

July 23, 2000

STRATEGIES

The Hidden Language of the Charts

By MARK HURLBERT

Finance professors are by their nature a skeptical lot, but their disdain for the forecasting practice known as charting has been especially notable.

Charting is the branch of technical analysis that tries to predict price changes in a stock on the basis of certain visual patterns in a chart of its historical prices or volume data. In some academic circles, charting is dismissed out of hand.

But according to a new study, much of this scorn may have resulted from a simple breakdown in communication

between the academics and the chartists. The study was prepared by Andrew W. Lo, a professor at the Sloan School of Management at the Massachusetts Institute of Technology; Jiang Wang, a professor of finance at MIT; and Harry Mamaysky, a graduate student.

In the past, academics didn't comprehend the chartists' argot, which is filled with terms like "double top" -- the pattern that is formed after two successive rallies end at more or less the same price, which is supposed to signal weakness in a stock's share price.

If academics had only understood what the chartists were talking about, the study contends, they might have found much with which they could agree.

Consider the following sentence: "The presence of clearly identified support and resistance levels, coupled with a one-third retracement parameter when prices lie between them, suggests the presence of strong buying and selling opportunities in the near term." That mouthful is crystal clear to a chartist but is inscrutable, if not ridiculous, to an academic.

How about this one, written in professor-speak: "The magnitudes and decay pattern of the first 12 autocorrelations and the statistical significance of the Box-Pierce Q-statistic suggest the presence of a high-frequency predictable component in stock returns."

According to Lo and his co-authors, the two sides' sentences say essentially the same thing: that past prices contain information that may be useful in predicting future movements.

Why did it take so long to discover that chartists and finance professors may at times be basically in agreement? In part, it is because of the difficulties of translating chartists' visual pattern recognition into the mathematics on which academics rely.

The professors believe, however, that recent advances make the translation easier. Because charting patterns can now be expressed in terms that academics can understand and measure, they say, researchers can now focus on gauging which charting techniques actually work.

The authors have done so with five popular but previously elusive chart

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patterns, known as head and shoulders, broadening tops (and the related bottoms), triangles, rectangles and double tops (and the related bottoms). After defining them mathematically, the researchers back-tested the patterns' predictive prowess on price data for 750 stocks over 35 years ending in 1996.

One of their findings is that the patterns predict the future direction of Nasdaq stocks better than they do exchange-listed issues. Some that seemed to work well as buy or sell signals for Nasdaq shares failed utterly when applied to exchange-listed stocks. More research is needed to determine why that should be so.

Of the five patterns studied, two worked particularly well with both kinds of stocks in forecasting price weakness: double tops and the so-called head and shoulders -- a pattern in which a stock rallies and falls back again three successive times, with the second of the three rallies (the head) advancing further than either the first or the third (the shoulders).

Unfortunately, Lo and his colleagues did not calculate the returns that would have been garnered had investors bought and sold stocks based on signals from the chart patterns. The results, they conclude, simply suggest that charting "can add value to the investment process."

Still, from a team of academics, that's a remarkable endorsement.

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