Investment Decisions - Influence Of Behavioural Factors

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INTRODUCTION

During the past decade, there has been a growing recognition that normal investors sometimes behave in a manner that cannot be described as fully rational. They can become affected by cognitive biases and emotions **(Ricciardi V, 2008)**. Such biases can cause investors to consider each of their stocks distinctly from their overall portfolio. Behavioral Finance is a new approach to financial markets that has emerged in response to the difficulties faced by the traditional paradigm, and it focuses on investor's behavior and the decision-making process. This field merges the concept from financial economics and cognitive psychology in an attempt to construct a more detailed model of human behaviour in financial markets.

A prudent investor, who can control his emotions, can use his money for hedging against inflation by identifying sources of right analytical presentations and by sparing sufficient time for investment decisions for directly taking part in the stock market operations. Various researchers have examined the financial markets in hopes of finding investment strategies that yield the best result. Psychological studies have demonstrated that the pain of losing money from investments is nearly three times greater than the joy of earning money. Small corrections in a capital market have often disintegrated into full-scale crashes fueled by panicked investors, who made rash decisions to avoid losing money in the short term, rather than focusing on an investment's long-term potential.

Behavioural finance seeks to identify market conditions in which investors are likely to overreact or under react to new information. A particularly attractive feature of behavioural finance investment strategies is that they have an advantage over most traditional approaches to investing. There is a growing literature that suggests an individual's investment decisions, which are affected by behavioural biases. Behavioural finance tries to understand how people forget fundamentals and make investments based on emotions. The volume of literature in this field has grown notably over the past decade.

REVIEW OF LITERATURE

It is commonly reported that behavioural investment psychology drives financial decision-making and is a strong vehicle to analyse the individual behavioural influences. **Lewellen (1977)** found that age, gender, income and education affects investors' preferences and attitudes towards investment decisions. **Rajarajan (2000)** has revealed that there is an association between the lifestyle clusters and investment-related characteristics. **Shollapur M. R. and Kuchanur A. B. (2008)** in their article found that investors strongly agree on the perceptions upon various investment avenues. **Yash Pal Davar and Suveera Gill (2007)** in their paper on investment decision making revealed that the class of investors (undoubtedly) with growing age develop maturity and experience for making decisions about the usage of their surplus and available funds in the light of overall economic needs of the family. **Shanmugasundaram V. and Balakrishnan V. (2006)** reviewed the emergence of behavioural finance, which sets out the perceived decision making irrationalities of the investors. They suggested that the knowledge of behavioural finance will enable the investor to acquire capability of deciding the investment in a more rational manner. **Szyszka Adam (2008)** in his article on efficient market hypothesis to behavioural finance analyzed how investors' psychology changes the vision of financial markets. He found that investors not always are able to correctly value the utility of decision alternatives, cannot estimate and update probability and events and do not diversify properly. **Julie R. Agnew (2006)** examined the individual

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characteristics on behavioural biases in 401(k) plan allocation decisions and found that higher salaried employees tend to make significantly better choices in investment in company stocks. As a result, he suggested that a sample of higher-income market participants is more likely to meet the diversification conditions. **Cohn.R.A et.al.,(1975)** made an attempt to explain the attributes and attitudes of individual investors and also conducted a study to examine the individual investor's risk aversion and portfolio composition. **Oslen (1998)** asserted that behavioural finance does not try to define rational behaviour or label decision-making as biased or faulty; it seeks to understand and predict systematic financial market implications of psychological decision processes. **Tversky.A and Kahneman.D (1974)** identified that the decision-making process is not a strictly rational one, where all relevant information is collected and objectively evaluated, rather, the decision maker takes mental *'short cuts'* in the process. **Plous (1993)** wrote *'The Psychology and Decision Making'*, which gives a comprehensive introduction to the field with a strong focus on the social aspects of decision-making processes. **Veronesi (1999)** presented a dynamic, rational expectation equilibrium model of asset prices, in which among other features, price overreacts to bad news in good times and under reacts to good news in bad times. **Woolridge et.al., (1990)** studied the stock market reactions to public announcements of corporate strategic investment decisions, by examining 767 strategic investment decisions announced by 248 companies in 102 industries and concluded that there is a significant positive reaction by the stock market to investment announcements. In their analysis, they also analyzed the announcements from the perspective of *'size'* and *'term'* of investment, and found no marked difference in the investor's reaction to such announcements, although both react positively. Psychologists have found that as decisions become more difficult and involve higher levels of uncertainty, the decisions tend to be more greatly influenced by emotions and feelings **(Cianci A.M, 2008)**. Investors in various places **(Shanmugasundaram V. and Balakrishnan V., 2009)** acknowledge the role of emotions in investment decision-making and their empirical results suggested that the demographic factors influence the investors' investment decision. **Waweru N M et al., (2008)** investigated the role of behavioural finance and investor psychology in investment decision-making and identified that certain behavioral factors influenced the investment decision-making process of investors. Their study supported the view that the behavior of the institutional investors operating at the NSE-India was affected by various factors.

OBJECTIVES OF THE STUDY

The main objectives of the study are :

1. To study the various factors that influence the investor's decision-making process.

2. To analyze the investment pattern of investors to various capital market information.

3. To examine the relationship between age , income and the investment portfolio of the investors.

LIMITATIONS OF THE STUDY

Though the present research paper is aimed to achieve the above-mentioned objective in full earnest and accuracy, there are certain limitations.

- The data has been taken from primary sources, so the findings are true to the extent of authentication of the data.
- The time factor was the main limitation for completion of the research, and the study was conducted targeting the investors in Chennai city only.
- The primary data has been collected through a structured questionnaire to a sample of 100 investors in Chennai city, which may not reflect the opinion of the entire population.

HYPOTHESES OF THE STUDY

Hyp 1: Investment decisions of investors are influenced by various factors.

Hyp 2: There is a significant relationship between the age and income of the investors and their investment portfolio.

Hyp 3: Investors behave rationally towards various capital market information.

RESEARCH METHODOLOGY

❁ The design for the proposed study aims at exploring the investor behavior to the various information from the capital market with respect to Chennai city.

❁ The questionnaire approach was used for the collection of data. In this study, the primary data was collected from 100 investors in Chennai city. A total of about 120 questionnaires were sent to the investors located in Chennai, mainly through broker offices in the city. A response of 100 valid questionnaires was received. The responses were received from those investors who were willing to spend their time and wished to contribute to the research willingly . So, it constitutes a judgement sampling.

❁ The questionnaire had three parts. In the first part, the demographic factors of the investors' were recorded primarily for their classification.

❁ The second part of the questionnaire was related to the investment details of the investor. The various avenues the investor has invested in and details regarding investment in capital market viz primary, secondary or both were recorded. Furthermore, a ranking scale was employed to find out the decision-making process of the investor.

❁ The final part of the questionnaire was related to the behavioural details, which recorded the investor reactions to various information . The Likert scale was used to verify the investor perception to risk of investing in blue chip against other companies. The final question was an open ended one to find out what other factors affect investors to change their investment profile.

❁ Analytical tests such as simple percentage have been used. Also, ANOVA has been used to test for significant relationship between age and decision-making process and income and investment portfolio. Chi square was used for testing the relationship between age and behavior to informational triggers. Software Package for Social Sciences (SPSS) package has been used for the purpose of the analysis.

ANALYSIS AND INTERPRETATION

It is observed that maximum number of respondents fall in the 21-30 years category. The next highest number of respondents fall in the 30-40 years category. Thus, around 70% of the respondents are below 40 years of age and are relatively young.

❁ **Income Distribution Of The Respondents :** Most of the respondents fall under the income level of below ₹ 1, 50,000. This is probably because most of the respondents i.e. around 40% of the respondents fell under the age group of 21-30 years.

❁ **Investors' Reaction To Announcement Of Results By Companies:** When the Results announced by the company are better than expected, 38% of respondents want to buy more shares. This could indicate that the investor believes that the good performance indicates the future growth potential of the company, which would translate into good returns from the stock. 40% of the investors prefer to hold on to their existing holdings. Their reaction may stem from the opinion that the good financial performance would already be discounted by the market, leaving little scope for future appreciation. 22% of investors prefer to book profits in this case. When the result announcement is below expectations, a majority of respondents preferred to hold onto their investment. This could be a case of waiting for the right price to exit, or it could be a classical case of mental accounting. When the share prices decline at a later stage, the

Table 1 : Showing The Income Distribution Pattern Of The Respondents

Income levels	No of respondents
< ₹ 1,50,000	36
₹ 1,50,000- ₹ 2,50,000	18
₹ 2,50,000 - ₹ 3,50,000	20
₹ 3,50,000- ₹ 4,50,000	18
>₹ 4,50,000	8
Total	**100**

investor holds on to the share in the hope of making the profits, assuming that the share price will touch the highs it did before. Thus, he fails to consider the market realities and the fundamentals of the scrip. 46% of the respondents preferred to book profits or cut their losses as the case may be when the results announced are below the expectations. No respondent indicated a willingness to buy such a scrip.

Figure 1: Income Distribution Of Respondents

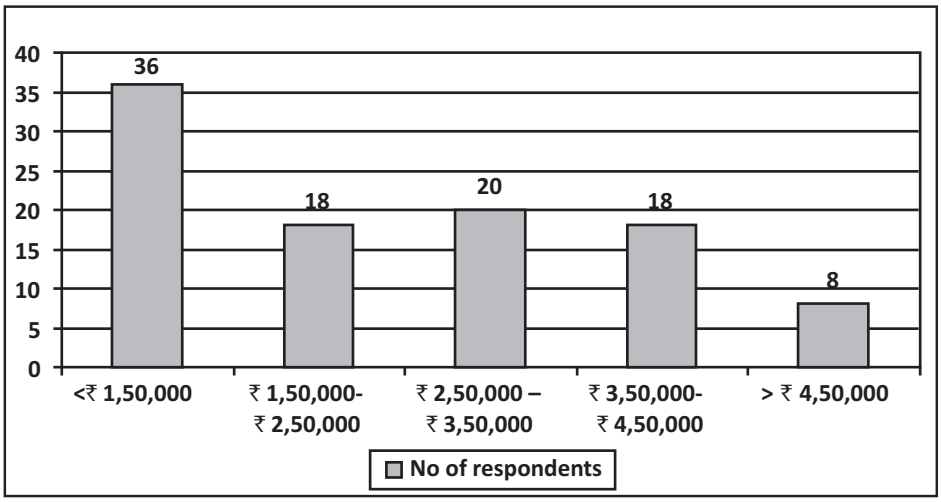
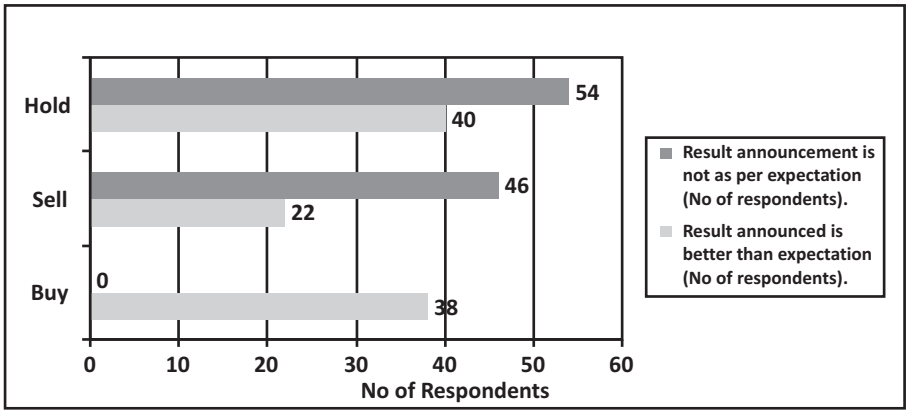


Table 2: Showing Investor Behavior On Result Announcements

Reaction	Result announced is better than expectation (No of respondents)	Result announcement in not as per expectation (No of respondents)
Buy	38	0
Sell	22	46
Hold	40	54
Total	**100**	**100**

Figure 2 : Chart Showing Investor Behavior On Result Announcements



❁**Investor Reaction To Dividend Announcement :** The researchers found that 46% of the investors would like to hold on to their investment, while another 46% would like to buy more shares on the dividend announcement. It needs to be noted here that 50% of the investors were willing to buy shares, and they belonged to the age group of 21-30 years. These investors might believe that a dividend announcement is an indication of better financial performance of the company in the future. The other 46% of the investors wanted to wait and watch for a clearer indication. Only 8% of the respondents wanted to liquidate their holdings and book profits.

Table 3: Showing Investor Reaction To Dividend Announcements

Investor reaction to dividend announcement	No of respondents
Buy	46
Sell	8
Hold	46
Total	**100**

Figure 3: Chart Showing Investor Reaction To Dividend Announcements

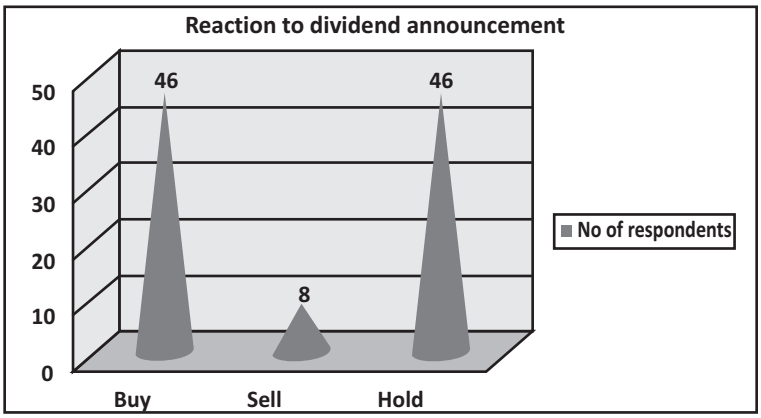


Table 4: Showing Investor Reaction To Bonus Announcements

Investor reaction to bonus announcement	No of respondents
Buy	36
Sell	14
Hold	50
Total	**100**

❁**Investor Reaction To Bonus Announcements :** Unlike a dividend announcement, in case of bonus announcement, the researchers found a lesser percentage of investors willing to buy more shares. Only 36% of the investors were willing to buy in case of a bonus announcement, against 46% of the investors, who were willing to buy on a dividend announcement. These investors obviously believe that the bonus announcement is a sign of good tidings for the company. Again, half of the investors willing to buy shares were below 30 years of age. The number of investors willing to sell the shares was slightly on the higher side, with 14% of the investors willing to book profits on bonus announcement, against 8% in case of dividends. The number of cautious investors was more or less the same, with

Figure 4 : Chart Showing Investor Reaction To Bonus Announcements

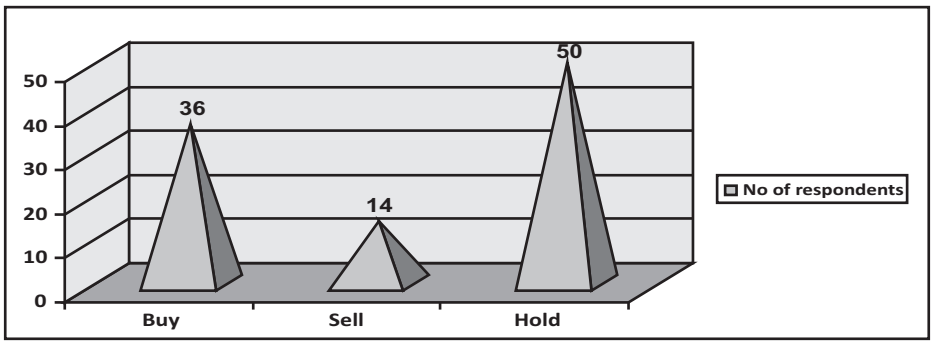


Table 5 : Test Of Significance For Relationship Between Age Of The Investors And Their Criteria For Investment.

Anova values for relationship between age and their criteria of investment						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Market con	Between Groups	1.528	3	.509	.563	.642
	Within Groups	41.592	46	.904		
	Total	**43.120**	**49**			
Brokers	Between Groups	6.675	3	2.225	1.068	.372
	Within Groups	95.805	46	2.083		
	Total	**102.480**	**49**			
Industry	Between Groups	7.268	3	2.423	2.987	.041
	Within Groups	37.312	46	.811		
	Total	**44.580**	**49**			
EPS/PE	Between Groups	8.938	3	2.979	1.596	.203
	Within Groups	85.882	46	1.867		
	Total	**94.820**	**49**			
Intuition	Between Groups	.304	3	.101	.061	.980
	Within Groups	76.196	46	1.656		
	Total	**76.500**	**49**			

Table 6 : Test Of Significance Between Income Of The Investors And Their Investment Portfolio
Anova Values For Income And Investment Portfolio

		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Fixed Deposit	Between Groups	99.806	4	24.952	1.845	.137
	Within Groups	608.694	45	13.527		
	Total	**708.500**	**49**			
NSC	Between Groups	6.977	4	1.744	.778	.546
	Within Groups	100.943	45	2.243		
	Total	**107.920**	**49**			
Mutual Fund	Between Groups	33.974	4	8.494	1.683	.171
	Within Groups	227.146	45	5.048		
	Total	**261.120**	**49**			
Shares	Between Groups	66.509	4	16.627	1.170	.337
	Within Groups	639.491	45	14.211		
	Total	**706.000**	**49**			
Insurance	Between Groups	49.761	4	12.440	3.318	.018
	Within Groups	168.739	45	3.750		
	Total	**218.500**	**49**			
Real estate	Between Groups	52.587	4	13.147	2.155	.090
	Within Groups	274.533	45	6.101		
	Total	**327.120**	**49**			
Gold	Between Groups	35.614	4	8.904	2.012	.109
	Within Groups	199.106	45	4.425		
	Total	**234.720**	**49**			

Table 7 : Test Of Significant Relationship Between Age Of The Investors And Their Investment Behavior
Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
age of resp * result good	100	100.0%	0	.0%	100	100.0%
age of resp * result bad	100	100.0%	0	.0%	100	100.0%
age of resp * dividends	100	100.0%	0	.0%	100	100.0%
age of resp * bonus	100	100.0%	0	.0%	100	100.0%

Table 8 : Crosstab

Count					
		Result Good			
		Buy	Sell	Hold	Total
age of resp	21-30	12	10	22	44
	31-40	10	8	8	26
	41-50	8	2	4	14
	51-60	8	2	6	16
Total		**38**	**22**	**40**	**100**

Table 9: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.690[a]	6	.718
Likelihood Ratio	3.692	6	. 718
Linear-by-Linear Association	1.677	1	.195
N of Valid Cases	100		
a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is 1.54.			

Table 10 : Crosstab

Count				
		Result Good		
		Sell	Hold	Total
age of resp	21-30	14	30	44
	31-40	10	16	26
	41-50	10	4	14
	51-60	12	4	16
Total		**46**	**54**	**100**

Table 11 : Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.609[a]	3	.085
Likelihood Ratio	6.776	3	.079
Linear-by-Linear Association	5.888	1	.015
N of Valid Cases	100		
a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is 3.22.			

Table 12 : Crosstab

Count					
		Dividends			
		Buy	Sell	Hold	Total
age of resp	21-30	24	0	20	44
	31-40	10	6	10	26
	41-50	8	2	4	14
	51-60	4	0	12	16
	Total	**46**	**8**	**46**	**100**

Table 13 : Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.992[a]	6	.125
Likelihood Ratio	11.045	6	.087
Linear-by-Linear Association	1.118	1	.290
N of Valid Cases	100		
a. 8 cells (66.7%) have expected count less than 5. The minimum expected count is .56.			

Table 14 : Crosstab

Count					
		Bonus			
		Buy	Sell	Hold	Total
age of resp	21-30	22	2	20	44
	31-40	8	8	10	26
	41-50	4	2	8	14
	51-60	2	2	12	16
	Total	**36**	**14**	**50**	**100**

Table 15 : Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.169[a]	6	.226
Likelihood Ratio	8.199	6	.224
Linear-by-Linear Association	3.163	1	.075
N of Valid Cases	100		
a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is .98.			

50% of the investors preferring the wait and watch policy.

It was hypothesized (Table 5) that there is a significant relationship between age of the investors and their ranking of investment criteria. However, the anova tests revealed that age does not have a significant influence on all factors. It shows that only the industry factor has a significance level of .041 and that age of the investor has a significant role only on industry prospects.

It was hypothesized (Table 6) that there is a significant relationship between income of the investors and their investment portfolio. However, the anova tests revealed that income does not have a significant influence on choosing the investment criteria. The tests show that there is a significant relationship between income of the investors and their investments in insurance, savings bank account and real estate investments.

FINDINGS OF THE STUDY

❁From the analysis, the researchers found that 70% of the respondents were below 40 years of age and were relatively young. Within this, the researchers found that the maximum number of respondents fell in the 21-30 years category.

❁When the income profiles of the investors were analyzed, the researchers found that around 75% of the respondents came under the income level of below ₹ 3, 50,000. Again, of this, around 50% of the respondents were below the income level of below ₹ 1,50,000. This is probably because most of the respondents, i.e. around 40% came under the age group of 21-30 years. Most of the investors were professionally qualified.

❁To analyze the investor behavior on result announcement, two parameters were considered - when results are better than expected, and when results are not as expected. When the results announced by the company were better than expected, 38% of the respondents wanted to buy more shares. This could indicate that the investor believed that the good performance indicates the future growth potential of the company, which would translate into good returns from the stock. 40% of the investors preferred to hold on to their existing holdings. Their reaction may stem from the opinion that the good financial performance would already be discounted by the market, leaving little scope for future appreciation. 22% of investors preferred to book profits in this case.

❁ Unlike a dividend announcement, in case of a bonus announcement, the researchers found a lesser percentage of investors willing to buy more shares. Only 36% of the investors were willing to buy in case of a bonus announcement against 46% of the investors, who were willing to buy on a dividend announcement. These investors obviously believe that the bonus announcement is a sign of good tidings for the company. The number of investors willing to sell the shares is slightly on the higher side, with 14% of the investors willing to book profits on bonus announcement against 8%, in case of dividends. The number of cautious investors is more or less the same, with 50% of the investors preferring the wait and watch policy.

❁ It was hypothesized that investors behave rationally towards various capital market information. Using Chi-square test to find if there is any association between investor behaviour and various capital market information, based on the P values of various capital market information, it is concluded that investors behave rationally for certain specific capital market information.

❁ Tests of significance shows that there is a significant relationship between age and the industry prospects in the decision making criteria. Also, income factors affect investment in savings bank, insurance and real estate. Age also plays a role in behavior to informational triggers such as when results announced are not good, when stock splits are announced in bullish market conditions, and when mergers are announced. Correlation analysis shows that there is a correlation between age and informational triggers such as bullish market conditions, stock splits in bull markets and when mergers are announced.

CONCLUSION

❁This research brings forth certain peculiar characteristics of Indian investors, living in Chennai. The ability to understand the judgement heuristics, like rationality or irrationality of the investment pattern and behaviour will enable the investor to act with caution as the consequences are likely to affect the asset value, lifestyle, relationship with others and social interaction. The present study has shown that the investors show a marked preference for investing in the capital markets and that too, both the primary as well as the secondary markets.

❁Most of the decisions are rational and often influenced by information about the government policies, business opportunities and the herd behaviour noticed among certain classes of society, where investment culture is imbibed over a period of time. The investors stay invested in certain companies for the long-term growth despite a short-term setback in their earning capability.

❁Furthermore, it has been found that the investors prefer a wait and watch policy for taking their decisions to most information. Thus, investors are also cautious while analyzing news, which could alter the risk profile of companies. Investor decisions are influenced by psychological factors and behavioural dimensions in accordance with the research results shown in other countries. Anyone ambitious of achieving a threshold of success in the capital market must acquire adequate knowledge in behavioural finance.

SCOPE FOR FURTHER RESEARCH

The interdisciplinary field exploring behavioural characteristics of the market with special reference to risk perception of investors in a capital market has potential scope for future research. Further research on the behavioural aspects of the investors can also be studied by categorizing investors into retail investors and professional investors; and also by categorizing domestic institutional investors and foreign institutional investors.

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