Volume-4, Issue-5, May-2015 • ISSN No 2277 - 8160

Research Paper Commerce

Market Walks Random—Investor Be on Your Guard

Maneesh Arora Assistant Professor in Commerce in DAV College, Jalandhar, Punjab

ABSTRACT

The objective of this article is to explain the concept of Random Walk Hypothesis as opposed to technical analysis. The random walk model has now become an extension of the fundamental analysis as well as the technical analysis for taking equity investment decisions. It is also known as efficient market hypothesis and it considers that individuals cannot outperform the markets for the simple reasons that there are many experts who would not allow the market price to deviate from the intrinsic value due to their active4 buying and selling. It is also observed that the current market price will reflect the intrinsic value and therefore there is no need for fundamental or technical analysis.

KEYWORDS : Random Walk, Efficient markets, Weak form, Semi Strong Form, Strong Form.

Introduction:

The basic assumption of the Technical analysis tells us that with the exception of some expectations, stock prices tend to move in persistent trends. Market forces of demand and supply bring shift in trends but irrespective of the reasons, the shifts in market forces can be detected with the help of charting of market phenomenon.

The Technical approach is the oldest approach to equity investment, dating back to the late nineteenth century. Because of its psychological and intuitive appeal, it is widely used. But in recent decades, its validity has been seriously challenged.

Random Walk Hypothesis:

It reveals that present stock market prices reflect all known information with regard to past stock prices, trends & volumes. Prices appear to follow a random walk, implying that successive price changes are independent of each other. According to the hypothesis, like the steps of a drunken man, the stock prices also behave in a manner where 'the left hand does not know what the right hand doing'.

According to this hypothesis, the stock prices are absolutely independent and they cannot form a proper base for taking an effective investment decision. The Random Walk school has demonstrated through empirical tests that successive price changes over short period such as a day, a week or a month are independent.

The Major Assumptions:

Markets are said to be efficient, if there is a free flow of information and markets absorb this information fully & quickly:" Efficiency means the ability of the capital market to function, so that price of security react rapidly. Such efficiency will produce prices that are 'appropriate' in terms of current knowledge and investors will be less likely to make unwise investments." As the demand and supply forces are playing their roles freely, the emerging prices are fair and more in random manner.

When the empirical evidence in favor of random walk hypothesis seemed overwhelming, the more curious among the academic researchers ask themselves the question:"What is the economic process that produces a Random Walk?" they concluded that the Randomness of stock prices was the result of an efficient market.

Eugene Fama states that" An efficient capital market is a market that is efficient in processing information. The prices of securities observed at any time are based on correct evaluation of all information available at that time. In efficient market prices fully reflect all available information."William Sharpe also said that "A perfectly efficient market is one in which every security price equals it market value all times."

Broadly, the assumptions underlying the Random Walk theory are as under:-

- `The share market discounts all the available information in no time.
- `The market forces of supply and demand are independent and the stock market makes quick adjustments.
- `The information relating to the fundamentals influences the price of securities.
- `No individual investor has inside information.
- `Every investor has free access to the same information and no one has superior knowledge.
- `The stock market is wide and supreme. So no individual investor or group of investors can influence the stock market.
- `There is a keen competition among market participants so this phenomenon tends to show the market prices of securities at their intrinsic value.
- `Because new information cannot be predicted in advance so price changes of the securities also cannot be predicted in advance. So the result is that prices behave like a random walk.

An Accidental Discovery:

In 1953 Royal Statistical Society of London organized a seminar and Mr. Maurice Kendall, who was a distinguished Statistician, presented a paper in which he tried to examine and analyze the behavior of stock prices and commodity prices. His hypothesis was that the stock prices and commodity prices have a fairly persistent trend or a regular price cycle. His hypothesis was in lying with the assumption of technical analyst and there was nothing wrong with this hypothesis. But surprisingly he came up with a fairly apposed one where he found out that each price series was not showing a regular trend. To quote him "Each series is a wandering one, almost as if once a week the Demon of Chance drew a random number ……. And added it to the current price to determine the next weeks price ." so Maurice Kendall found out that stock prices(securities and commodities) followed a random walk which means that price changes which are about to take place are independent of one another.

Level of Random Walk Hypothesis:

According to Eugene F.Fama there are three level of random walk hypothesis:

- `Weak Form (Past information)
- `Semi Strong Form (Past information + Current official information on public platform)
- `Strong Form (Past information + Current official information on public platform + current unofficial / inside information)

Weak Form: This is the first form of random walk hypothesis. The present prices move independent of the past so the past data cannot be used to predict future stock price. The prices of the stock market at any time will on the average reflect the intrinsic value of the security and the trends will provide no bases for forecasting the future. The statistical evidence to provide support for the weak form of random walk are presented below:

Filter Rules: It is essentially a technique for filleting out the material information from the immaterial price and volume data. According to filter rules if a stock moves up to a 5 % then the strategy is 'buy and hold' and if the share price decline up to 5 % then sell it off and take a Short position. Short position is a situation where one sells even without holding shares to deliver. Fama, Blume and Alexnder conducted

these tests but did not get conclusive results.

Serial Correlation Tests: Another way to test the randomness in stock price changes is to look at their serial correlations also known as auto correlations. Is the price change in one period is similar to the price change in some other period? If such serial correlations are negligible, the price changes are considered to be serial independent. Many studies have been conducted employing serial correlations but failed to discover any.

Runs Tests: Runs tests is set of consecutive price changes in the same direction. Given a series of stock price changes each price change is designated as a plus (+) if it represents or a minus (-) if it represents a decrease. The resulting series may look as under:

HYPOTHETICAL SHARE	NUMBER OF RUNS
X	+ + + - + + …… 3
Y	+ - + - + - + ….. 7
Z	-- + - + + + - - + + …… 6

The pattern of share X reflects a continuing trend. Share Y shows opposite behavior whereas share Z represents an unpredictable sequence.

So we can say that yesterday's prices do not tell us much about tomorrow or at least not enough to consistently make unusual returns based merely on price data.

Semi Strong Form: As per this theory not only the past price information but also all official information available on public platform are quickly absorb by the stock market and efficiently processed. So it means that using publically available information the investors will not be able to earn above normal rates of return after considering the risk factor. To test the semi strong form, a number of studies conducted which have been presented as follows:

R.Ball and P.Brown in their paper titled "An Empirical Evaluation of Accounting information numbers" which was published in The Journal of Accounting Research in 1968 conducted the study of effect of annual earnings announcements. They divided firms into two groups, the good earning group and the bad earning group. They found out that before the announcement of earnings, stocks in the first group earned positive returns whereas stocks in the second group earned negative returns. But after the announcement of annual earning stocks in both returns.

Fama, Fisher, Jensen and Roll brought a paper titled "The Adjustment of Stock Prices to New Information". In the journal, International Economic Review in 1969. They tested the speed of the market's reaction to a firm's announcement of a stock split and the accompanying information with respect to a change in dividend policy. These were actually 940 stock splits on the NYSE. During the period 1927 to 1959. They found that prior to the split; the stock returns higher returns than predicted by the market model. But after the split the stocks earned returns which were more or less suggested by the market model.

Strong Form: The Strong form of random walk theory holds that all available information whether public or private or inside is reflected in the stock prices. It is a very extreme kind of hypothesis and we would be greatly astonished if it ever came through.

We have the example of Satyam computers where M.Raju Lingam earned superior rate of return after adjustment for risk.

Conclusion:

After going through the history of random walk hypothesis the investment implication that we have can be detailed as follows: the substantial evidence in favour of randomness of stock price behavior shows that technical analysis is useless as well as routine and conventional fundamental analysis is nit of much use in identifying profitable courses of action. The key factors for achieving superior rates of returns can be the sensitivity of the investor towards market imperfections as well as the use of original, unconventional and innovative methods of analysis. Normally an independent judgment would help very much if it is not affected by market psychology. And last but least if we have that very difficult access to the inside information and can make a sensible interpretation of that.

REFERENCES

Chatrath, Arjun, Sanjay Ramchander and Frank Song (1995): "Does Options Trading Lead to | Greater Cash Market Volatility?" Journal of Futures Markets, 15 (7), 785-803. | | Cox, C C (1976): "Futures Trading and Market Information" Journal of Political Economy, 84, | 1215-37. | | E. Fama, Efficient Capital markets: A Review of Theory and Empirical Work, journal of Finance, May 1970. | | Fisher and Jorden, Securities Analysis and Portfolio management, PHI, New Delhi. | | Elton, Edusin, J. and Gruber, Martin j. Modern Portfolio Theory and Investment Analysis, John Wiley & sons,1987. | | Alexender, Gordon W.J. and Sharpe, William F. Fundamental of Investments, Prentice Hall, new Delhi. | | V.A. Avadhani, Investment and Securities Markets in India, Himalaya Publishing House, Bombay. | | Slater .Jim . D, Investment Made Easy, Orion Books Ltd.1994. | | Chandra Parsanna, Investment Analysis and Portfolio management, Tata Mc Graw Hill,2002. | | Schwarz T V and F Laatsch (1991): "Dynamic Efficiency and Price Leadership in Stock Index | Cash and Futures Markets", Journal of Futures Markets, 11, 669-83. | | Shenbagaraman P (2003): "Do Futures and Options Trading increase Stock Market Volatility?" | NSE Research Initiative, Paper no. 20. | |