

Inconvenient Truth

Earlier this year some interesting research was published on an aspect of technical analysis that is widely used in the markets. The work was by the academic Roy Batchelor, HSBC Professor of Banking and Finance at Sir John Cass Business School, City of London and PhD researcher Richard Ramyar and has the somewhat provocative title *Magic Numbers in the Dow*.

Batchelor and Ramyar point out in their introduction that although technical analysis is widely used, it has been regarded with suspicion by academics. They observe that:

The root of the problem is in the failure of technical analysts to specify their trading rules and report trading results in a scientifically acceptable way.

This is an issue that has concerned me personally for a long time. I have spent a great deal of time and effort trying to promote the use of technical analysis, despite the suspicion of academia and outright condemnation by fundamental analysts. It would be much easier if there was a great deal more academic testing of technical analysis concepts that could be used to substantiate the claims by technical analysts.

Batchelor and Ramyar point it that a great deal of academic research has been done in recent decades on various aspects of technical analysis that lend themselves to testing. By no means have all of the results been negative. Batchelor and Ramyar are in fact receptive to the idea that much of technical analysis may well be able to be proven of real value. Nevertheless, there is also a large body of beliefs in technical analysis that are so subjective and lacking in specificity that it is difficult to test them.

Batchelor and Ramyar chose to research an aspect of technical analysis that is widely used and believed with an almost religious fervour:

This paper tests a popular but previously untested proposition about the behaviour of the stock market. The proposition is that when the market changes direction after a period of trending prices, the magnitude and duration of the next trend is not random, but depends on the magnitude and duration of the previous trend. Specifically we are interested in whether the ratios of successive trends cluster around Fibonacci ratios or round numbers.

They chose for the purpose of testing Fibonacci and round number beliefs a data set of daily values for the Dow Jones Industrial Average (DJIA) from January 1915 through June 2003.

A great deal of the paper is taken up with a review of the previous research that has relevance to the methodology they chose to use. The specific problem they were faced with was determining an objective method of defining peaks and troughs in the DJIA. They take the reader through a very detailed discussion of the pros and cons of the alternative methods used for similar purposes and work towards a clear explanation of the method they chose. It should be noted that:

1. Having run their chosen method over the data set and arrived at defined peaks and troughs, they ran the results past a competent technical analyst, who attested to them being realistic in terms of general market practice.

2. They were concerned that there may have been some bias caused by the sensitivity of the parameters they used. They tested other parameters either side of their chosen set and the results were essentially the same.

They made a point of testing daily highs and lows, rather than closing prices. This is clearly realistic in terms of market practice. They also tested a range of different applications of the ratios, recognising that, for example, some technical analysts work in terms of percentages rather than absolute DJIA values.

Considering the widespread use and support for the utility of Fibonacci ratios and round numbers in determining where support and resistance might be expected, their results were surprising:

A few significant ratios appear, but no more than would be expected by chance given the large number of tests we conduct.

Their conclusion:

Our conclusion must be that there is no significant difference between the frequencies with which price and time ratios occur in cycles in the Dow Jones Industrial Average, and frequencies which we would expect to occur at random in such a time series. In our introduction, we noted that empirical evidence from academic studies suggests that not all of technical analysis can be dismissed *prima facie*. The evidence from this paper suggests that the idea that round fractions and Fibonacci ratios occur in the Dow can be dismissed.

Many technical analysts are going to find this an inconvenient truth in the sense that it will challenge their beliefs about part of what they do in analysis and trading. There will be those who want to know which ratios appeared at all and try to clutch at straws that represent no more than chance. There will be others who are even more deeply in denial and try to explain it all away by saying that is fine for the Dow, but what about other markets? This is a good point. However, Batchelor and Ramyar have set a standard of research that should be undertaken before relying on Fibonacci ratios or round number ratios in serious trading and investing.

I must say that I had myself believed there was some utility in these ratios, but no longer. I thank Batchelor and Ramyar for their excellent work in establishing that these ratios are no more than something akin to mysticism

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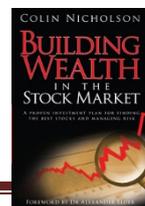
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