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INFLUENCE OF BEHAVIOURAL FACTORS ON STOCK MARKET INVESTMENT DECISION IN INDIA

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Abstract

Investment has various avenues and each avenue has its own advantages and disadvantages hence it is important to take decision on the right type of avenue based on the objective and necessity of the investors. Here the study concentrated on behavioural aspect of an individual while he decides on investing in various stocks in the stock market as an investment avenue.

The study concludes that behavioural factors such as heuristic, prospect, market, herding have positive and significant influence on an individual's investment decision making in stock market. Heuristic has the greatest influence with a standard estimation of 0.410 which could mean investors in Indian market follow the rule of thumb or learn from their past experiences, pre-existing ideas/concepts of the stock, skills that they possess, analyzing the future based on recent stock price movement. The second most influential behavioural factor is market with a standard estimation of 0.202 which interprets that investor's use stock market information while they make investment decision. Market information such as stock prices, past trends of the stock, price changes, examining economic, financial, and other qualitative and quantitative factors. The third influential behavioural factor is prospect with a standard estimation of 0.202 which interprets that people value their losses greater than their gains and use factors such mental accounting, regret aversion and loss aversion to make decisions while investing. Indian investors value herding as a behavioural factor as the least influencing with a standard estimation of 0.125 which interprets that they do not follow the herd or there exists no bandwagon effect which they make their investment decisions in the stock market.

Introduction

Finance is considered as the core of an economic system. Hence, from a simple bank account savings to making complex investments, every penny that is spent or saved is well accounted. Finance is defined as the management of money and consists of activities such as saving, investing and predicting (corporatefinanceinstitute, corporatefinanceinstitute.com, 2012). Over the years, a period finance has been categorized under two major schools of thought- Traditional Finance and Modern finance.

Traditional finance scholars have propounded that individuals are rational and their decisions are a result of serious contemplation. Traditional school of thought has always portrayed investors as rational, calculated and emotionless people. This school also assumes that investors are not subjected to biases and based on these observations, traditional financial theories were developed. Traditional Finance has developed various theories such as Efficient Market Hypothesis, the Portfolio Theories of Markowitz, Obtuse Theories of Miller and Modigliani (Meir, 1999). The second major contribution in traditional Finance is that of the Capital Asset Pricing Model by Jack Treynor (1962). It was also concluded that rationality exists among investors and they

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provide more importance on maximizing utility or return from their investments for a given level of risk. In other words, the main objective that rational investors have is maximizing their risk return trade off. (baker, hargrove, & haslem, 1977).

On various events, psychological studies have shown that the torment of losing cash from investment is nearly three times more prominent than the joy of procuring money (PASHTOON, 2016). (Subramaniam V.A. & Velnampy T, 2017)Small market corrections have often resulted in full-scale crashes due to investors panicking and making rash decisions for a momentary again and not long term profits. For e.g. Tulip scam, also known as Tulip Mania saw the Bloom of behavioural finance, where tulips were valued and invested for a greater value and due to the bubble, the value of tulips fell and resulted in the burst of the bubble. (gupta, Preetibedi, & Poonamlakra, 2014)This created an emotional instability amongst investors, which ultimately resulted in a huge loss. Hence, the value of tulips came crashing down, creating a major void in the market. Emotions such as fear and greed play a vital role in investment decisions. Modern Finance and Economics had close links with Psychology. The father of Economics, Adam Smith stated the importance of psychological principles of individual behaviour in his theory of moral sentiments. Although, during the neo classical economic era, psychology had largely disappeared from economics. A number of theories during the same time propounded that investors are rational and hence, the invention of effective market hypothesis and rationality gained much importance.

Perhaps, the most vital concepts of the development of the behavioral finance and political economy fields was introduced by Kahneman and Tversky. This paper, ‘Prospect Theory: Decision Making under Risk’, utilized psychological features and techniques to clarify a variety of documented anomalies with higher cognitive process (Ricciardi, 2008). Human judgment and decision-making under uncertainty was an integration of psychology and economic science for which Daniel Kahneman was granted noble prize. (Kuriakose, 2017)Behavioral Finance is a new subject within the field of finance and is exceptionally popular in stock markets worldwide for investment choices. It is the study of investor’s science and also creating monetary choices. Investors fall prey to their own and for the most part others’ mistakes as a result of the use of feelings\emotions in monetary decision-making. Behaviour Finance tries to know how investors overlook fundamentals and build investments supported by emotions (Abhijeet & chandra, 2008).

These models epitomize those upheld expected risk and return identified with an investment, and risk-based assessment models like CAPM (Kengatharan & Kengatharan, 2014). (Hertz, 1979). However, selections ought to never be created solely by wishing on the non-public resources and sophisticated models, that don't take into account the situational factors. (chandra & abijeeth, 2008) Situational factors not only considers investors problems but also the environment.

(Lingesiya & Navaneethakrishnan, 2014)So to construct an appropriate decision, investor has to analyze the various factors of the matter by mediating on them by applying psychological science (Committee, 2011).

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Review of literature

Though finance is a relatively established field, there are limited research studies that have looked into the behavioural perspective of an investor. Behavioural finance theories focus on cognitive errors, biases and emotion influence behaviour of retail investors.

Behavioral finance uses models in which a few operators are not completely discerning, either due to preference or in view of mixed up beliefs. (Arora, 2008)Mixed up beliefs emerge on the grounds that individuals are terrible Bayesians. Modern finance has a cumber that is the Efficient Markets Hypothesis (EMH). Conversely, behavioral finance accepts that, in certain conditions, financial markets are instructively inefficient. Not all misevaluations are brought about by mental predispositions. But some are only due to supply and demand imbalances. It is hard to discover exchanging techniques that make profit, this does not infer that financial markets are instructively effective, in any case. Low recurrence misevaluations might be enormous, without introducing any chance to dependably profit, (Ritter J. R., 2003).

Behavioral finance may be a new perspective to financial markets that has emerged, at least in part to retaliate the difficulties in traditional finance. In a wider perspective, it argues that some financial phenomena are often understood by using models during which some agents aren't totally rational (Thomaidis, 2008).

Heuristic

Heuristic was developed in 1970- 1980 by psychologist Amos Tversky and Daniel Kahneman in an article called ‘judgement and decision making’, though the concept was first coined by Herbert A. Simon. Simon’s criticism of mainstream financial models of optimum rationality initiated a number of researches in psychology and behavioral economics. Unfortunately those applications evolved independently with very little conversation among them. The decision making program in psychology was dominated with the aid of Tversky and Kahneman’s approach. This method empirically tested Simon’s guidelines and showed that they were accurate (campitelli & gobet, 2010). Heuristic is defined as involving or serving as an aid to learning, discovery, or problem-solving by experimental and especially trial-and-error method (Ritter J. R., 2003) . (Kengatharan & Kengatharan, 2014) Heuristic is characterized as the “rules of thumb, which makes decision making easier, especially in complex and uncertain environments” (Ritter R. J., 2003) but sometimes leads to severe and systematic error (kahneman & Tversky, 1979) heuristic is based on an assumption of limited data validity and limited time (Waweru, Munyoki, & Uliana, 2008). (Kengatharan & Kengatharan, 2014) The first three factors belonging to heuristics namely representativeness, availability bias, and anchoring were introduced by Tversky and Kahneman in addition two factors named Gambler’s fallacy and Overconfidence were introduced in heuristic theory by (Waweru, Munyoki, & Uliana, 2008).

Prospect

Prospect theory was first introduced by Kahneman and Tversky, which is by far one the best documented and most quoted phenomena in behavioural finance. The theory states that decision makers do not react the same for the gains and losses that they make from investments (Tvede, 1999).Prospect theory is used in a situation when an

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investor is faced with risk and uncertainty. In relation people are more inclined towards certainty therefore people depend more on outcomes which are particularly certain than those which are considered uncertain (Kishore, 2004) . Schwartz articulates that “subjects (traders) generally tend to evaluate potentialities or possible effects in terms of gains and losses relative to a few reference points as a substitute than the very last states of wealth.”

Market

Financial market can be affected by human behaviour which is studied in behaviour finance, if behavioural finance beliefs are to be considered then investors may over or under react to price change, understanding the past trends in future, lack of fundamental analysis, focus on branded stock and seasonal price cycles (Kengatharan & Kengatharan, 2014) Investors are in return affected by these factors while making decisions in the market. (Bondt & Thaler, 1994). The factors of market that have an impact on investors’ decision making are: Price changes, market information, past trends of stocks, customer preference, over-reaction to price changes, and fundamentals of underlying stocks (Kengatharan & Kengatharan, 2014). (Waweru, N. M, Munyoki, E, & Uliana, E, 2008)Investment decisions go through a detailed analysis of various factors, different sets of information which might be rational or irrational and hence avoiding uncertainty while making investment decisions. Past performance of a company stock, insider information, recommendation of Financial advisors and analyst, Loyalty of Company Product, rumors and the least influencing factors are lower level of risk in stock, level of publicity, religious reasons, expected losses from other investment, best opportunities for speculation (Samal & Mohapatra, 2017).

Herding

Herding effect in the financial marketplace is recognized as a tendency of investors’ behaviour to comply with the others’ actions. Professionals normally consider mindfully the existence of herding, because of the way investors rely upon collective information more significant than private information. Which can result in price deviation of the shares which are of major worth; thus, numerous appropriate probabilities for subsidizing at the present might be affected. Educational researchers furthermore pay attention to herd; since its effect on stock rate changes can impact the properties of risk and return models and this has impact on the perspectives of asset pricing theories (Kengatharan & Kengatharan, 2014) (Tan, Chiang, Mason, & Nelling, 2008).A Bird's Eye view of the empirical research on herd behavior in financial markets were the understanding of herding, the causes of herd behavior, the success of preceding works in identifying the phenomenon, and the final results that herding had on financial markets (Bikhchandani & Sharma, 2000). (Kutan & Demirer, 2006) Used new technique based on the method of Hwang and Salmon and primarily based it on a cross sectional dispersion of trading volume to analyze the herding conduct on Toronto stock exchange. (Maditinos, Sevic, & Theriou, 2007) Used a power-law distribution of stock-price variations within a phase denoting herding conduct and the upward thrust of the dot.com bubble. The results exhibited that DFA can be used to determine the beginning of stock-marketplace bubbles but not the beginning of crashes. (Chiang & Zheng, 2010)

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Data and Methodology

Significance of study

India is one of the fastest emerging economies and certainly, one of the most ethnically diverse nations around the world. This research will provide an in-depth analysis in regard to the psychology of an Indian investor and the factors that shape their decisions within stock market investments. With India's financial market being open to global investors, it has created a heterogeneous investor portfolio. The study throws light on the influence of behavioural factors in regard to investment decisions within Indian stock market. Since no studies have been carried out in India using a complete conceptual model, the results could value add to a great extent towards the existing literature.

Research question

1. What are the behavioural factors influencing an investor's decision on investment?

Research objectives

- To identify the most influencing behavioural factor on investment decision making of individual investors

Design of the study

A descriptive method has been utilized for the purpose of this study and data utilized is primary data. Primary data was collected through a questionnaire method. The study of behavioural factors were measured using a Likert scale and analysis was carried out using SPSS, AMOS

Population and sample size

In the present study, Population size is 3.37 crores (SEBI survey 2018). The selected population were retail investor, Retail investors according to SEBI is defined as "A retail investor is someone who buys and sells equity shares, commodity contracts, mutual funds, or exchange traded funds (ETFs) through traditional or online brokerage firms or other types of investment accounts. SEBI law defines retail individual investor as an investor who applies or bids for securities of or for a value of not more than Rs 2,00,000 in an IPO and buys or holds shares worth less than Rs 2,00,000 in a stock". The questionnaire was distributed through google forms in English language Purposive sampling technique was applied to decide on the basis of area of the study and respondents.

Reliability test

Case processing summary

	N	%
Case valid	430	100.0
Excluded	0	.0
Total	430	100.0

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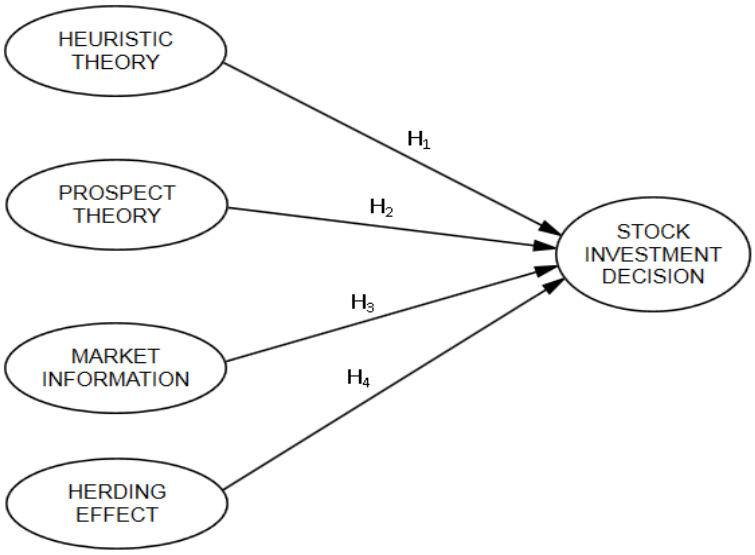
Reliability statistics

Cronbach's Alpha	N of items
.837	18

Data analysis and interpretation

Fig 1



Based on research model shown in Fig 1, the following hypotheses are tested

H_1: Heuristic Theory has a positive and significant influence on Stock Market Investment Decision.

H_2: Prospect Theory has a positive and significant influence on Stock Market Investment Decision.

H_3: Market Information has a positive and significant influence on Stock Market Investment Decision.

H_4: Herding Effect has a positive and significant influence on Stock Market Investment Decision.

(Kengatharan & Kengatharan, 2014)

Objective 1

To identify the most influencing behavioural factor on investment decision making of individual investors

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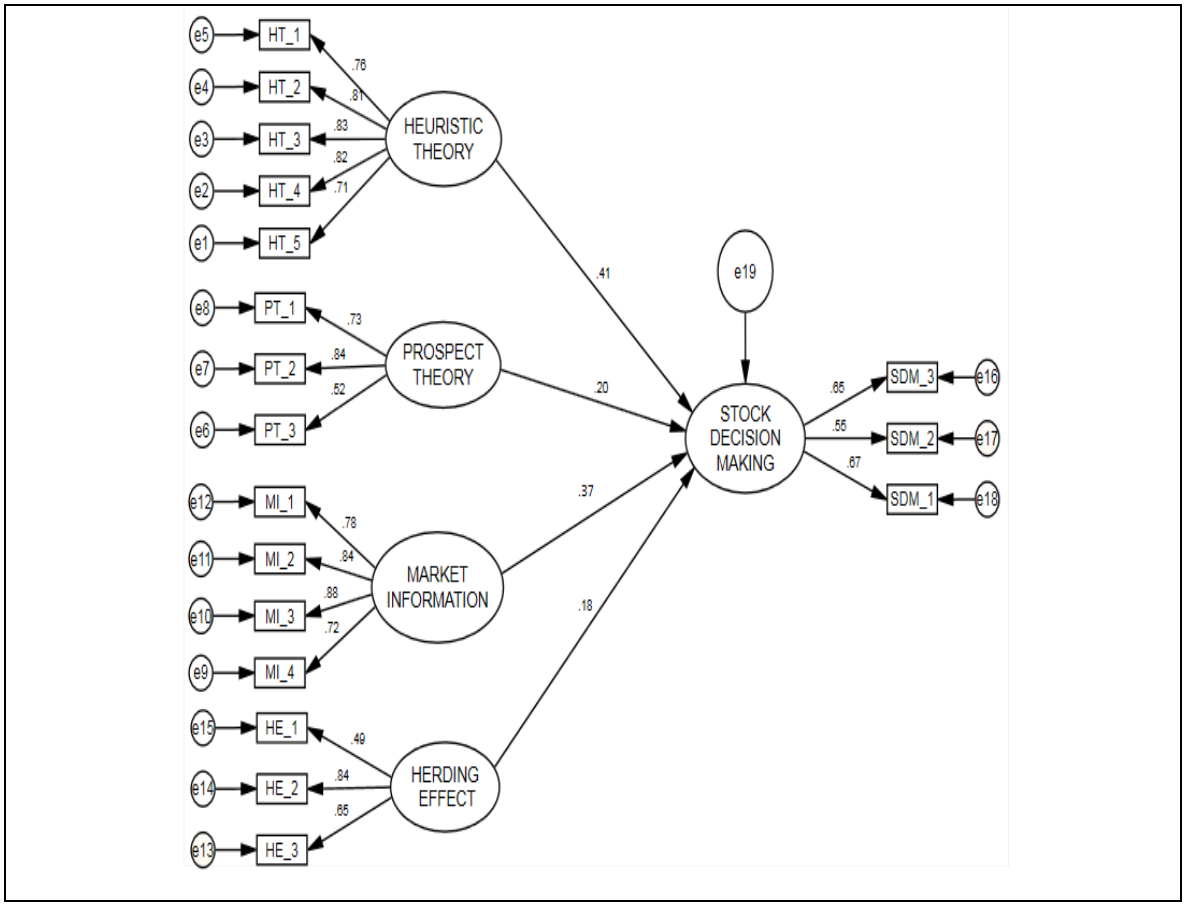
Final Measurement Model for the Influence of Behavioural factors on Stock Investment Decision dimension



It is observed that HEURISTIC THEORY has a positive and significant influence on Stock market Investment Decision Making dimension (ß = 0.410; CR= 6.129, p = 0.000, p<0.05) of purchase behaviour. Thus, H_1 could be fully asserted. The interpretation is that, for one unit increase in the rating scale of agreement on HEURISTIC THEORY construct, one could expect about 0.410 times (more than one third time)

Direct Effect of Research Model: Standardized Regression Weights for the Influence of Behavioural factors on Stock Investment Decision dimension

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Relationships between Exogenous and Endogenous			Standard Estimate	S.E.	C.R.	P-value
Stock Investment Decision Making	<---	Heuristic Theory	0.410	0.072	6.129	0.000*
Stock Investment Decision Making	<---	Prospect Theory	0.202	0.100	3.098	0.002*
Stock Investment Decision Making	<---	Market Information	0.372	0.062	5.080	0.000*
Stock Investment Decision Making	<---	Herding Effect	0.182	0.065	2.832	0.005*

* Significance at 5 % level.

Increase in Stock market Investment Decision Making dimension. Similarly, PROSPECT THEORY has a positive and significant influence on Stock market Investment Decision Making (ß =0.202; CR= 3.098, p = 0.002, p<0.05) of purchase behaviour. Thus, H_2 could be fully asserted. The interpretation is that, for one unit increase in the rating scale of agreement on PROSPECT THEORY construct, one could expect about 0.202 times (approximately nearly one fifth time) increase in Stock market Investment Decision Making dimension.

Furthermore, MARKET INFORMATION has a positive and significant influence on Stock market Investment Decision Making (ß = 0.372; CR= 5.080, p = 0.000, p<0.05) of purchase behaviour. Thus, H_3 could be fully asserted. The interpretation is that, for one unit increase in the rating scale of agreement on MARKET INFORMATION construct, one could expect about 0.372 times (approximately more than one third time) increase in Stock market Investment Decision Making dimension.

Finally, HERDING EFFECT has a positive and significant influence on Stock market Investment Decision Making (ß =0.182; CR= 2.832, p = 0.005, p<0.05) of purchase behaviour. Thus, H_4 could be fully asserted. The interpretation is that, for one unit increase in the rating scale of agreement on HERDING EFFECT construct, one could expect about 0.182 times (approximately nearly one fifth time) increase in Stock market Investment Decision Making dimension.

Findings

I. Finding regarding influence of behavioural factor on investment decision making of individual investors

It is inferred from the regression result that *HEURISTIC THEORY* has a positive and significant influence on *Stock market Investment Decision Making* dimension of purchase behaviour. The interpretation is that, for one unit increase in the rating scale of agreement on *HEURISTIC THEORY* construct, one could expect about 0.410 times (more than one third time) increase in *Stock market Investment Decision Making* dimension. Similarly, *PROSPECT THEORY* has a positive and significant influence

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on *Stock market Investment Decision Making* of purchase behaviour. The interpretation is that, for one unit increase in the rating scale of agreement on *PROSPECT THEORY* construct, one could expect about 0.202 times (approximately nearly one fifth time) increase in *Stock market Investment Decision Making* dimension.

Furthermore, *MARKET INFORMATION* has a positive and significant influence on *Stock market Investment Decision Making* of purchase behaviour. The interpretation is that, for one unit increase in the rating scale of agreement on *MARKET INFORMATION* construct, one could expect about 0.372 times (approximately more than one third time) increase in *Stock market Investment Decision Making* dimension.

Finally, *HERDING EFFECT* has a positive and significant influence on *Stock market Investment Decision Making* of purchase behaviour. The interpretation is that, for one unit increase in the rating scale of agreement on *HERDING EFFECT* construct, one could expect about 0.182 times (approximately nearly one fifth time) increase in *Stock market Investment Decision Making* dimension.

Conclusion

“Money saved is money earned” the value of invested money is greater than money saved hence investment becomes a major part of an individual’s life. Investment has various avenues and each avenue has its own advantages and disadvantages hence it is important to take decision on the right type of avenue based on the objective and necessity of the investors. Here the study concentrated on behavioural aspect of an individual while he decides on investing in various stocks in the stock market as an investment avenue.

From the study we can conclude that behavioural factors such as heuristic, prospect, market, herding have positive and significant influence on an individual’s investment decision making in stock market. Heuristic has the greatest influence with a standard estimation of 0.410 which could mean investors in Indian market follow the rule of thumb or learn from their past experiences, pre-existing ideas/concepts of the stock, skills that they possess, analyzing the future based on recent stock price movement. The second most influential behavioural factor is market with a standard estimation of 0.202 which interprets that investor’s use stock market information while they make investment decision. Market information such as stock prices, past trends of the stock, price changes, examining economic, financial, and other qualitative and quantitative factors. The third influential behavioural factor is prospect with a standard estimation of 0.202 which interprets that people value their losses greater than their gains and use factors such mental accounting, regret aversion and loss aversion to make decisions while investing. Indian investors value herding as a behavioural factor as the least influencing with a standard estimation of 0.125 which interprets that they do not follow the herd or there exists no bandwagon effect which they make their investment decisions in the stock market.

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Suggestions

Since India economy has paved its way into the global market for commerce and finance it has also opened its doors to various Investment Avenue and global stocks in our market, which makes the work of investors difficult as they have to choose from a wide range of stocks and Investment Avenue. Therefore analyzing the behavioural factor of investors in Indian stock market helps to narrow down on the right mix of stocks an individual has to select based on his behavioural pattern and helps brokers and companies to understand the stock market in a better manner by analyzing its underlying behaviour pattern. Further stock brokers and investment firms can use this to construct an appropriate portfolio for their investors.

Scope for further research

This research has concentrated on retail investors in specific and with a sample size of 430 which might be difficult to be generalized, further since the research is conducted on retail investors generalizing it to the whole of the stock market could be less pervasive so the future research could be conducted with generation X, Y, Z, core investors, equity investors, commodity market.

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