

The Determinants of Portfolio Management Strategies: An Analysis of Individual Investors Behaviour

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Abstract

Investor behavior and its dynamic relationship with stock price compose a crucial research problem in both traditional as well as behavioral finance - an emerging area of applied finance and behavioral economics. Psychological biases such as heuristics, anchoring, herding, loss aversion to name a few, tend to influence financial behavior of investors, both institutional and individual investors. Investor behavior under the influence of such biases subsequently has significant impact on the stock price and returns. A growing interest in behavioral finance and the impact of behavioral factors on stock prices and return has spawned a rapidly expanding literature during the last few decades. However, in India, there exists a gap in empirical research on behavioral factors influencing Indian investors, and their impact on stock price and return in Indian stock market. The rapid growth of the Indian economy in general and Indian stock market in particular in earlier decades has witnessed the growing participation of individual investors. Automation of trading and stock exchanges motivated the individual investors to more participation in trading, as it helped improve the level of transparency, more user-friendly trading systems, reduced spreads and lower transaction costs. A survey of household saving and investment behavior conducted by the NCAER in 2011 found that households investing in bonds, debentures, equity instruments, mutual funds and derivatives totaled 24.5 million and constituted 10.74 % of all households in the country. The proportion of investor households was nearly 21 % in urban areas and 6 % in rural areas. Of these investors % showed a preference for mutual funds, 22 % were exposed to bonds and debentures, another 22 % to the secondary market, 10 % invested in IPOs and less than 4 % in derivatives. According to the SEBI estimated that total retail investor population as of July 2017 is 59.1. The present study has considered two alternative measures of trading volume namely, number of shares traded and value of shares traded. Using Linear Granger causality, the study found that for 13 stocks there exists causality from volume to returns. Therefore, for 37 stocks, there is no causality from volume to returns. Thus, for most of the stocks, individual trading behavior as measured by trading volume does not influence stock returns. Regarding causality from returns to volume, the study found that 13 stocks have causality. Thus, for most of the stocks, past trading volume cannot be used to predict future price movements and vice versa. These results provide mixed evidence for weak-form of efficient market hypothesis which states that prices fully reflect all historical information contained in past prices and volume. The study has also examined contemporaneous and asymmetric relationship between volume and returns. The study found that there exists positive contemporaneous relationship between volume and returns and this relationship is asymmetrical

Keywords: Individual Investors, Psychological Biases, Dynamic Relationship Causality, Indian Stock Market, Return Movements

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Introduction

Understanding the behavior of the stock market is difficult because markets are made on the basis of the varied opinions expressed by their participants. Investing in equity is considered inherently riskier than investments in fixed income securities e.g., bonds, debentures etc. Despite widespread acknowledgement about the popularly known risk-reward relationship of fixed-income securities and equity, an era has been spent on understanding what makes equities riskier than bonds and what makes the stock price so volatile. Has it got anything to do with the inconsistent performance of the companies behind the stocks? Or, has it got something to do with the way the equities are approached and appraised by broader market participants, who are prone to fear and greed, leading to wide swings in returns for investors? Finding an answer to the above questions would not only help the investors put things in perspective. But would also help them decide if it would really be prudent on their part to take the route of equities while deploying their savings, with the aim to generate returns. Alternatively, it could be concluded that the risk associated with equities cannot be reduced by an investor, under any circumstances, and hence, s/he should shift his/her savings towards fixed income generating securities, i.e., bonds. To put it simply, understanding relationship between investor behavior and stock prices (and returns) seems to be of great importance for a better understanding of the equity investment strategies. It is the behavioral traits of the investor in particular and the crowd behavior of the markets in general which makes equity investing appear a risky proposition and also stock price so volatile to some extent. General investors may consider risk and return factors before investing their savings into the financial market. There are several basic principles of portfolio construction, and in order to construct a portfolio investor should consider their own specific objectives, needs, and risk profile. Allocation between the various asset classes will then be carried out by combining several analyses. Next, depending on market conditions, the attractiveness of one or more asset classes will be determined. This analysis must be performed dynamically, so that changes in market conditions can be taken into account, and, more importantly, in an entirely flexible manner to allow for adaptation to these conditions. This allocation is much more important than the diversification ensured within each asset class. In addition, negative or weak correlations have a positive effect on the portfolio, because they help reduce the portfolio's risk and improve its return. So, the first step is deciding, for each asset class, whether or not it should be included. The next step is to make choices within the selected asset classes. Finally, it is useful to include transaction costs, fees associated with the investment such as custodial fees, and ultimately tax, which may have a significant impact on performance.

Literature Review

Investors are using various shortcut methods (heuristic) for investment-making decision to save time and money particularly with the respect of financial uncertainty in market. Much of this uncertainty is inestimable in risk, Use of Heuristics by investors is the reason argued for occurrence of cognitive biases by Tversky and Kahneman (1974). In order to make rational decisions cognitive resources are required but, since investors do not possess them, they use heuristics. The use of heuristics leads to biased decisions under certain circumstances and "these heuristics are economical and usually effective" as argued by Tversky and Kahneman Altman.M (2012a, p.48) People invest with individuals they trust e.g., family, friends, and

members of their community or religious group because of the belief that these people can be trusted. As trust is a very high probability expectation that the other party to a transaction will deliver on promises made. The basis for this becomes the reputation of the people involved. In a series of publications, Amos Tversky and Daniel Kahneman mentioned three important heuristics - namely Representativeness, Availability and Anchoring which might misguide the investors.

De Bondt, W. F. M., and R. Thaler, 1985, big high-growth firm's prospect viewed as good investment and growth companies are viewed as good investment. Roll, R., 1986, provided the empirical result of the study that show small-cap value firm have historically outperformed. Indeed, the tendency for individuals to use representativeness in this context may have contributed to the small-firm and value anomalies. In concerned research, there is evidence that company image has impacts on the perception of investment attractiveness. As mentioned earlier, while a positive firm image can be viewed as good prospects for investors in terms of future benefits. It has potential to generate cash flow and growth in the price of the stock. (Ackert, L. F., and B. K. Church, (2006), it was observed that firms with a negative image were less invested in than the ones with a positive image.

Tversky & Kahneman, 1974 described heuristics as "if- then" procedural rules. "If seeking the probability that a case is a member of a given category (or that a sample was generated by a given population), then compute the similarity between the case/sample and the category/ population prototype." "If seeking the probability that an event will occur, and then compute the ease with which examples of that event come to mind." On other hand many psychological findings depend upon a variety of situational factors, and it is therefore a refreshing truism that human judgment is guided by accessible information (Higgins, 1996).

Barber and Odean (2001) state that women tend to be more risk averse as compared to men, this fact argued that men may have higher degree of overconfidence as compared to women, which forces the men to trade more than women. According to the findings of Barber and Odean, women are performing well in terms of return as compared to men.

Fan and Xiao (2005) and Statman (2010) show that individuals in different societies and cultures may have different behavioral biases which may affect their financial decisions. Individuals in collectivist societies emphasize the group more than the individual. Hence people who belong to a group feel more comfortable and become less risk averse in their behaviors and decisions.

Thaler (1999), state of our knowledge about how people engage in mental accounting activities. Three components of mental accounting receive the most attention. This first captures how outcomes are perceived and experienced, and how decisions are made and subsequently evaluated. The accounting system provides the inputs to be both ex ante and ex post cost-benefit analyses.

DeBondt and Thaler (1995, p.396) state that financial markets can be affected by investors' behaviors and their irrational decision making. If the perspectives of behavioral finance are correct, it is believed that the investors may have over- or under-reaction to price changes or news; inference of past trends into the future; a lack of attention to fundamentals underlying a stock; the focus on popular stocks and seasonal price cycles. The investors' decision making

in the stock market is affected by these market factors. there are several market factors identified by Waweru et al. (2008, p.36) which affect decision making of the investors: changes such as, "change in market information, fundamentals of underlying stock and stock price" can cause over or under-reaction to the change in price of the stocks and have an impact on investors' decision making, it is empirically proved as well.

Objectives of the Study

- To know about the asset selection and preference of individual investors for designing optimum portfolio.
- To examine the preference of investors towards various investment portfolio strategies in Indian Financial market.
- To identify the Goals and Problems faced by individual investors.
- To identify the behavioral factors and establish their relationship with investor behavior in Indian stock markets.
- To analyze and examine the bidirectional and dynamic relationship between individual trading behavior and stock price movements in Indian stock market.

Methodology

The present study tries to focus on the psychological biases factors that influencing individual investors investment decisions and their causal relationship with stock price movements in Indian financial market. The current chapter includes the methodological aspect of the research on individual investors' behavior and its relationship with stock price movements and discussed in details about the methodologies applied for the research issues relating to individual investor behavior and its relationship with stock price movements in Indian context. The main outline of the chapter is as follow, first section includes the nature of the problem and genesis of the issues of relationship between Indian individual investor's behavior and stock price movements. In next section, a brief review of the research problems and research objectives is discussed. In following section, discussed about the respondent's selection using purposive sampling technique. In addition, data collection methods namely structured questionnaire is also discussed along with highlights the tools used by the researcher for data analysis. Further it also explains AMOS, e-views software and statistical techniques including Descriptive analysis, factor analysis, Cronbach's Alpha test, Structural Equation Modeling (SEM) and Time series analysis.

Results

Investing in financial market is a very critical task; because of the involvement of money every investor wants appreciation in invested amount. Therefore, investors should design optimum portfolio which provides maximum utility or abnormal return to the investment. There are huge numbers of investment avenues available in the financial market for investors. But here a question arises that which investment avenues give good returns or are safer form the investment point of view. As per empirical results, 25.82% individual investors prefer to invest in the equities, the second most preferred investment avenue is saving in bank accounts, as 16.10% investors preferred keeping the cash in their bank accounts. The respondents are self-efficient to manage their portfolio on their own and they do not prefer taking broker's advice

for making the portfolio. They believe on their own analytical skills and security market knowledge. As far as awareness of the respondents is concerned, they are aware of the level of risk of the assets and also, they are able to analyze which instruments are safe for their investments. Respondents are aware about the level of risk involved in various investment avenues. Sources of information play a vital role in investment decisions, particularly in Indian stock market because, a reliable source of information leads to good return in stock market. A source of information includes family, friends, and other media sources. As per the results of this survey, it can be said that investors are relying on Media sources rather than sources like personal resources. Rational investors always analyze the market information and make the investment strategies according to the information they had received. In this study, twenty investment strategies were shortlisted after intensive review of related literature for this study. Out of these, thirteen were shortlisted on the basis of respondent's preferences. These thirteen investment strategies were shortlisted on the bases of mean score above 3.00; These thirteen strategies belong to both fundamental and as well as technical strategies. The survey results presented in this study show that most of the investors use both fundamental as well as technical analysis while investing in Indian stock market.

Discussion

Classification of the Investors The core area of the present study is individual investor's behavior in the stock market. A variety of participants are engaged in various activities at different levels of stock market. Stock market stake holders include the government, the regulator (Security and Exchange Broad of India), stock exchanges, brokers, banks, companies, investors, media, etc. Each and every stakeholder has separate objectives for the investing. The Stock market indexes are considered as barometers of an economy and booming stock market send positive signal to existing and prospective investors. Government uses bullish stock market trends to attract foreign investment. Brokers lift their income by transaction charges, listing fees, etc. similarly banks also take the benefits to earn a lot from leading against stocks, margin trading, and depository. In a nutshell, all participants want to get benefited from stock market.

Individual Investors vs. Institutional Investors Individual investors and institutional investors have different combination needs and constraints. The basic difference is volume of fund, individual investor plays in the stock market with small volume of funds. They invest only that amount of money which they have as a saving. On the other side, institutional investors (e.g, mutual funds, and investment bankers.) have loads of fund pooled from a number of investors or organizations and also, they have investment skills in their basket. Individual investors also differ from institutional investors in terms of risk-taking ability. There are many ways where individual investors differ from institutional investors particularly risk perspective, in the following ways

- (i) Institutions perceive the risk as volatility in the financial market and measured it by standard deviation or beta. On the other hand, individuals view the risk as losing opportunity of funds that make them uncomfortable or feel unsecured. They don't want to see behind the risk or simply they are risk-averse. They don't want any loss in the savings or invested money under any circumstances.
- (ii) We can categorize individuals on basis of their personality traits like boldness, risk lover

(want to take risk), educational status, etc. whereas, institutions can be categorized on the basis of profit-making interest in their portfolio (for example, beneficiaries of the Mutual Funds).

- (iii) Individuals can be categorized by their financial objectives, resources and goals. Individuals have certain obligations towards their family and they have certain expectations of their own. For instance, buying a house, pursuing higher education, getting married, etc. On the contrary, institutions are a more precise package of assets and liability. They have limited obligations and goals of their partners/members.
- (iv) Individuals have complied with the taxes like STT (Security Transaction Tax), on the other hand institutions are free from taxes in many cases. Although, institutional investors are also governed by tax laws.

Individual investors generally consider three types of investments as risky. First, unfamiliar investments are considered to be unsafe. They are hesitant to invest in a newly-issued and unpopular company's equity. They are not interested in stocks which they are unfamiliar with until and unless they have received some positive feedback of that company from any person/media source they can trust upon. Second, individual investors perceive prior losses in familiar instruments as deterring factor. It is a famous adage, "a burnt child dreads the fire". So, an investor who has once seen any particular stock underperforming, rarely goes for it again or even find it difficult to hold any further if already bought. Finally, investing is also viewed as risky since individuals often find it hard to go against the prevailing market sentiments. That is, they are more likely to follow the crowd.

Investment Revenue

There are large numbers of investment avenues available for investors in India. Some of them are marketable and liquid while other are non-marketable. Some of them are highly risky while some are almost riskless. So, the investor has to choose proper avenues among them depending on his/her preferences, need and ability to assume risk. Various types of investment avenues are as follow

- (a) **Stocks / Equities:** Stocks represent a proportionate ownership interest in a corporation. Stocks offer the potential for current income from dividends and for capital appreciation resulting from an increase in value over time. Stock prices are susceptible to short-term risk and fluctuate over short time period. Stocks must appeal to long-term investors for their potential to provide competitive returns through dividends and capital gains. Risk of investing in equities is high and so the returns are also high. We could dabble in the stock market broadly in three ways.
 - (1) Directly by buying and selling shares on the stock exchanges BSE/NS
 - (2) Take the plunge via the Mutual Fund route - wherein the options available are: equity diversified, balanced, tax saving ELSS funds, thematic, exchange traded or index funds
 - (3) Investing in ULIPs (insurance plans) via their equity funds that the fund's investment produces and also the brokerage expenses, management fee and other operating costs incurred by the fund.

- (b) **Bonds:** Bonds are interest-bearing debt obligations issued by corporations, the government and its agencies. Bond represents a loan to the issuer and provides income, usually fixed, plus a promise to repay principal on maturity. Although bonds generally offer higher and steadier income than cash reserves/bank deposits, their principal value fluctuates as interest rates change. In general, when interest rates raise, bond price decline; when interest rates decline, bond prices rise. Bonds can be varying maturities from one year to 10 years. Corporate bonds are simply debt obligations issued by individual firms. Municipal bonds are interest-bearing securities issued by local governments. Government agencies such as Rural Electrification Corporation (REC), Housing & Urban Development Authority (HUD) and NHAI (National Highway Authority of India) issue bonds to collect funds. Most of bonds of this category are typically free of income tax obligations. Investors who prefer safety of their investment over higher returns usually invest in bonds.
- (c) **Mutual Fund:** it is a tailor-made investment vehicle that is designed according to participant's needs and goals. A mutual fund represents a vehicle for collecting investment. When investors participate in a scheme of mutual fund, investors become a part-owner of the investment held under that scheme. Mutual fund schemes invest in three broad categories of financial assets, viz. stocks, bonds and cash. Stocks refer to equity and equity related instruments. Bonds are debt instruments that have a maturity of more than one year. Cash represents bank deposit and debt instruments that have a maturity of less than one year. In a mutual fund, each investor shares the income, gain, and losses
- (d) **Real Estate:** Real estate also known for the most rewarding area of investment. The sky-piercing prices of real estates in metros and adjacent areas have extended to investors an opportunity to reap benefits from this trend. It provides speedy capital appreciation by way of high-rising prices quickly. Besides, one can also earn rental return from his investment in real estates.
- (e) **Financial Derivatives:** A derivative is an instrument whose value depends on the value of some underlying asset. From the point view of investors and portfolio managers, futures and options are two most important financial derivatives. Apart from these instruments of investment, investment in precious metals like gold, platinum, etc, rare art collection is also considered good investment in a similar way nowadays, because the investment values appreciate over time and these also provide hedge against inflation and other risk exposure such as political uncertainties. So, investors can choose any of these options according to their financial needs and objectives.

Classification of Individual Investors In the stock market, different people are engaged in various activities. They select investment product according to their requirement and future objectives, then choose a suitable procedure along with best strategy and hope to fulfill their objectives. So, individual investors can be classified by the product they include in their investment portfolio and the procedures they adopt as well the investors can be classified in the following ways:

- (i) **Stock Trader:** A stock trader is one who trades in stocks. Trading is a process of buying and then selling and in the process booking some profits. It involves buy side and sell side. Trading is basically a search problem. It is important for buyers to find sellers and,

for sellers to find buyers. Every trader wants to trade at a favorable price. Sellers seek buyers, who are willing to pay high prices. Whereas, buyers seek sellers who are willing to sell at lower price. There must be trade with matching size or quantities as well. Traders may have long positions and traders with long position profit when prices rise. Traders with short position or short- sellers profit when they sell high and buy low. They sell with hope that prices will fall so they can repurchase at a lower price. When they repurchase, they cover their positions.

- (ii) **Long-term Investors:** Investors who hold position of the assets like stocks and bonds for long time say more than one year can be referred as long-term investors. It also called utilitarian traders. They trade with a view to move money from the present to the future, while obtaining a fair rate of return. They get some another benefits besides trading profits. While going for a long-term investment, an investor's return requirements and his/her risk appetite are taken into consideration. Other factors to be taken into account are tax obligations, inflation and market volatility. In a volatile market, an investor may rethink his/her decision to invest for a long time period.
- (iii) **Speculator:** They are another class of traders who attempt to book profit by predicting precisely how prices will change in future. They predict the future price movement from the information they collect, analyze, and some cases, produce. To profit from their insight, they buy when they anticipate prices will rise and sell when they think prices will fall. Most often their predications are found to be wrong. It has been observed that successful speculators are right but often their predictions go wrong. Their profit depends on the right prediction.

Apart from these ones, there may be other people with different investment products and exercise different investment procedures. Real estate speculators are such category who deal in real estate and predict changes in future prices and thereby earning profits. They buy real estate properties, hold them till their prices go up and then sell reaping obvious profits. Some investors trade in commodities in future markets. There may be hedgers who use the capital markets to diminish their exposure to potential financial risks. They hedge their risk by selling or buying instruments whose values are positively or inversely correlated with the risks that they face. Their positions in these instruments are their hedging risks. If properly executed, the risks in their hedges offset their financial risks. Their hedge positions - the combinations of their positions in the original risk and in the hedging vehicle- are better than either position taken separately. Then, comes the most conservative class of investors, people who prefer to put their saving in the bank and holds it over a long time. Although, by this way they earn very little or, say negligible as compared to other investment alternatives, but they think that their savings are safe on the risk front.

Individual Investor Behavior

There are various motives behind the investment of different people. The main objective of the big investors is to obtain the control of the company, for investor's perspective in general and individual in particular, their interest in investment is largely due to financial reasons especially they want to earn handsome amount in terms of profit. Return is the motivating force behind investment in respect of investors in general. It is the principal and ultimate reward they get from their investment. The rate of return is the key factor for investors to make best

choice among competitive investment opportunities. They compare alternative investment opportunities from the return angle and accordingly assign ranking to them. In general terms, return on investment includes the periodical cash inflows (either in the form of interest or dividends) plus the appreciation in the price of the asset, i.e., capital gain. Different investment products yield differently. Shares and stock can earn income in the form of dividend, bondholders receive return on their investment in the form of fixed interest. Although investor's main motive to earn profit/ return while selecting an investment product, but it doesn't mean that they rely solely upon returns, they also consider safety of investment. They expect higher return, at the same time they wish to avoid risk of losing their money.

Individual Investors Behavior Form Risk and Return Perspective

The investment process consists of two tasks. The task is security analysis which focuses on assessing the risk and return characteristics of the available investment alternatives. The second task is portfolio selection which involves choosing the best possible portfolio from the set of feasible portfolios. Traditional investment theories focus on the fact that the most important concern for investors is volatility of individual securities, i.e., risk. People pay more attention to the risk associated with their investment i.e., safety of investment along with the return. In the stock markets, they see securities carrying risk in different degree. Most investors, therefore, tend to hold more than one security at a time and by this way, they attempt to spread risks, that is, spreading risks by not putting all their eggs into one basket. This notion forms the base of modern portfolio theory. Portfolio theory, originally proposed by Harry Markowitz in the 1950s, was the first formal attempt to quantify the risk of a portfolio and develop a methodology for determining the optimum portfolio. Harry Markowitz was the first person to show quantitatively why and how diversification reduces risk. In recognition of his seminal contribution in this field he was awarded the Nobel Prize in economics in 1990s. According to the theory, a portfolio consisting of two stocks, for example, is probably less risky than one holding either stock alone. This is referred to as diversification of investment. And, the sole motivation behind investment decisions is to maximize economic welfare. This is contrary to the view proposed in traditional investment theories. The modern portfolio theory proposed by Harry Markowitz is based on two fundamentals regarding investment behavior.

- (i) Investors want to maximize utility that can be expressed in terms of positive benefits from investment. Investors want from their investment highest returns at lower-level amount of risk for a given expected rate of return.
- (ii) Investors are said to be risk averse. Whenever there is an increase in the expected rate of return, they get positive benefits (read, utility), and in case of an increase in the amount of risk, they suffer a psychic loss (read, disutility). In a nutshell, utility rises with expected return and fall with an increase in volatility. So, for an avid investor, the optimal portfolio is one with the highest expected rate of return for a given level of risk, or the lowest of risk at a given expected rate of return. According to the "modern portfolio theory", investors considered only the expected return and risk (measured in terms of volatility) of their investment portfolio. Whenever they are to decide which investment product to buy, they are assumed to be only interested in the new investment product's interaction with their existing portfolio, if any.

Stock Price Movements

The stock market is a source of raising funds for their participants whether it is through private sectors or public sectors. In India, the volume of funds raised on the stock market by private and public sector units increased significantly during the early 20th century. It is evidence to show growth of private sectors companies in stock market. Increased number of capital issues on the stock market means more functional stock market. The tenor of the working of the stock market is reflected by the security prices (Bhole, L.M, (2006). Increasing in security price shows the booming phase of stock market. The stock is also known as barometer of an economy. So, the government also tries to frame such economic policies that spur the stock market. The stock price movements and individual trading behavior are another major aspect the present study. Stock price is one of the factors that influence the individual investor behavior towards investment decisions. Prices of the shares fluctuate so frequently that it is possible for an investor to become a millionaire on a particular day and broke (bankrupt) the other just by the choice of investment s/he has made. No one can predict the stock market with hundred percent confidences. Like any other commodity, in the stock market, share prices are also dependent on several factors. So, it is difficult to say that only one or two factors affect the prices of the stocks. The price of shares fluctuates every now and then. The prices for shares go up and down owing to a number of factors happening from individual business units (i.e., company itself) through to a complex environment of the entire economic system, both local and global. In this study, the researcher has highlighted and discusses some factors that influence the share prices. There are some factors that directly influence the share prices as followed:-

- **Demand and Supply-** This theory proposes that when the demand for a certain commodity increases, the supply constant, and the price of that commodity tends to increase and vice versa. This is exactly what happens in case of the price of a share. The price is directly affected by the trend of stock market trading. When more people start buying a certain stock, the price of that stock increases and when more people start selling a particular stock, the price of that particular stock falls. It is to predict the trend of the market but investor can get some fair idea about the ongoing trend of the market. In online poll, a question was asked before individual investors, "what are the factors affecting the share price hikes?" it was found that most individuals agree that demand and supply rule of the stock prices. The share price is based on the demand and supply, if the demand is more than the share price will rise; on the other hand, if the supply goes up then share price will fall down. Recently, 2008 to 2013 same things happened in stock market crash due to fear of loss factor the small investors sold their shares that lead to heavy loss. In the stock terminology, it is called a bearish trend. Someone has rightly said that "stock is worth what somebody is willing to pay for it". That's because the price of a stock is determined by buyers and sellers. There are many factors (the economy, information about the company, and investor's goals) that decide price or investors estimated price which they are willing to pay for a particular stock. Simply put, the price of an individual stock is determined by supply and demand. The price of shares is determined by supply and demand. The supply is based on the number of shares a company issue. The demand is created by investors who want to buy those shares from the investors who already own them. The demand of the shares is driven by willingness to buy shares by more investors. The more the people

desire to own a stock, the more they are willing to pay for it. But there is limited supply of the shares so that investors can buy only those shares which are already floating in the share market. If lots of traders/investors want to buy a particular share at current price, and a lot of investors do not want sell on the current price as a result of this the price will go up until more people are willing to sell. When the prices get so high that buyers no longer want that particular stock, the prices start to drop.

- **Environmental Factors-** Information relating to economy and environment play a vital factor in stock price decision. Information can take any form, such as news, rumors, etc. positive news about a company can increase buying interest in the market while a negative press release can ruin the prospect of a stock. Positive information is good for increasing demand of the concerned shares. On the other hand, unfavorable or negative information may not be good for the company's public image and in the eye of the stakeholders, both existing and prospective one's. In the current scenario economic activities can reach at global level, the smallest tremor can detonate an earthquake, a spark can ignite a wild fire. Markets react promptly and uncharacteristically to rumors of wars, change in regulatory environment, political climate is seen as negative by the business (investing) community, interest rate variation to general performance of the economy. In the stock market the price of the share is affected positively and negatively by number of factors occurring within and without the economic system. The factors which influence share price within the country are categorized as domestic factors. Those that are impacting on the business and investment from outside the country are defined as global factors. Thus, before buying or selling shares one should first ascertain both global and domestic factors which may be influencing the market and establish a good timing of buying or selling one's shares. Traditionally, shares price are higher when country's economy is doing stronger and lower when the country experiences poor economic performance. In determining the stock market trends, interest rates play a vital role. Bull markets are usually associated with low interest rates, and bear markets with high interest rates. Interest rates are determined by the demand for capital. High demands for capital result high interest rate and that indicates the positive growth of the economy which leads to increase price of the shares. Low interest indicates low demand for capital; thus, liquidity builds up on the economy forcing share price to go down. There is another important factor playing an important role in share price i.e., health of entire industry to which the company is related to. A company's share price may go up or come down depending on whether investors think its industry is growing or contracting. Investors in general and individual investors in particular, look the future of any stock from the perspective of the overall industry. For example, a company might be doing well financially, but if its industry is declining then, investors might question the company's ability to keep growing further. In this case, the demand for that company's shares starts declining, leading to stock price fall. Some industries are considered cyclical; it means that they expand and contract in cycle. For example, home building declines when interest rates rise. Consumer electronics typically demand more at the end of the year, these products are purchased by the people during the festive season as gifts. Some policy related factors also have their bearing on the stock prices. Monetary policy also affects the stock price, the restrictive policy result as a lower stock price, on the contrary, accommodative monetary policy leads to higher policy stock price. A part from other factors, national or

international events can also influence stock price. When investors think on a new policy or government announcement will be good for the economy, such as tax rebates, reducing taxes, and giving some especially tax benefit to the particular industry segment, which supposed to go up the stock prices. If news such as massive layoffs or raising CRR, will mean an economic slowdown or uncertainty or adverse impact on company's cash flows, stock prices generally drop. A political development be it inside or outside the country may have bearing on the share prices. The political factor is visible through regulatory processes and its influence (not directly) on share prices becomes the eventuality. For example, recently in Karnataka election 2018, when congress alliance with JDS did not get the chance to make government and BJP came into power, the share market went up to 400 points. After 48 hours when BJP was not able to prove its majority and Yadurappa resigned, as a result share market correct them after this event. So, it can be said that share market indices can get affected from events outside the share market itself. This effect can last for an hour, a day, and several weeks or longer depending on the prevailing circumstances.

- **Company's Financial Health-** Investors need to analyze the company's financial health before going to buying or selling the stocks. If they look like a company is going to lose money, perhaps the company just announced poor earning then its stock has less value. Investors will consider paying more for a company with a history of earning strong profits and consistently paying healthy dividends. For this purpose, they can look at Earning per share (EPS). EPS is the profit that the company made per share on the last quarter. It is mandatory for every public company to publish quarterly report that states the earning per share of the company. EPS plays an important role in determining the health of the company and change the buying tendency of the investors in the market resulting in the increase in the price of that particular stock. So, investors keep an eye on the quarterly reports that the companies publish and should consider those results before buying and selling shares of that particular stock. Companies are interested in doing well in their business to attract more & more prospect investors, thereby, resulting in high demand for their shares. Entities which are not doing well, business wise may result in investors selling their shares on the market. Selling end masse will result in more shares flooding the market and consequently bringing the price down and an abundance of a commodity leads to decline in price. After the EPS analysis, investors consider another important factor which help in investment decision i.e., P/E ratio. Price/Earnings ratio or the P/E ratio gives investors a fair idea of how a company's share price compares to its earnings. If the share price is too much lower that the earning of the company, the stock is called as undervalued and it has the potential to rise in future. On the other hand, if the share price is going to much high as compared to actual earning of the company and then stock that is known as overvalued and the price can fall at any point. These are the bases on which investors from their opinions regarding investment decisions. Investors sometimes make a huge mistake by assuming the company's market capitalization as the worth of the company
- **Demographic Profile-** The survey conducted, was dominated by males (59.30%) and but the percentage of females' participating in stock market was impressive (40.70%) as compared to percent of female participants in other studies conducted in India. The above information showed that females have become more interested in investing in share market

over the time. The responses were collected from individuals working in different sectors and organizations. Although, the working force in companies is dominated by males which was also represented in the sample. But it was observed that females now take part in investment related matters and invest money on their own as well proving their economic independence. Age classification as per personal profile and their investment pattern shows that middle aged men and women ranging from 25-35 years (39.1%) and 36-45 years (38.7%) are more interested in investing in stocks. As the people are crossing 45 years of age but are below 55 years the proportion of people investing reduces to 16.2%, this may also be because the people in the age group are less in number who have participated in the survey. The proportion of people between the age group of 18-24 years are only 3.0% of the total sample, which may indicate that people in this age group they are not comfortable to invest in stock markets. It is surprising that the percentage of respondents in the age group 56-65 years is 3.0% of the sample population who are found to be investing in stock markets. As per the survey, people with different qualifications have shown interest in investing in shares market, topping the proportion are post-Graduates which is 66.3%, then Graduates 23.2% and Individuals who are highly educated like Ph.D. are not active participants in stock markets which makes about 9.3% of the total sample. In terms of analysis of occupation, it was found that corporate employees are most active participants who make 43.0% of the sample as compared to self-employed professionals like, Chartered Accountants, Lawyers and Government Employees who are 20.5% and 17.5% respectively. The People in Business who participated were 14.9 % while proportion of home makers was 2.5% and of retired people being the lowest at 1.7%. Analysis based on income level revealed that the people with income level of Rs.50,000 to Rs.60,000 per month topped the list of participants (28.5%), followed by people with highest earning level as per the table i.e., of Rs. 60,001 and above i.e., 25.8%.

Table1: Percentage Holdings of the Investors in the following Investment Avenues

<i>S.No</i>	<i>Particulars</i>	<i>Average</i>
1	Cash / Saving Bank Balance	16.10 %
2	Fixed Deposits	15.01 %
3	Corporate Bonds/ Debenture	6.88 %
4	Insurance Plans	12.44 %
5	Mutual Funds	6.21 %
6	Unit Linked Insurance Plans	2.25 %
7	Equities	25.82 %
8	Alternate Asset Class (Art, Commodities, Gold & Silver)	10.79 %
9	Exchange-Traded Fund (ETF)	0.87 %
10	Derivatives	3.64 %

From the above table it shows 25.82 % investors invest in equity, 16.10 % respondents hold cash in Bank, 15.01 % investors invest their money in Fixed deposits and 12.44 % choose

insurance plan(s). 10.79 % investors invest in Alternate asset class like Gold and Commodities. Only 6.88 % investors invest in Bonds and Debentures and 6.21 % respondents have taken Mutual Funds as an option. Derivates are not so popular among the respondents only 3.64 % investors invest in them. ETF is the least preferred investment option, only 0.87 % investors choose this option. As per the observation, respondents are moderate risk lovers, they prefer mix portfolio which includes risky as well as risk free assets. The result shows that investors are taking risk but to a certain limit.

Table 2: Safe Investment Instrument for Investment

<i>Investment Avenues</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>
Bank Deposits	3.00	5.00	4.78
Insurance	1.00	5.00	4.37
Post office Schemes	1.00	5.00	4.36
Debenture	1.00	5.00	2.40
Share	1.00	3.00	1.09
Mutual funds	1.00	3.00	1.08
Derivatives instruments	1.00	3.00	1.01

As per the above table results, respondents are aware of the level of risk of the assets and they are able to analyze which instruments are safe for their investment. As per results, respondents believe that Bank Deposits (mean = 4.78), Insurance (mean= 4.37), Post Office deposits (mean= 4.36) are safest investment instrument for their savings. As per investment point of view respondents believe that Debentures (mean= 2.40) are Moderately safe and Share (mean= 1.09), Mutual Funds (mean= 1.08) and Derivative (mean= 1.01) Instrument are unsafe for their investment.

Table 3: Sources of Information Reliable for Making Investment Decisions

<i>Particulars</i>	<i>Brokers/ Agents</i>	<i>Friends & Relatives</i>	<i>Family Members</i>	<i>TV & Radio</i>	<i>Magazines & News Paper</i>	<i>Internet</i>	<i>News channels</i>
Highly reliable	23.5%	16.6%	19.2%	19.9%	31.8%	36.8%	40.7%
Fairly Reliable	32.8%	29.8%	36.4%	29.1%	34.1%	39.7%	30.1%
Reliable	27.8%	30.5%	19.2%	32.1%	17.2%	17.2%	19.5%
Sometime Reliable	11.6%	18.9%	14.6%	11.3%	13.2%	5.0%	6.6%
Least Reliable	4.3%	4.3%	10.6%	7.6%	3.6%	1.3%	3.0%
Mean Score	3.59%	3.35	3.42	3.39	3.77	4.05	3.99%

The table above concerns about which sources of information are believed to be reliable by the investors for making investment related decision. As per the observation the 40.7% investors follow investments related news channels, 36.8% people says internet sources and 31.8% Magazines & News Papers are highly reliable source for taking investment related

decision, 32.8% respondents see broker's advice as fairly reliable, 39.7% investors feel that information available on the internet is fairly reliable, 36.4% respondents say that family members' advice is reliable and 29.8% respondents believe that advice from friends & relatives is reliable. As per the above result, we can say all the above sources are conceived to be reliable and respondents consider the advice of others before making an investment. If we observe the mean score of the above data, internet has a high score of 4.05 and News channels is 3.99. That means investors are likely to rely on Media sources rather than other sources like Personal resources.

Table 4: Investment Strategies Recommended and/or Used by Investors in Indian Equity Market

<i>S.No</i>	<i>Particulars</i>	<i>Average</i>
1	Size effect (buy small cap stocks)	3.84
2	Value effect (buy high Book to market equity stock)	2.76
3	Leverage effect (buy stock of highly levered companies)	3.91
4	P/E effect (buy low P/E stocks)	3.86
5	January seasonality effect (buy stocks in December and sell in January)	2.25
6	April effect (buy stocks in March and sell in April)	1.82
7	Day of the week effect (buy Monday sell Friday)	1.95
8	Intra month effect	1.79
9	Pre-holiday effect	1.74
10	Momentum effect (buy past winners)	2.37
11	Contrarian effect (buy past loser)	2.47
12	Follow the investment behavior of FIIs	3.02
13	Buy stock whose price has gone down by certain %	3.18
14	Buy stock whose price has gone up by certain percentage	3.29
15	Buy stock for which good news is expected	3.99
16	Buy stock which is expected to announce bonus issue and stock split	3.59
17	Buy stock which has announced well quarterly results	3.66
18	Buy stock which is most actively traded	3.50
19	Buy stock on the basis of 30 days moving average	3.26
20	Buy stocks on the basis of market capitalization index	3.66

In order to investigate what are the popular investment strategies being recommended and/or used by equity analysts and active investors in Indian equity market respondents were asked how often they use these investment strategies and to rate the specified investment strategies on a Five-point scale as Always, Sometimes, Rarely, Mostly, never. Twenty such strategies have been specified clearly in the questionnaire and information has also been sought as to the other investment strategies which might have been used by the respondent. The results have been presented in above table. In order to present meaningful analysis of the collected

information, mean scores of these investment strategies using Likert-Scale has been calculated, they were assigned the following numbers for different rates. Always = 5, Sometimes = 4, Rarely = 3, Mostly = 2, Never = 1. Then these strategies have been ranked on the basis of their mean scores (from highest to lowest). Table 5.6 presents the results regarding mean scores of various investment strategies used and/or recommended by equity analysts and active investors in Indian equity market. The results clearly show that thirteen investment strategies used mostly in Indian equity market are:

- Buy stock for which good news is expected (Mean Score 3.99)
- Leverage effect (buy stock of highly levered companies) (Mean Score 3.91)
- P/E effect (buy low P/E stocks) (Mean Score 3.86)
- Size effect (buy small cap stocks) (Mean Score 3.84)
- Buy stock which has announced well quarterly results (Mean Score 3.66)
- Buy stocks on the basis of market capitalization index. (Mean Score 3.66)
- Buy stock which is expected to announce bonus issue and stock split (Mean Score 3.59)
- Buy stock which is most actively traded (Mean Score 3.50)
- Buy stock whose price has gone up by certain percentage (Mean Score 3.29)
- Buy stock on the basis of 30 days moving average (Mean Score 3.26)
- Buy stock whose price has gone down by certain % (Mean Score 3.18)
- Follow the investment behavior of FIIs (Mean Score 3.03)

All the above strategies were determined from the review of literature which can be used by investors to take investment decisions. Thirteen strategies were identified which were highly recommended by various authors in different studies. Calculated the mean score of the above variables (Strategy) and rank them on the basis of mean score and arranged them in a chronological order and we found that twelve variables are frequently used by the respondents. Further, exploratory factor analysis technique was applied on all investment strategies for identifying the relation among all variables and strategies were divided into groups on the basis of their correlation.

Factor Analysis

Factor analysis was run on the 15 items so as to find the dimension perceived by the respondents. The KMO sampling adequacy is 0.734 which is above 0.5 level of significance that means, to run factor analysis the number of respondents is adequate and the level of significance of Bartlett's Test of Sphericity is 0.000 which means that data is suitable for factor analysis.

Table 5: Multiple Goals for Making Investment

<i>Particulars</i>	<i>Minimize of Risk</i>	<i>Stability in Return</i>	<i>High Return</i>	<i>Retirement income</i>	<i>Consumption n needs like children Educational, Marriage and etc.</i>	<i>Tax saving</i>	<i>Liquidity needs in future</i>
Most Important	46.6%	57.0%	52.0%	37.0%	44.0%	52.0%	47.0%
Important	42.1%	36.0%	37.0%	35.8%	39.1%	34.4%	42.0%
Neutral	10.3%	6.0%	10.0%	20.2%	9.6%	6.6%	9.0%
Not so Important	1.0%	1.0%	1.0%	6.0%	7.3%	7.0%	1.0%
Don't Know	--	--	--	--	--	--	1.0%
Mean Score	4.34	4.50	4.40	4.03	4.19	4.31	4.32

Multiple Goals Pursued by Investors

From the empirical observation conducted, it has been observed that investors pursue multiple goals. It was also observed that some of the important portfolio goals in descending order are stability in return (57.0%), high returns (52.0%) and tax saving (52.0%) and they constantly think about these goals while making their investment decision. Some of the other important goals not pursued so aggressively include minimization of risk (42.1%), Liquidity need in future (42.0%), Consumption needs like children's Educational, Marriage and etc. 39.1%. on other hand, as per the mean score of the stability in return and high return are most preferable goals for their investment. As per the results, respondents were thinking less about the income after retirement while taking investment decisions. They mainly were focusing on stability of returns due to the unstable market conditions, tax saving and high returns and they also consider as a major objective of formation of investment portfolio.

Table 6: Important Factors for the Investment Decisions

<i>Particulars</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>
Consider the political linkage news that belongs to specific company	1.00	5.00	4.47
Price/ volume charts	2.00	5.00	4.25
Company specific information such as sales, growth rate etc	2.00	5.00	4.25
Economic Factors such as GDP forecast, inflation etc	1.00	5.00	4.06
Industry specific information to which the company belong	1.00	5.00	3.94

From above table investors consider politically linked news which is related to the company (mean=4.47) most of the times before investing. Investors also consider the price/volume chart (mean= 4.25), company specific fundamental information (mean= 4.25), economic factors (mean= 4.06) and industry specific information (mean= 3.94) for their investment decisions.

Table 7: Factor Analysis of Behavioral Variables Influencing the Individual Investment Decision and the Variables of Investment Performance

<i>Item No</i>	<i>Statement of Factors</i>
1	You buy 'Popular' stocks and avoid stocks that have performed poorly in the recent past
2	You use trend analysis of some representative stocks to make investment decisions for all stocks that you invest.
3	You believe that your skills and knowledge of stock market can help you to outperform the market.
4	You rely on your previous experiences in the market for your next investment.
5	You forecast the changes in stock prices in the future based on the recent stock prices
6	You are normally able to anticipate the end of good or poor market returns at Indian national Stock Exchange.
7	You prefer to buy Indian company's stocks than foreign company's stocks
8	You consider the information from your close friends and relatives as the reliable reference for your investment decisions
9	After a prior gain, you are more risk seeking than usual.
10	After a prior loss, you become more risk averse.
11	You avoid selling shares that have decreased in value and readily sell shares that have increased in value
12	You feel more sorrow about holding losing stocks too long than about selling winning stocks too soon
13	You keep separate investment budget for different assets classes like equity, bond, Derivatives and etc.
14	You consider carefully the price changes of stocks that you intend to invest in.
15	You're trading activity increasing significantly in response to even small price changes.
16	Market information is important for your stock investment
17	You put the past trends of stocks under your consideration for your investment.
18	Before you invest in a particular company, you analyze the customer preferences for its products.
19	Other investors' decisions of choosing stock types have impact on your investment decisions.
20	Other investors' decisions of the stock volume have impact on your investment decisions.
21	Other investors' decisions of buying and selling stocks have impact on your investment decisions.
22	You usually react quickly to the changes of other investors' decisions.
23	The return rate of your recent stock investment meets your expectation.
24	Your rate of return is equal to or higher than the average return rate of the market.
25	You feel satisfied with your investment decisions in the last year (including selling, buying, choosing stocks, and deciding the stock volumes).

The table above includes psychological questions which helped the researcher to measure investor's behavior. These statements belong to various variables namely Heuristics, Prospect theory, Market, Herding and Investment Performance

Influence of Behavioral Factors on the Individual Investment Performance

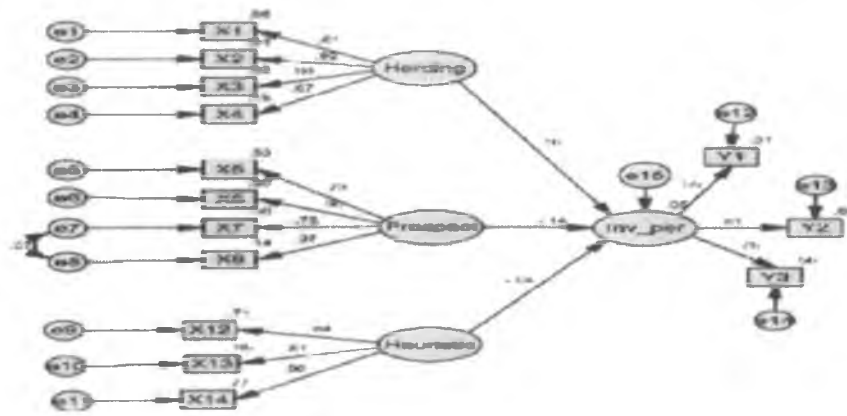
In this section, Structural Equation Modeling (SEM) was used to represent relationship between behavioral variables. Structural equation modelling can examine a series of dependence relationships simultaneously. It is particularly useful in testing theories that contain multiple equations involving dependence relationships. The confirmatory factor analysis (CFA) is one component of SEM which helps to confirm which factors and their variables (formed by EFA as mentioned above) are suitable for the structural model; whereas, the other component, multiple regression, estimate the regression weights between behavioral factors (consisting of independent variables) and the factor of investment performance (including dependent variables).

Table 8: Model Fit Indices (Measurement Models)

<i>Indices</i>	<i>Recommended Value</i>	<i>Model Fit Indices</i>
CFI	> 0.95	0.962
GFI	> 0.95	0.936
CMIN/df	< 3	2.075
AGFI	> 0.80	0.908
RMESA	< 0.05	0.041
P Close	> 0.05	0.109

The structural model fit is very good with CFI (comparative Fit Index) = 0.962; GFI (Goodness-of-Fit index) = 0.936 that was very close to recommended value and should be acceptable for good model fit; The value of RMESA (Root Mean Square Error of Approximation) was found to be 0.041, CMIN/df was 2.075 and PCLOSE was 0.109. These all-Indices value indicates strong predictive validity of the model.

Figure 1: Structural Equation Modelling for Behavioral factors and Investment Performance



Above Figure provides the estimates of factor loadings between observed variables and their respective latent variables. In this model, only three factors are explored to have impact on Investment Performance; Herding (including X1, X2, X3 and X4), Prospect (including X5, X6, X7 and X8), Heuristics (X12, X13, X14). The factor loadings between each factor and its variables are all over 0.5 that ensure the convergent validity of data measurements. The path coefficient between herding factor and investment performance was found to be positive where as it was found to be negative for heuristic and prospect theory factors. Herding behavior factor is the highest and only factor that has positive impact on the investment performance with the path coefficient of 0.16. This means investor's change their investment decision according to the other investor's decision i.e., their decisions are highly influenced by other's investment related decisions. Prospect variables include Loss aversion and regret aversion having negative impact on the investment performance with the path coefficient of -0.14. This means the respondents' investment performance may not be affected by the losses and bad decisions taken while investing in the Indian stock market. A heuristic behavior includes Gambler's fallacy and Ability biases have negative impact on the investment performance with the path coefficient of -0.04.

Conclusion

Investing in financial market is a very critical task; because of the involvement of money every investor wants appreciation in invested amount. Therefore, investors should design optimum portfolio which provides maximum utility or abnormal return to the investment. There are huge numbers of investment avenues available in the financial market for investors. But here a question arises that which investment avenues give good returns or are safer from the investment point of view. As per empirical results, 25.82% individual investors prefer to invest in the equities, the second most preferred investment avenue is saving in bank accounts, as 16.10% investors preferred keeping the cash in their bank accounts. As far as awareness of the respondents is concerned, they are aware of the level of risk of the assets and also, they are able to analyze which instruments are safe for their investments. Respondents are aware about the level of risk involved in various investment avenues. Sources of information play a vital role in investment decisions, particularly in Indian stock market because, a reliable source of information leads to good return in stock market. A source of information includes family, friends, and other media sources. As per the results of this survey, it can be said that investors are relying on Media sources rather than sources like personal resources. Rational investors always analyze the market information and make the investment strategies according to the information they had received. In this study, twenty investment strategies were shortlisted after intensive review of related literature for this study. Out of these, thirteen were shortlisted on the basis of respondent's preferences. These thirteen investment strategies were shortlisted on the bases of mean score above 3.00; These thirteen strategies belong to both fundamental and as well as technical strategies. The survey results presented in this study show that most of the investors use both fundamental as well as technical analysis while investing in Indian stock market. The relationship between individual trading behavior (trading volume) and stock price movements (returns). Towards this end, the study has used high frequency (5-min) data. The present study has considered two alternatives' measures of trading volume namely, no. of shares traded and value of shares traded. Using linear Granger causality, the study found that for 13 stocks there exists causality from volume to returns. Therefore, for 37 stocks, there is no causality from volume to returns.

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