

**FACTORS INFLUENCING INDIVIDUAL INVESTOR BEHAVIOUR AND  
INVESTMENT DECISIONS – A CASE OF INDIAN CAPITAL MARKET**

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**ABSTRACT**

*Individual investor behaviour is motivated by a variety of psychological heuristics and biases. The traditional finance theory says that the investors behave rationally, however the modern finance theory disproved the same as the individual investors are irrational when they make investment decisions. In this attempt the researchers conducted this research to mainly identify and prioritize those behavioural factors that influence investors decision making process. This study is an exploratory in nature used the primary data collected through a structured questionnaire from 36 individual investors based out in Mysore city on a convenient manner. The researchers identified eight behavioural factors that were tested in the advanced economy based the extensive literature survey. Using these behavioural factors, seventeen statements made and posed to investors for their response on a five point scale. The factor analysis used to identify those factors influencing investor behaviour. The total variance explained through the factor analysis is 76.059% and identified seven factors based on Eigen values. Based on results, the author labeled those factors as Representativeness, Anchoring, Information Heuristics, Risk Aversion, Overconfidence, Disposition Effect, and Gamblers Fallacy. This would help the many stakeholders to understand how investors behave when they make investment decisions and especially useful to the financial institutions to design financial products that address the psychological needs of the investors.*

**Key Words** – Investor Behaviour, Representativeness, Anchoring, Overconfidence, Factor Analysis

**JEL Code** – G10, G11, G14, G17

**Introduction:**

Finance concept has been in a process of rapid development during this last century. Particularly, the Modern Portfolio Theory that was developed mid 1950s and the subsequent financial models that emerged to play a big role in this rapid development. These theories aim to bring an objective perspective to finance in the traditional sense and express the investment preferences of the individual in mathematical terms. The models and techniques covered by the traditional finance literature and cited above assist the individuals in their preferences and each individual is expected to make rational preferences as a standard. This principal of rationality that is one the assumptions required to be able to standardize investment preferences attracts attention as the most important assumption of modern finance.

This assumption of traditional finance has been under criticism by people since the first day and the issue of whether or not humans make rational preferences has been a matter of investigation. As we know, humans are social creatures that have unique values and that tend to make decisions in accordance with their emotions and behavior. One should not expect humans to make decisions solely based on objective factors. It is at this point that Behavioral Finance brings a novel perspective to analyze those areas that traditional finance failed to explain or had difficulty in explaining. Behavioral Finance argues that behaviors and mood states of humans are determinant factors in shaping their investment preferences and has demonstrated great progress in the last 20 years and has been the main theme of numerous interdisciplinary studies. Thus, it is expected that this particular area of finance would be researched in more detail and that research would focus on this field.

**Review of Literature:**

The extensive research has been conducted in the area of behavioural finance within the India and outside India as below.

**A. Kartasova J (2013)** aimed at identifying the factors that frame irrational individual investors' behaviour in the Lithuanian stock market. To analyze those factors, author employed the methods of literature survey, comparison of theoretical insights, networking, benchmarking analogy and generalization. He conducted this study in two stages. During the first stage investigation on individual investors irrationality initiated and results show that individual investors in Lithuanian suffered from the majority of the biases such as anchoring, mental accounting, confirmation and hind sight bias, herd behaviour, overconfidence, overreaction and availability bias. In second stage of study with updated questionnaire survey conducted in a broader way to cover more than 5000 individual investors. However the complete response was received from only 404 respondents. Analysis was done using basic statistical tools. Based on the analysis author concluded that the individual investors in Lithuania suffered from all basic biases but overconfidence, anchoring, mental accounting and herd behaviour had greater influence on their financial decision-making process. He also asserted that the influence of factors forming irrational individual investors' behaviour depends on their personal characteristics such as age, experience, gender and profession.

**Choudhury A K (2013)** examines the meaning and importance of behavioural finance and its applications in investment decisions. This conceptual paper provides an explanation why investor makes irrational financial decisions. It demonstrated how emotions and cognitive errors influence investors in the decision making process. The author found that various causes that influence investors' investment decisions are Anchoring, Overconfidence, Herd Behaviour, over and Under-reactions and Loss Aversion. In essence, behavioural finance approach investigates the behavioural patterns of investors and tries to understand how these patterns guide investment decisions. It provides a framework for evaluating active investment strategies for the investors.

**Bisen V and Pandey M (2013)** Aimed at identify those psychological factors that play an important role in decision making process of investors. Authors also threw a light on how standard and behavioural theories contradict modern financial theories. Survey method was used with questionnaire to collect required data. The sample size used for the study was 195 respondents. The hypothesis was designed and tested using Chi-square analysis. They found that

loss aversion is greater sensitivity to losses to gains and they found that the difference in investor's behaviour when stock is losing in the market and when it is gaining. Through hypothesis analysis authors concluded that there is difference in the perception of investors as they rely on newly arrived information and adjust their decision according to that available information to them

**Kabra, Mishra and Dash (2010)** Aimed at gaining knowledge about key factors that influence investment behaviour and how these factors impact investors' risk-tolerance and decision making process among men and women at different age groups. This study followed survey research methodology. Primary data was collected through questionnaire administration. The data were analyzed using standard techniques like factor analysis, regression analysis and other basic statistical tools. The sample used for the study was regular investors. The perceptions of the investors were analysed through SPSS and concluded that, though investors are in new information age, are mature enough and groomed adequately, they prefer investments according to their risk preferences and they were found to be in trap of cognitive illusions, such as overconfidence and narrow framing. They consider multiple factors and seek diversified information before taking decisions. Finally, it has been proved that investors' age and gender predominantly decides the risk-taking capacity of investors.

**Chandra, A., (2008)** attempted to explore the impact of behavioural factors and investors' psychology on their investment decision making and to examine the relationship between investors attitude towards risk and behavioural decision making process. Author used literature survey to study the behavioural decision making and investors' psychology. In this descriptive study author used secondary data related to investments, finance and economics. The results show that unlike the classical finance theory, individual investors often do not make rational decisions. Further results reveal that the investor decision making influenced by behavioural factors such as greed and fear, cognitive dissonance, heuristics, mental accounting and anchoring.

**Kahneman D and Tversky A (1979)** Proposed an expected utility theory as a descriptive model of decision making under risk and paves for development of an alternative model called prospect theory. However this study proves that expected utility theory is not an adequate descriptive

model and they propose an alternative account of choice under risk. Decision making risk viewed as a choice between prospects or gambles in contrast that brings outcome with some probability in comparison that are obtained with certainty this tendency called as the certainty effect. This effect contribute to risk aversion in choices involving sure gains and to risk seeking in choices involving sure losses. In this study authors developed an alternative theory OD choice in which value is assigned to gains and losses rather than to final assets and probabilities are replaced by decision weights. Value function is normally concave for gains and convex for losses and steeper in general for losses than gains. This analysis of risky options has developed two themes/ first, concerns editing operation that determine hoe prospect are perceived and second theme involves the judgmental principles that govern the evaluation of gains and losses and weighting of uncertain outcomes.

### **Research Gap**

By considering the above researches we can conclude that behavioural finance does not claim that all the investors will suffer from the same illusion simultaneously. The susceptibility of an investor to a particular illusion is likely to be a function of several variables. For example, there is suggestive evidence that the experience of the investor has an explanatory role in his regard with less experienced investors being prone to extrapolation (representativeness) while more experienced investors commit gambler fallacy. Similarly, behavioural factors play a vital role in the decision making process of the investors. Hence the investors has to take necessary steps to minimize or avoid illusions for influencing in their decision making process.

We can justify one thing here for conducting this research that any of the researches discussed above do not describe the variables in detail they generalized the variables there is a research gap where we can carry a research study on Behavioural Finance of Indian potential investors on various factors and unexpected events on investment decision.

### **Statement of the Problem:**

The economic development of our country is directly influenced by its capital market and financial services. Its contribution towards the national growth is high and inseparable one. It is very difficult to understand the activities of capital market. It has so many players in its real

sense. It consists of so many players in its segments say primary and secondary market. Each acts differently with varying needs. Investors also approach capital market with varying objectives. They differ in their risk perception also. The price of securities varies depending upon the activities and behaviours of all these persons. In recent days, the awareness of the investors and risk appetite leads to more attention and involvement in the capital market.

The investors are classified as general, institutional and retail investors. In the emerging scenario of capital market, the retail investors are playing a vital role in deciding the nature and extent of business in the market and they are integral part of the capital market. Under these circumstances **“Factors Influencing Individual Investors Behaviour and Investment Decision – A Case of Indian Capital Market”** focuses its attention towards concepts like volatility in Indian capital market, variety of investment options, global level of economic changes and the impact on investment behaviour of investors.

#### **Scope of the Study:**

This research will cover mainly the study on the behaviour of Indian retail investors with respect to Mysore city, which study the factors which are affecting the investor behaviour

#### **Objectives of the Study:**

The following are the objectives of the proposed research

1. To study in detail the demographic characteristics of selected respondents
2. To identify and prioritize the factors that influence the investor behaviour in investment decisions making process

#### **Research Methodology:**

**Research Type** – Exploratory

**Sampling Technique** – Non-Probability

**Sampling Type** – Convenience Sampling

**Sampling Unit** – Retail Individual Investors

**Sample Size** - 36

**Data Used**– Primary Data

**Data Tool** – Questionnaire

**Area under Study** – Mysore, Karnataka State

**Limitations of the Study:**

Following are the limitations of the study

1. The views of respondents will be subjected to their bias and prejudice.
2. The findings of this study would be based on sample size, so they cannot be generalized.
3. Study will be made only in Mysore.
4. The research period is very short. Therefore, time constraint could be a limiting factor

**Results and Discussions**

**Table 1 - Showing Demographic Characteristics of Respondents**

Sl No	Demographic Characteristics	Categories	Frequency	Percentage
1	Gender	Male	31	86
		Female	5	14
		Total	36	100
		Married	22	61
			36	100
3	Educational Qualification	Less than High School	0	0
		High School	1	3
		PUC	6	17
		Degree	10	28
		PG or Ph. D	19	53
			36	100
4	Occupation	Service	3	8
		Business	13	36
		Professional	14	39
		Others	6	17

			36	100
<b>5</b>	<b>Annual Income</b>	Below Rs. 150,000	5	14
		Rs. 150,000 - Rs. 300,000	11	31
		Rs. 300,000 - Rs. 450,000	13	36
		Rs. 450,000 - Rs. 600,000	6	17
		Rs. 600,000 and Above	1	3
			36	100
<b>6</b>	<b>Percentage of Income Invested</b>	< 10%	19	53
		10% - 20%	9	25
		20% - 30%	6	17
		30% - 40%	2	6
		>40%	0	0
			36	100
<b>7</b>	<b>Investment Avenues</b>	Shares	32	89
		FD	25	69
		POS	13	36
		Real Estate	4	11
		Gold	15	42
		MF	18	50
		Insurance	14	39
		Others	0	0
<b>8</b>	<b>Sources of Investment Information</b>	News paper	23	64
		TV	21	58
		Friends	22	61
		Family	8	22
		Brokers	28	78
		Self	0	0
		Others	0	0
<b>9</b>	<b>Years of Capital Market Investments</b>	0 -5	27	75
		6 years - 10 y	7	19
		11 y - 15 y	2	6
		16- 20	0	0
		>20	0	0
			36	100
<b>10</b>	<b>Age Group</b>	<25	4	11
		25 years – 35	18	50

		35 years – 45	7	19
		>45	7	19
			36	100

### **Gender**

It is evident from the information presented in above table that the Capital market is not confined to Males only as the researcher has female respondents of 14% (5 numbers) for the study According to my research out of 36 respondents (86%) i.e. 31 members are male respondents.

### **Marital Status**

Overall, the majority of the respondents are married (61%) i.e. 22 members and (39%) i.e. 14 members are single.

### **Educational Qualification**

The 53% of the respondents selected for the study have completed their post-graduation i.e. 19 members, Degree of (28%) i.e. 10 members, PUC i.e.17% i.e. 6 members, High School of (3%) i.e. 1 member. This pattern shows that educated people are taking part in the capital market as there are many awareness creating initiatives by the regulators that intensify the confidence in individual investors.

### **Occupation**

In the conducted research occupation is one of the demographical characteristic which affect the investor behavior on investments decision that the majority of the respondents (39%) are Professional, (36%) are business people, (17%) are doing others occupation, and (8%) are service sectors.

### **Annual Income**

The Annual Income also one of the demographical characteristics that should be considered while investing in the capital market. the above table shows that the annual income of 36%

respondents for is between Rs 300,000 -Rs 450,000, 31% of respondents are earning between Rs150, 000 – Rs 300,000, 17% of total respondents were earnings between Rs. 450,000 –Rs 600,000, (14%) of total respondents are earnings between below Rs 150,000 and only (3%) of total respondent i.e. 1 respondent out of 36 is earning income of above Rs600, 000.

### Age

It is evident from the information presented in the above table that the majority respondents age is (50%) between 25 - 35 years. Then (19%) of respondents are in the age group of 35 – 45 years, (19%) respondents are in the age group above 45 years and 11% of total respondents are below the age of 25 year.

### Factors Influencing Investor Behaviour

#### Table 2 -Showing Validity and Reliability test

Validity is concerned with the accuracy of our measurement in the context of sample representativeness. It is related to the ability to create questions that reflect the issues being researched. The content validity of the survey instrument (*i.e.* the questionnaire) is verified by discussions with two experts, one academician and one industry professionals

<b>Reliability Statistics</b>	
Cronbach's	N of Items
.606	17

The reliability of the survey instrument is tested with the help of Cronbach's Alpha method. The Cronbach's Alpha method allows us measure the reliability of different categories. It consists of estimates of how much variation in scores of different variables is attributable to chance As a general rule, an alpha coefficient greater than or equal to 0.5 is considered acceptable and a good indication of construct reliability The Cronbach's Alpha shows that these categories for survey instruments are valid and reliable so above table will conclude that Cronbach's Alpha is 0.606 so it will say that for research data is more reliable.

**Table 3 -Sampling Adequacy:**

With an objective to determine the suitability of data for factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's Test of Sphericity are applied. The KMO measure of sampling adequacy is a statistic that indicates the proportion of variance in the variables that might be caused by the reduced factors. Kaiser (1974) recommends that a bare minimum of 0.5 is unacceptable and that values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb the results from these tests are given below table.

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.517
Bartlett's Test of Sphericity	Approx. Chi-Square	190.849
	Df	136
	Sig.	.001

KMO (0.517) indicates that a factor analysis is quite useful for the data being used in this study. The KMO figures provide strong evidence for sampling adequacy for these data. Similarly, the significance value for Bartlett's test of Sphericity is 0.001 which indicates that there exist significant relationships among variables. The output of KMO and Bartlett's tests supports the view that factor analysis is very much useful for the present data.

The communalities showed the variance of each variable that is contributed to the total variance of the investors' behavioural factors. The communality value more than 0.50 is adequate for the factor analysis. However for all the 17 variables the communalities are more than 0.50 which is sufficient for conducting the factor analysis.

**Table 4 Showing the Total Variance Explained**

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	3.032	17.833	17.833	3.032	17.833	17.833
2	2.501	14.714	32.547	2.501	14.714	32.547
3	2.011	11.830	44.377	2.011	11.830	44.377
4	1.629	9.581	53.958	1.629	9.581	53.958
5	1.486	8.744	62.702	1.486	8.744	62.702
6	1.231	7.241	69.943	1.231	7.241	69.943
7	1.040	6.116	76.059	1.040	6.116	76.059
8	.814	4.791	80.850			
9	.691	4.063	84.913			
10	.639	3.760	88.673			
11	.475	2.795	91.468			
12	.356	2.095	93.563			
13	.295	1.734	95.298			
14	.264	1.556	96.853			
15	.206	1.213	98.067			
16	.182	1.069	99.136			
17	.147	.864	100.000			
Extraction Method: Principal Component Analysis.						

The observation of the table above provides an insight that only these seven components extracted from the Principal Component Analysis are significant enough to retain for rotation and further interpretation it is found that the variance proportion explained begins to decrease from 8<sup>th</sup> component onward. Each of the principal components selected for rotation and interpretation According to the extracted coefficients these seven behavioural components are named as follows: **(Representativeness, Anchoring, Information Heuristics, Risk Aversion, Overconfidence, Disposition Effect, and Gamblers Fallacy)**

The total variance accounted for, by all the seven factors with Eigen value greater than 1 is 76.059% which is sufficiently significant, and the remaining variance is explained by other variables. Among the seven factors, the first factor accounts for around 17.833% of variance which is the prime factor influencing investment behaviour of our sample individual investors. The detailed values obtained from the Principal Component Analysis tests for these seven factors.

### **Analysis and Interpretation**

**Representativeness (component 1)** - In making the investing, among the behavioural factors representativeness considered most from the above table we can say that representativeness will cover up to 17.833% of investor behaviour while making investment decision.

**Anchoring (component 2)** - Anchoring can also be a source of frustration in the financial world, as investors base their decisions on irrelevant figures and statistics. But concern to my research above table shows the percentage of behavioural factor (anchoring) will impact the investor behaviour up to 14.714% on the investment decision making process.

**Information Heuristic (Component 3)** - Investors tend to discount the information that seems complex to incorporate into their decision-making process, and adopts only those easily available and adjustable. They don't practice information mapping whereby information is classified according to the sources and their reliability, and then being considered for decision-making on top-down basis. Though Indian individual investors are seen using different sources for their informational needs, they lack the objectivity in rationally using the appropriate ones. So, they are influenced by the informational Heuristics of 11.830% while making investment decision.

**Risk Aversion (Component 4)** - Risk-averse investor might choose to put his or her money into a bank account with a low but guaranteed interest rate, rather than into a stock that may have high expected returns, but also involves a chance of losing value. So this type of behavioural factor will influence up to 9.851% of the investor behaviour while making investment decision.

**Overconfidence (Component 5)** - In terms of investing, overconfidence can be detrimental to your stock-picking ability in the long run. Coming to research the respondents are overconfidence of 8.744% it is the behavioural factor which affect the investor while making decision on investments.

**Disposition Effect(Component 6)** - The disposition effect is an anomaly discovered in behavioral finance. It relates to the tendency of investors to sell shares whose price has increased, while keeping assets that have dropped in value, concern to above table this type of behavioural factor will influence the investor up to 7.241% while making investment decision while dropping in the value of asset.

**Gambler's Fallacy (Component 7)** - From the above table we can say that one of the behavioural component which will affect the investor behaviour while making investments i.e. Gambler's Fallacy up to 6.116% in their behaviour so according to research respondents will gamble in nature also while investing.

**Conclusion:**

In the present study, the principal component analysis (PCA) is carried out on the data collected through survey of individual investors, to extract the factors influencing Indian individual investor behaviour in stock market; especially the psychological heuristics and biases which may drive their investment behaviour are identified. A wide array of behavioural financial literature is scanned in order to extract the psychological and contextual factors influencing individual investor behaviour. The psychological and contextual biases resorted from the behavioural financial literature and noted psychologists' experiments as well as those derived from the discussions with stock market practitioners are captured by seventeen variables.

To understand Indian individual investor behaviour, we adopted the questionnaire survey tool that comprised of scenario based questions relating to psychological biases considered for the study. The principal components analysis technique is primarily used for factor analysis of data thus collected. The suitability of the techniques adopted in this study is tested through appropriate statistical tests such as KMO test and Bartlett's Test of sampling adequacy as this is

basic before running the factor analysis. The results of the principal components revealed seven psychological factors. In the sample of Indian individual investor behaviour these seven factors on the basis of the underlying variables are named as (Representativeness, Anchoring, Information Heuristics, Risk Aversion, Overconfidence, Disposition Effect, and Gamblers Fallacy) Consistent with the prior literature, the result suggests that psychological biases, such as c Representativeness, Anchoring, Information Heuristics, are playing significant role in determining individual investor behaviour; but factor analysis reports certain behavioural factor such as Overconfidence, Disposition Effect, and Gamblers Fallacy which are not yet explained in prior literature in growing economies, particularly in Indian context with respect to Mysore city. The findings from the survey of Indian individual investors show that behavioural biases do influence their investment decision making processes.

#### **Scope for Further Research:**

The researcher has given the scope for the further research in the same area of research conducted. In this study, the researcher used survey based analysis of individual investor behaviour which could not be generalized across the market segments and various market situations. Therefore this would be better to use proxies for making an index that will help the various stakeholders to understand how an individual investor behaves during various market situations. And also this research can be extended to other types of investors who influence the stock market to the great extent.

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