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The Management School

Evaluating the usefulness of Technical Analysis

by

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4.4 Conclusions

The only rules that seem to work very well in isolation are the major levels, that is, the G1, G2, G3 and G4 levels, and the rule of all angles. All the others have very poor results in isolation and it is very difficult to test their combinations, since they fill the screen with levels in such a way that every top or bottom seems to occur at a level where a Gann rule applies.

The major levels work very effectively, not only the first time they are hit, but also all the other times. The importance of these levels should not be underestimated by the percentages, lying in the area of 50%. On almost all the charts, at least one major top or bottom occurred at these levels. Furthermore, I noticed that even when these levels were broken, most of the times they were not broken without providing a form of weak support or resistance.

The rule of all angles also seems to work very effectively. Once, the angle that provided support in the uptrends or resistance in the downtrends was identified, it was very easy to predict future tops and bottoms, simply by drawing the next angle in the sequence. I think that the combination of the major levels with angles drawn from important highs or lows can provide with strong decision levels.

Finally, the combination of the major rules with the Trend Indicator Line and the "buy" and "sell" signals seems to work very well, and can help a trader to identify major turning points or to take advantage of established trends.

The results of the tests can be summarised in the following table:

Rule	% of success	% of failure
G1 level	58	42
G2 level	53	47
G3 level	48	52
G4 level	50	50
The 50% retracement level	23	77
Percentages from highs and lows	42	58
Natural numbers	16	84
The rule of all angles	90	10

Table 4.8

5.4 Performance of the technical analysis methods

How can we judge now the performance of a technical analysis method? When it comes to investing, you need to answer three questions: what to buy?, when to buy? and when to sell? Therefore, a method of technical analysis should provide an investor with answers and effective rules with respect to these questions.

The first question is the easiest for a Gann follower : what to buy? Gann claims that his rules work in any kind of investment, from stocks to commodities, and did not concern himself with trying to identify any underpriced securities, a quest that is undertaken by the fundamentalists. The only rule [22] that he devised with respect to "what" is : "Trade only in active shares. Keep out of slow, dead ones".

The other two questions-when to buy? and when to sell?- are the most essential in an attempt to construct a trading system based on the ideas of chartism. According to Hyerczyk [8], developing a trading system is a three-step process.

The first step is the decision over the type of the system. Hyerczyk thinks the strongest point of the trading system that Gann devised was the combination of a trend-following with a support-resistance system. Most trend-following systems are designed to catch the large moves and are unable to predict with accuracy the turning points. The biggest fear that traders have when using them is that they will miss "the big one" after ignoring a great buy signal. Gann's combination of trend-following and support-resistance system suggests it is virtually never too late to enter the market after a definite signal, "even if you miss the bottom or top, the geometric angle will guide you into position."

The second step is to establish entry rules. The profitability of the technical analysis methods depends on their ability to identify the trends, to predict future turning points and to generate buy signals. Gann analysis can provide very effective entry rules, due to the combination of support and resistance levels with angles. My experiments with the Gann rules showed that the major Gann levels can be very effective entry points. Furthermore, most of the Gann users base their trading on a very simple rule: enter the market when the market touches on an angle. From these angles the 1x1 is the most important and according to Gann, one could trade off this angle alone, buying every time price rested on the 45-degree line.

Almost all the methods of technical analysis suffer from two problems : they are by nature late in triggering "buy" and "sell" signals, and they introduce a great deal of subjectivity that always leave the investor in doubt. The greatest advantage of Gann analysis is that it deals effectively with these two problems. Firstly, it is almost the only system that allows "advance" planning and is not laggard in nature. It allows the investor to identify decision levels both above and below the current value of the analysed security, weeks, months or even years in advance. If and when these pre-determined levels are reached, a buy, sell or hold decision signal based upon the daily moves is followed. Secondly, Gann analysis is not very subjective because it offers some quite straightforward rules, e.g., we identify a level where a number of rules apply and when the prices reach this level, we wait for the Trend Indicator Line to generate a buy signal. Gann analysis does not say that the price will reach this level and does not anticipate that the signal will be a buy or sell. It just says that if the price reaches this level, be ready to act and let the market tell you what to do. Some people argue that Gann analysis never tells a trader when to

enter the market. Because Gann rules work better in unison, he has to wait for an accumulation of Gann rules until it is very late to act. This is not a problem for Gann : ". . . never get into the market because you are tired of waiting . . . you can make four good trades a year and become extremely rich." Or, according to Edwards and Magee [3]: There is nothing in the science of technical analysis which requires one always to have a position in the market. "There is nothing which dictates that something must happen every day. There are periods-sometimes long months-when the conservative trader's best policy is to stay out entirely. And there is nothing in technical analysis to compel the market to go ahead and complete in a few days a move which the charts have fore told; it will take its own good time. Patience is as much a virtue in stock trading as in any other human activity."

The third step is to determine the placement of stops (exit points). Gann also placed a strong emphasis on the identification of stop-loss points and was one of the pioneers of this risk management technique. The exit rules that he devised are described in chapter 3 and can help an investor to protect his capital after an investment or to protect any profits not yet realised. These risk management techniques are quite essential, because it is not only getting the direction of the price activity correct, that keeps one in the trading business, but also the ability to quantify the risk-reward relationship.

As it becomes obvious from the above, the performance of a charting method depends on its ability to identify the trends, to predict the turning points and to offer effective rules for the entry and exit points. Some argue that the most profitable method will be the one that predicts the turning points with such accuracy that it helps the investor to get in at the bottom of a trend and get out at the top. But this is not the case according to Edwards and Magee [3]: "You

will be told that the chart analyst is always late - that he buys after prices have already started up, maybe not until long after the "wise boys" have completed their accumulation, and that he sells after the trend has unmistakably turned down. Partly true, as you have no doubt already discovered yourself. But the secret of success lies not in buying at the very lowest possible price and selling at the absolute top. It is the avoidance of large losses. (Small losses you will have to take occasionally.)"

A researcher that will attempt to make a study and compare the performance and profitability of the major charting methods is bound to face two problems. Firstly, the reluctance of the technical analysts to disclose the nature of all their rules, and not only the simplest ones, in order to protect their profits which otherwise would disappear. The problem is that they usually hold for themselves the rules that they believe are the most profitable ones. And secondly, the lack of tests that judge the profitability of the various technical analysis methods both on the side of the academics and on the side of the chartists. Studies that have demonstrated careful data collection, risk adjustment, and testing procedures are very rare. Therefore, the only possible way of checking the performance and the profitability of the various kinds of technical analysis methods is to examine their ability to generate profits in excess of the average market return. And this can be done only by checking and comparing the profits of the operators of the rule (as opposed to checking the rule itself). So far, there appears to have been no research on this; according to Joy and Jones [11], this is probably due to operators not being willing to publish data on their investment performance.

6.5 Conclusion

The two last arguments in favour of technical analysis, apart from the above research that shows that even 50% of the Ph.D. students believe that technical analysis should be used in the analysis of the markets, are :

Firstly, the fact that chartists survive, along with other types of analysts. Whatever technique is used it must be correct a sufficient number of times because chartists remain in business. The techniques that the chartists use, at least must have kept investors as satisfied as the apparently more sophisticated approaches.

Secondly the widespread use of technical analysis, along with fundamental analysis, from all the major investment organisations. Probably the solution lies exactly in using both fundamental analysis and technical analysis. Maybe an investor should delay purchase of stocks whose chart patterns look bad, no matter how good the fundamentals are. The market may be telling that something is still awry, or that the chartists will not be buying and they will not be helping the stock move up.

Chapter 8: Conclusion

8.1 Overall conclusions from this thesis

In this thesis a study upon technical analysis in general and Gann analysis in particular was attempted. After the introduction (chapter 1), in the second chapter, firstly both the technical and the fundamental analysis were defined, and the differences between the two approaches were described. The conclusion derived from this comparison, was that while the long-term trend of a security can be explained by the fundamentals, in the short run the price depends on supply/demand conditions and market sentiment that are best captured by technical analysis. In the second part of chapter two, the methods of technical analysis that were developed in the beginning of the century and formed the foundation for all the contemporary schools of thought of chartism were described, that is, the Dow theory, the Fibonacci numbers, the Elliott theory and the cycle theory. From these theories Dow theory is considered to be the bedrock of technical analysis, Elliott theory with the idea of the waves revolutionised chartism, Fibonacci numbers are widely used in order to predict the price and time relationships, and cycle theory, which teaches that market activity follows repetitive patterns, is commonly accepted and used in our days.

In the last part of the second chapter, all the contemporary schools of thought of chartism were presented, that is, the pattern recognition theories, the price-volume studies, the moving averages, the support and resistance levels and the Divergence analysis. All these theories draw their basis and ideas from the previous methods, but also from Gann analysis, which belongs to the first category of the "early" theories.

A precise presentation of Gann analysis was attempted in the third chapter. In the first part of the chapter, the general principles and the philosophy of the method were put forth, and the rules and their application were explained. The point that strong emphasis was placed on was that all these rules, the major levels, the retracement percentages, the angles, the anniversary dates and the cardinal numbers, work better when applied together and not in isolation. The last part of the chapter is dedicated to the actual method of application of the Gann analysis. This application is made from a macro down to a micro scale. Since an area that many Gann rules apply is identified in the monthly and weekly charts, we proceed to the daily charts and we wait for "buy" or "sell short" signals.

In the fourth chapter, the tests that I conducted in order to check the validity of the major Gann rules were described. The rules that were tested were: the G1 level, The G2 level, the levels G3 and G4, the 50% retracement level, the lesser levels, the percentages from important highs and lows, the natural numbers and the rule of all angles. The conclusions of these tests were that the rules that work better in isolation, were the major levels and the angles. The percentages of success for the major levels were in the area of 50-60%, percentages very impressive, if we consider that only the ability of these levels to cause a reversal of the trend the first time they were reached was tested, and not the general support or resistance that they provided. In addition the rule of all angles had very impressive results, since in most cases the sequence of the angles drawn from an important top or bottom predicted all the intermediate tops or bottoms with great accuracy. The other rules had poor results, a fact that was expected given that these rules are supportive ones.

Chapter five is dedicated to a comparison between the various methods of technical analysis and to an evaluation of the Gann analysis from some Gann users. This chapter showed that very interesting parallels exist between all kinds of technical analysis and that the performance of various methods of chartism can be judged against the accuracy with which they identify the trends, they predict turning points and they generate entry and exit points. Nevertheless, provided that studies which test the above abilities do not exist, the only way to judge their profitability is the profits of their operators. From the above comparative study, I concluded that the two things that distinguish Gann analysis from all the other methods were its ability to offer pre-planning, in order not to be laggard, and also the fact that it is not as subjective as most of the other techniques. Furthermore, this chapter showed that most of the Gann users agree that the angles are the single most important component of Gann's philosophy.

In chapter six, some of the arguments both in favour and against technical analysis were presented. The most severe argument against technical analysis, and the one that makes the academics believe that chartism is useless, is that all studies have proven that the market is weak-form efficient and thus, the price changes are independent over time. In the last part of this chapter, a research was presented that unexpectedly offered support to chartists. Almost half of the asked Ph.D. students thought that technical analysis should be used in investment, despite their view that it was useless. Then two more arguments in favour of chartism were presented: The survival of chartists and the widespread use of technical analysis, along with fundamental analysis, from all the major investment organisations. Finally I suggested the use of technical analysis, together with fundamental analysis, as the appropriate way that the markets should be analysed.

Finally, some new thinking about technical analysis was put forth, and a presentation of some very innovative approaches that drew their basis from chaos theory and used artificial intelligence, neural networks and genetic algorithms, in their attempt to predict future price movements, was made.