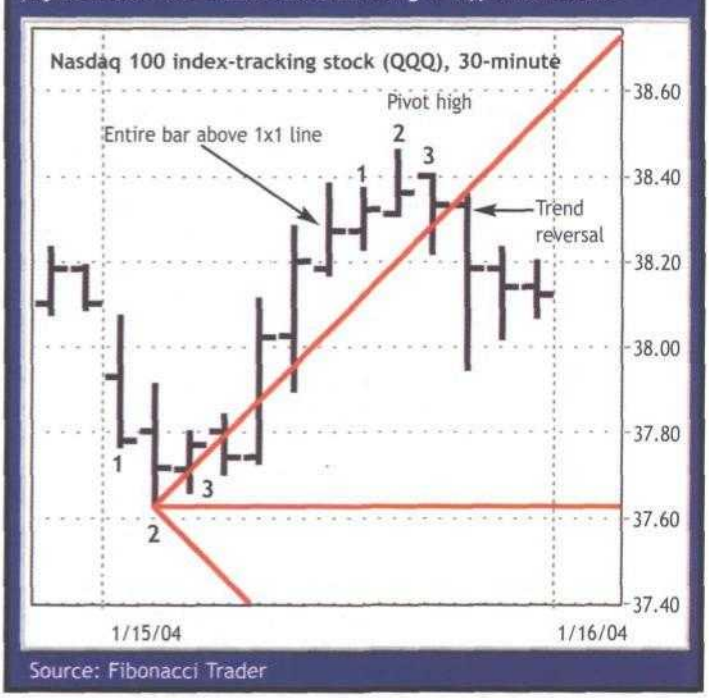
The next column is used to enter the trade number (in the row of the bar on which the trade occurred). You could also log this number on the appropriate bar on a chart, either a printed or electronic version. The setup for this trade, which is based on a set of rules that indicate a purchase on the close of the bar, is labeled L-1.

The next two columns contain the MFE and MAE for the trade. For example, trade number 35 occurred on the close of the 12:00 bar. The position reached its maximum open profit of 18 cents on the 14:30 bar; this value is entered on the same row as the trade number in the MFE column. The trade reached its largest open loss of -6 cents on the next bar, and this MAE

*continued on p. 32*

**FIGURE 3** GANN LINE NO. 2: SAME "SETUP," DIFFERENT RESULT

*Because the Gann line is inconsistent and can change depending on how a chart is constructed, the same price action shown in Figure 2 produces different results here simply because the chart is drawn using a different scale.*




Source: Fibonacci Trader

**FIGURE 4** AN EXCELLENT SOLUTION

*Spreadsheet analysis allows you to perform a great deal of hands-on analysis. This example shows the trade date and time, indicator values, price data, trade number, setup, MFE and MAE values, profit or loss, and reason for exit. After compiling this information for all your trades, you can then sort the data and perform in-depth analysis that reveals key information about profit targets, stop levels and other aspects of a strategy.*

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Date | Time | BMA | BHI | BLO | MA | O | H | L | C | # | Setup | MFE | MAE | P/L | Notes |
| 60 | 12/19/2003 | 11:30 | 35.43 | 35.72 | 35.25 | 35.10 | 35.33 | 35.35 | 35.2 | 35.27 | | | | | | |
| 61 | 12/19/2003 | 12:00 | 35.46 | 35.71 | 35.22 | 35.11 | 35.27 | 35.35 | 35.22 | 35.31 | 35 | L-1 | 0.18 | -0.06 | 0.15 | Exit on close |
| 62 | 12/19/2003 | 12:30 | 35.44 | 35.63 | 35.20 | 35.10 | 35.31 | 35.35 | 35.25 | 35.35 | | | 0.04 | -0.06 | | |
| 63 | 12/19/2003 | 13:00 | 35.42 | 35.66 | 35.13 | 35.11 | 35.35 | 35.36 | 35.26 | 35.34 | | | 0.05 | -0.05 | | |
| 64 | 12/19/2003 | 13:30 | 35.42 | 35.66 | 35.17 | 35.12 | 35.34 | 35.33 | 35.3 | 35.34 | | | 0.02 | -0.01 | | |
| 65 | 12/19/2003 | 14:00 | 35.40 | 35.63 | 35.18 | 35.12 | 35.34 | 35.43 | 35.33 | 35.46 | | | 0.12 | 0.02 | | |
| 66 | 12/19/2003 | 14:30 | 35.40 | 35.60 | 35.19 | 35.13 | 35.46 | 35.49 | 35.41 | 35.46 | | | 0.18 | 0.10 | 0.15 | |
| 67 | 12/22/2003 | 8:30 | 35.39 | 35.56 | 35.21 | 35.13 | 35.35 | 35.63 | 35.33 | 35.53 | | | | | | |
| 68 | 12/22/2003 | 9:00 | 35.40 | 35.60 | 35.20 | 35.14 | 35.53 | 35.64 | 35.5 | 35.55 | | | | | | |
| 69 | 12/22/2003 | 9:30 | 35.41 | 35.62 | 35.21 | 35.14 | 35.56 | 35.57 | 35.41 | 35.43 | | | | | | |
| 70 | 12/22/2003 | 10:00 | 35.43 | 35.60 | 35.25 | 35.14 | 35.43 | 35.51 | 35.32 | 35.4 | | | | | | |
| 71 | 12/22/2003 | 10:30 | 35.44 | 35.60 | 35.23 | 35.15 | 35.4 | 35.47 | 35.33 | 35.44 | 36 | L-2 | 0.02 | -0.15 | -0.16 | Stopped out |
| 72 | 12/22/2003 | 11:00 | 35.44 | 35.61 | 35.27 | 35.16 | 35.44 | 35.46 | 35.29 | 35.31 | | | 0.02 | -0.15 | -0.16 | |
| 73 | 12/22/2003 | 11:30 | 35.44 | 35.60 | 35.27 | 35.15 | 35.32 | 35.41 | 35.3 | 35.37 | 37 | L-2 | 0.13 | -0.02 | 0.00 | Stopped out |
| 74 | 12/22/2003 | 12:00 | 35.44 | 35.60 | 35.23 | 35.16 | 35.37 | 35.43 | 35.35 | 35.37 | | | 0.06 | -0.02 | | |
| 75 | 12/22/2003 | 12:30 | 35.44 | 35.60 | 35.23 | 35.17 | 35.33 | 35.43 | 35.37 | 35.47 | | | 0.06 | 0.00 | | |
| 76 | 12/22/2003 | 13:00 | 35.44 | 35.60 | 35.28 | 35.17 | 35.47 | 35.5 | 35.38 | 35.4 | | | 0.13 | 0.01 | | |
| 77 | 12/22/2003 | 13:30 | 35.42 | 35.55 | 35.29 | 35.17 | 35.41 | 35.44 | 35.33 | 35.43 | 38 | L-2 | 0.17 | -0.04 | 0.14 | Exit on close |
| 78 | 12/22/2003 | 14:00 | 35.42 | 35.52 | 35.31 | 35.17 | 35.42 | 35.52 | 35.4 | 35.43 | | | 0.09 | -0.03 | | |
| 79 | 12/22/2003 | 14:30 | 35.42 | 35.56 | 35.24 | 35.13 | 35.5 | 35.6 | 35.43 | 35.57 | | | 0.17 | 0.00 | 0.14 | |

Source: Excel

value is entered in the same row in the MAE column.

Because the trailing stop was not hit and positions are not held overnight, the trade was exited at the close. Use the same line for key information about each trade (the highlighted rows). This will help later when you want to sort the data by trade number. The final two columns contain the trade's profit or loss (P/L) and the reason for the exit.

The other three trades were based on a different setup (L-2) and two of them were stopped out using a trailing stop. The last trade shown was exited on the close.

A natural question is how many trade examples are necessary to draw meaningful conclusions about a trade setup. But the more important issue is different types of market conditions. First, you should review a setup using price data that has uptrends, downtrends, trend reversals and trading ranges. Avoid testing in a period dominated by one price direction. That said, gathering information on at least 100 trades is a good start.

At this point you can begin to do some interesting work. For example, you can copy all the trades and paste their values in another spreadsheet page and sort the data different ways. For example, you could sort by trade number, then by MFE to see if there is a price target value that has a high probability of being hit on a regular basis. In Figure 4, the MFE was more than 10 cents for three of the trades. If you had 100 trade examples, you might find the market was making a favorable move of 10 cents at least 60 percent of the time. If the corresponding MAE is low - meaning, the trade isn't going against you more than it is going in your favor - then you have a potentially viable trade idea.

Similarly, you could sort by MAE and determine at what point you should abandon a trade because a majority of trades that hit a particular MAE level do not recover to be winners. Other ideas to consider are sorting trades by the type of setup or time of day to determine if there is a particular time that works best for a particular setup.

None of this analysis can be completed until you have specialized on a trade approach and have converted it into precise entry and exit rules. But once you have completed these first two steps — specialization and preparation — you will have a very clear understanding of the nature of your strategy. You might discover it is not as good as it initially appeared, and avoid rushing into the market and losing money. Also, by manually working through the charts and logging the information in a spreadsheet, you have the opportunity to discover a slight variation on your original idea that may be an improvement. This is less likely to occur if you let the computer do all of the work.

"Pattern probabilities" (opposite page) illustrates another way to use a spreadsheet to measure the probabilities of trade setups and determine their value.

Finally, all this work is an excellent way to develop good skills for trading when the market is actually open. It is similar to a basketball player spending hours in the gym shooting nothing but foul shots so he is confident and behaves automatically during the pressure of a real game.

Once you have tested your ideas and identified high-probability targets from the entry setups and risk points for managing the trade, you are ready for the execution phase.

### Implementing the strategy

At this point, you have a collection of procedures to follow and can trade objectively and consistently. You have moved away from trading by the seat of your pants, jumping from one technique to the next and wondering why you experience inconsistent results using a patchwork collection of strategies.

With this framework you no longer have to concern yourself with forecasting the markets; simply follow your tested proce-

## Additional research

The MFE and MAE analysis concept is from John Sweeney's book, *Campaign Trading: Tactics and Strategies to Exploit the Markets* (1996, John Wiley & Sons).

*Trading in the Zone* by Mark Douglas (2001, Prentice Hall Press) is a good source of information on the value of thinking and trading in probabilities.

"On-target trading," *Active Trader*, July 2001, p. 44.

"Taking the guesswork out of stop orders," *Active Trader*, October 2001, p. 58.

dures. This will relieve you of the psychological pressure of being right or wrong on any one trade. You will be trading based on probabilities that have been proven over dozens of trades.

But that doesn't mean the work is over.

### Going foruiard

It is important to continue to update your spreadsheet with real-time trades. Markets change, and if you begin to see results that are inconsistent with your original analysis, you can spot this before it becomes a real problem.

The three steps outlined here - specialization, preparation and execution - reflect the same basic process that carries people in a wide range of disciplines from the novice to professional stage. Moving from broad-based approaches to specialized techniques that are converted to procedures with probability-based outcomes puts you in a position to succeed.

It takes a lot of work, but the end result is having the skills to be consistent, regardless of the trading approach you use.

*For information on the author see p. 10.*

## Pattern probabilities

Another way to use a spreadsheet is to determine the probabilities of a price pattern before you even design specific rules for trading it.

Figure 5 (below) shows an excerpt from a spreadsheet that shows several statistics - the average price move, median price move, the maximum price move and the minimum price move - in the three days following the completion of a price pattern.

To perform this kind of analysis, you must first import the open-high-low-close price data for the period you wish to test (the "open" column is hidden here). The period here spans May 31, 2000, to Dec. 13, 2000; many of the rows are hidden to conserve space.

Column F contains the pattern's conditions. In Excel, it is easy to string together several "If" conditions that describe a pattern. In this case, the pattern is a bar with three conditions:

1. The high must be at least one percent above the previous high;
2. The close must be below the previous close;
3. The close must be in the bottom 10 percent of the price bar.

These conditions are shown in the formula bar (for cell F22) as:

1. (C22-C21)/C21>0.01
2. E22<E21
3. (E22-D22)/(C22-D22)<0.10

Each condition is preceded by the "IF" function, and the "1,0" at the end of the argument indicates that if all the conditions are true, "1" will be entered in the appropriate cell in the F column; if even one of the conditions is false, "0" will be entered. By dragging this formula to fill all the cells in column F, each bar that fulfills the pattern criteria will be flagged with a 1. (Alternately, if you have programmed the pattern conditions into your analysis software, you will be able to automatically include this information when you offload the price data to the spreadsheet.)

Columns G-0 contain the close-to-close price moves, MAE and MFE values for the three days after each pattern occurrence. Dragging the formulas makes calculating the numbers for the sheet a very simple process. This analysis could be carried out for as many days as you wish. Also shown is the total number of patterns that occurred.

For example, row 22 holds the data for the Oct. *24,* 2000, pattern and shows the market dropped 1.89 percent the day after the pattern (day 1), had an MFE of .69 percent and an MAE of -2.40 percent. By the close of day 2, however, the market had risen 1.57 percent, and so on.

The summary statistics at the bottom allow you to judge the probabilities of the raw pattern signal. These are only examples of the kinds of statistics you could include. Others are the percentage of positive and negative returns at each time interval, a separate breakdown of positive returns and negative returns, and so on.

If a pattern's probabilities are favorable, you can then proceed to developing and testing trading rules to maximize the pattern's potential.

*- Active Trader Staff*

**FIGURE 5** BASIC PATTERN TEST

*Column F contains the pattern criteria. The remaining columns show the closing price differences, and MFE and MAE values for qualifying price bars.*

F22 =IF((E22-D22)/(C22-D22)<0.1,IF(E22<E21,IF((C22-C21)/C21>0.01,1,0)))

| | A | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Date | High | Low | Close | T/F | Day 1 | MFE | MAE | Day 2 | MFE | MAE | Day 3 | MFE | MAE |
| 2 | 5/31/00 | 13.52 | 11.59 | 11.75 | 0 | | | | | | | | | |
| 3 | 9/27/00 | 20.18 | 19.33 | 19.39 | 1 | -5.76% | 0.00% | -6.24% | -3.20% | 4.07% | -8.24% | 3.71% | 4.59% | -6.24% |
| 4 | 9/28/00 | 19.19 | 18.18 | 18.27 | 0 | | | | | | | | | |
| 15 | 10/13/00 | 23.97 | 22.27 | 22.4 | 0 | | | | | | | | | |
| 22 | 10/24/00 | 22.37 | 21.57 | 21.64 | 1 | -1.89% | 0.69% | -2.40% | 1.57% | 3.37% | -2.40% | -2.91% | 3.37% | -3.33% |
| 45 | 11/28/00 | 24.28 | 23.36 | 23.4 | 0 | | | | | | | | | |
| 50 | 12/5/00 | 20.6 | 18.83 | 18.71 | 0 | | | | | | | | | |
| 56 | 12/13/00 | 19.05 | 17.8 | 17.92 | 1 | -5.30% | 1.45% | -8.43% | -1.45% | 6.31% | -8.43% | 2.62% | 6.31% | -8.43% |
| 825 | Total number of patterns: | | | | 17 | | | | | | | | | |
| 826 | | | | | | Day 1 | MFE | MAE | Day 2 | MFE | MAE | Day 3 | MFE | MAE |
| 827 | Pattern statistics: | | | | Average: | -1.6% | 1.7% | -4.6% | 0.1% | 8.0% | -5.7% | 1.0% | 8.1% | -5.9% |
| 828 | | | | | Median: | -1.6% | 1.1% | -3.2% | -0.1% | 8.0% | -5.8% | 0.7% | 8.0% | -5.8% |
| 829 | | | | | Maximum | 1.1% | 8.9% | -1.0% | 2.9% | 15.6% | -1.5% | 7.5% | 15.6% | -1.5% |
| 830 | | | | | Minimum | -5.8% | 0.0% | -9.9% | -4.2% | 3.4% | -13.4% | -4.9% | 3.4% | -13.4% |
| 831 | | | | | Standard Deviation | 2.2% | 2.5% | 2.9% | 2.5% | 3.5% | 3.6% | 4.3% | 3.5% | 3.5% |

Source: Excel