Investors’ Behavior and Perceptions Towards Stock Market: Structural Equation Modeling Approach

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Abstract

Investors’ behavior and perception towards stock indices performances of the stock market was taken into account for this study. Relevant data was collected from 416 equity investors indulged in the stock market situated in diverse parts of southern Tamil Nadu, India. This research focuses on how the investors’ perceptions regarding stock indices movements of stock markets are affected by their irrational behavior, rational behavior and decision making behavior. In this study SEM approach was applied to analyze the data. The observations from the study disclosed that, the hypothesized model has a good fit and indicates that the anticipated model has the adequate fit, by way of satiating the suggested values. The finding indicates that investors are partly rational and partly irrational because they collect complete financial information and use this information for investment decision making and also use short cuts for decision making.

Keywords: Investors’ behavior, investors’ perception, structural equation modeling.

1. Introduction

Financing in equity shares gives a chance to become a part of the possession of the business and also gives regular revenues as dividend income and capital appreciation. A ventures investment decision making is based on risk sensitivity of distinct stakeholders. It covers subjective and objective risk norms. Rendering to customary investment theory, stakeholders are anticipated to gather ample and flawless data and use all accessible evidence to take balanced assessments in the stock market, for which the significance would boost the equity share price to be precise and mirror the fundamental value and it is intend to move up or down only if unanticipated thing happen. However, Behavioral finance theories adopt that distinct investors are not constantly composed and do not include industry, vital and technical investigation in investment judgments. It emphases on how depositors essentially collect and comprehend information in order to make verdicts created on evidence and explores the impact of intellectual and emotions on speculation conclusions. Behavioral finance theory followers argue that depositors essentially behave absurdly while making speculative conclusions. Resolution creation method is created on heuristics such as bullishness, representativeness prejudice, attaching, Gamblers’ misconception bias, expertise bias, prospects such as risk aversion, loss aversion and mental accounting and herding behavior. Individual investors usually buy stocks when prices are upward trend and sell the stocks when prices are in down ward trend. International and domestic instability, war crimes, fraud and domestic or political unrest terrorist attack, scandals, and high oil price affect the stock market negatively. These factors including increase in inflation rate, increase in interest rates decrease or erode consumers spending capacity which may lead to lower business profits. Due to low profits, the company stock will be devalued. The investors become under confidence about the market. Individual investors are not willing to assume risk and they tend to sell the stock. Although several studies made huge contributions to the knowledge of how investors should behave in the stock market and how the investors actually behave in the stock market and its effect in the decision making procedure, they lack overall picture of relationships between the behavioral and traditional finance aspects and the investors’ views about the stock market indices performances and how the stock indices performances are affected when rational and irrational groups of investors behave in different fashion. This research focuses on how the investors’ perceptions regarding stock indices movements of stock markets are affected by their irrational behavior, rational behavior and decision making behavior.

2. Objectives of the research

1. To analyze whether all available criteria’s satisfy the suggested value, specifying a good fit between the hypothesized model and the available sample statistics.
2. To examine the relationship between dimensions of investor behavior and perceptions towards stock indices performances.

2.1. Hypothesis

H1: Investors’ irrational behaviors positively influence stock decision making process
H2: Investors’ rational behaviors positively influence stock decision making process
H3: Investors’ Irrational behaviors positively affect stock indices performances
H4: Investors’ rational behaviors positively affect stock indices performances
H5: Investors’ Decision making process positively affects stock indices performances

3. Research method

3.1. Plan and kind of the exploration

This examination pursues a graphic research plan. This investigation is a causal-logical methodology, clarifying the impact of measurements of financial specialists’ conduct on the stock files exhibitions by utilizing essential information. Essential information for examination were gathered by study from individual value financial specialists with their feelings, and encounters in settling on venture basic leadership process and observations about stock lists exhibitions. Speculators’ perspectives and observations were estimated with self-controlled survey. Five point scale with the score 5 demonstrating firmly concur and the score 1 showing unequivocally differ was utilized to gauge financial specialists silly conduct, stock basic leadership process, and recognitions towards stock lists exhibitions. A similar five point scale showing 1 slightest impact and 5 most altogether impact was utilized to quantify speculators sound conduct. The essential information and optional information were utilized for the investigation. The unit of examination is the individual stock financial specialists who put resources into the share trading system.

3.2. Populace, test and examining procedure

The populace comprises of individual speculators who put resources into the Indian Securities exchange. In view of pilot consider, test measure is resolved. Test measure n = (ZS/E)2
Where,
Z = the institutionalized esteem that relates to the certainty level of 95% = 1.96.
S = Test SD from Pilot investigation of 50 Test = 0.52
E = Adequate Mistake =5% = 0.05.
Along these lines the Example estimate = (1.96*0.52/0.05)2= 415.51= 416
Out of the 500 polls disseminated, just 425 completely finished surveys were gathered which added up to 85% of the reaction rate. Out of 425 completely finished polls 416 surveys were utilized for investigation. Accommodation examining method was utilized to gather the examples.

3.3. Method of Investigation

The accessible information were inspected and examined with the Auxiliary Condition Show (SEM) with the AMOS program to test theories 1 through 6 of this method is proper when used to portray the connection between securities exchange records and measurements of financial specialists conduct through the Basic condition display examination of way.

4. Data analysis, results and discussion

4.1. Reliability Test

Cronbach alpha dependability test was utilized to analyze the unwavering quality of the instrument utilized for essential information accumulation. Cronbach alpha estimates the unwavering quality of the unique classes and comprises of assessments for how much variety in scores of various factors is because of shot. A coefficient more prominent than or equivalent to 0.60 acknowledged and a decent sign of build unwavering quality. The example estimate decided for the dependability test was 50. It has the estimation of 0.60 or more. The general essentialness level of Cronbach’s alpha turned out to be 0.884. Along these lines unwavering quality is 88.4% and the instrument was solid to be utilized further in the examination. It infers the investigation factors were dependable (Hair et al 2010). The Aftereffects of testing unwavering quality of the investigation factors are appeared in table 1

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>No of Attributes</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual investors profile</td>
<td>7</td>
<td>0.637</td>
</tr>
<tr>
<td>Irrational behavioral factors influencing</td>
<td>22</td>
<td>0.754</td>
</tr>
<tr>
<td>investment decisions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rational factors influencing investment</td>
<td>40</td>
<td>0.901</td>
</tr>
<tr>
<td>decisions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Equity investors’ decision</td>
<td>4</td>
<td>0.600</td>
</tr>
<tr>
<td>making process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of determinants of stock</td>
<td>9</td>
<td>0.690</td>
</tr>
<tr>
<td>indices performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall reliability analysis for factor</td>
<td>59</td>
<td>0.884</td>
</tr>
<tr>
<td>influencing Individual Equity investors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>behavior and Stock indices performances</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Processed Primary Data

4.2. Structural equation modeling approach (SEM)

SEM is a factual displaying procedure that consolidates a few measurable systems to produce an arrangement of connections between at least one striking autonomous factors are accessible, so does it might be either proceeds or discrete in shape, and at least one ward factors that could be inspected (Hair et al., 2006). It is seen that the main role of utilizing the SEM is to clarify the example of entomb related reliance relationship simultaneously that are observed to be between an arrangement of inert factors which can estimated by at least one watched factors (McDonald and Ho, 2002).

4.3. Goodness-of-fit assessment

SEM was utilized to dissect the inclination of the model focused upon the acquired examples. As proposed by Anderson and Gerbing (1988), estimation model to test the dependability and judiciousness of the overview instrument was broke down first and by utilizing AMOS-V18 the auxiliary model has been analyzed. For the assurance of testing the model fit invalid theory and elective speculation are composed.

4.4. Model fit hypothesis
Since the criteria fit are satisfying all the suggested values, Null hypothesis is accepted. It indicates that this proposed model is suitable for further analysis.

4.5. SEM assessment

In the auxiliary model, the connection between the exogenous and endogenous factors is introduced by utilizing a restricted impact relationship. By applying AMOS V 18 all parameters were evaluated once more. Those parameters included way co proficient among exogenous and endogenous factors, differences of the inactive factors, stacking co productive, mistake fluctuations/co changes for the deliberate factors as appeared in Figure 1.

I. The factors utilized in the auxiliary condition show are Observed, Endogenous Variables

1. Heuristic
2. Prospect
3. Herding
4. Personal and Financial Needs
5. Firm Image
6. Accounting and Financial Information
7. Neutral Information
8. Advocate Recommendation
9. Decision Making Process
10. Stock Indices Performance

II. Unobserved, exogenous Variables

1. Investors’ Irrational Behavior
2. Investors’ Rational Behavior
3. e1: Error term for Heuristic
4. e2: Error term for Prospect
5. e3: Error term for Herding
6. e4: Error term for Personal and Financial Needs
7. e5: Error term for Firm Image
8. e6: Error term for Accounting and Financial Information
9. e7: Error term for Neutral Information
10. e8: error term for Advocate Recommendation
11. e9: error term for Decision Making Process
12. e10: Error term for Stock Indices Performance

Hence numbers of variable in the SEM are

- Number of Variables in this Model: 22
- Number of Observed Variables: 10
- Number of Unobserved Variables: 12
- Number of Exogenous variables: 12
- Number of Endogenous Variables: 10

Source: Processed Primary data

4.6. Irrational behaviour

Irrational investor behavior is defined as using shortcuts for collection and analysis of information before buying and selling of equity shares without doing fundamental analysis. This is measured by Researchers as developed from (Le Phuoc Luong et al, 2011) Investors’ irrational behavior is determined by three latent variables and 17 statements of 9 measured variables as follows.

1. Heuristic consists of five indicators, i.e. over confidence, Representativeness, Anchoring, Gamblers’ fallacy, Familiarity bias.
2. Prospect consist of three indicators, i.e. Risk aversion, Loss aversion, Mental accounting.
3. Herd behavior consist of other investors’ decision of purchasing and selling, other investors’ decision of the stock volume, other investors’ decision on the type of stock, following reactions of changes of other investors’ decision.

4.7. Rational behavior

Rational investor behavior is defined as considering and analyzing all available economic, industry and company information before choosing the best alternatives from various investment alternatives available in the stock market and always seeking to maximize the expected utility. This is measured by Researchers as developed from Investors’ rational behavior is determined by five latent variables and 31 measured variables as follows.

1. Personal and Financial needs consists of 8 variables
2. Firm- Images consists of 8 variables
3. Accounting and Financial information consists of 7 variables
4. Neutral information consist of 4 variables
5. Advocate Recommendation consists of 4 variables.

4.8. Decision making process

It involves what they need or want, their awareness of various investment alternatives, their information- gathering activities, their evaluation of alternatives and their selection of best alternatives from various alternatives available to them. The measurement of decision making process from Salman A.Q et.al, (2012) was done using Likert scale. The scale ranges from 5, that indicates strongly agree and 1 that indicates strongly disagree.

4.9. Stock indices performances

The general movement of the market is typically measured by stock indices representing the entire market. The most popular benchmark indices are S&P CNX Nifty Index and BSE-
SENSEX. The instrument of perceptions towards stock indices performances was done using a Likert scale that measures the factors influencing stock indices performances in which that in score 5 indicates strongly agree and score 1 shows strongly disagree.

4.10. Hypothesis testing

The SEM Examination demonstrates that the trial of speculations from H1 to H5. Every one of the speculations are acknowledged in light of the fact that H2, H3, H4 and H5 are critical at 1% level and H1 is noteworthy at 5% level. Every one of these confirmations are introduced in Table 3.

Here the coefficient of financial specialists’ nonsensical conduct on basic leadership process is 0.150 that means the fractional impact of speculators’ unreasonable conduct on basic leadership process, holding extra factors as consistent. The normal positive sign indicates that such impact is certain that basic leadership process would increment by 0.150 for each unit heightening in financial specialists’ silly conduct and this coefficient esteem is ground-breaking at 5% level. The coefficient of speculators’ reasonable conduct on basic leadership process is 0.301 speaks to the fractional impact of financial specialists’ sane conduct on basic leadership process, holding the extra factors as consistent. The evaluated positive sign suggests that such impact is certain that basic leadership process would increment by 0.301 for each unit increment in speculators’ judicious conduct and this coefficient esteem is critical at 1% level.

The coefficient of speculators’ basic leadership process conduct on stock lists exhibitions is 0.210 speaks to the incomplete impact of financial specialists’ basic leadership process conduct on stock records exhibitions holding alternate factors as steady. The evaluated positive sign suggests that such impact is certain that stock files exhibitions would increment by 0.210 for each unit increment in financial specialists’ basic leadership process conduct and this coefficient esteem is huge at 1% level. The coefficient of nonsensical conduct on stock records execution is 0.535 speaks to the fractional impact of impact silly conduct on stock lists exhibitions, holding alternate factors as steady. The assessed positive sign infers that such impact is sure that stock lists exhibitions would increment by 0.535 for each unit increment in sane conduct and this coefficient esteem is huge at 1% level. The coefficient of sane conduct on stock records exhibitions is 0.489 speaks to the fractional impact of levelheaded conduct on stock files exhibitions holding alternate factors as consistent. The evaluated positive sign suggests that such impact is sure that stock records exhibitions would increment by 0.489 for each unit increment in sane conduct and this coefficient esteem is critical at 1% level.

Table 3: Variables and Estimation of Structural Equation Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>UnStandardized Co-Efficient</th>
<th>Standardized Co-Efficient</th>
<th>t Value</th>
<th>P Value</th>
<th>Hypotheses</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision Making Process</td>
<td>Investors’ Irrational Behavior</td>
<td>0.150</td>
<td>0.069</td>
<td>0.131</td>
<td>2.179</td>
<td>H1</td>
</tr>
<tr>
<td>Decision Making Process</td>
<td>Investors’ Rational Behavior</td>
<td>0.301</td>
<td>0.074</td>
<td>0.244</td>
<td>4.083</td>
<td>H2</td>
</tr>
<tr>
<td>Stock Indices Performance</td>
<td>Investors’ Irrational Behavior</td>
<td>0.535</td>
<td>0.102</td>
<td>0.308</td>
<td>5.245</td>
<td>H3</td>
</tr>
<tr>
<td>Stock Indices Performance</td>
<td>Investors’ Rational Behavior</td>
<td>0.489</td>
<td>0.107</td>
<td>0.260</td>
<td>4.569</td>
<td>H4</td>
</tr>
<tr>
<td>Stock Indices Performance</td>
<td>Decision Making Process</td>
<td>0.210</td>
<td>0.070</td>
<td>0.138</td>
<td>2.988</td>
<td>H5</td>
</tr>
</tbody>
</table>

The findings of the research are discussed below: For Hypothesis 1, It concerns the influence of investors’ irrational behavior on the decision making process. It indicates that the investors’ irrational behavior positively influence the decision making behavior. It suggests that irrational behavioral factors can make the investors to change their belief or intention to buy, held for sale or sale the securities. The belief was based on the economical, financial and other information about the intrinsic value of share available in the stock market. At the time of publication of these information, the irrational investor do not read, examine, analyze and interpret information but they use short ways for making investment. These results of irrational behavior provide changes in the decision making process. From this evidence, Hypothesis 1 is strongly accepted. For Hypothesis 2, It concerns the influence of investors’ rational behavior on the decision making process. It indicates that the investors’ rational behavior also positively influence the decision making process. It suggests that rational behavioral factors also can make the investors to change their belief or intention to buy, held for sale or sale of equity shares. The rational investor collects and analyzes the financial statements of the companies to take stock investment decisions in the stock market. Analyzing the financial and non financial information motivates the investor to change the investment decision. This rational behavior determines decision making behavior of investors to interpret and analyze the information. Therefore, as per the traditional finance, rational investor should critically analyze the financial and nonfinancial information to take investment decision based on intrinsic value of share. From this evidence, Hypothesis 2 is strongly accepted. The test of Hypothesis 3 concerns the effect of Irrational behavior on perceptions towards stock indices performances. Test results indicate that irrational behavior positively affects the stock indices performances. It means that the irrational behavior has a significant effect on the performances of the Bench mark stock indices. Attitudes towards stock indices performances can be positive because it is formed from the experience and knowledge of the investor as well as the experiences of others who can change direction due to influence of people such as friends, observers and regulators. If the behavior of the investors towards stock indices performances is positive, while other investors or their friends do not support his perception, then the investors’ perception towards stock indices can change contradictory. Therefore investors’ irrational behavior affects stock indices performances. With this evidence, hypothesis 3 of the study was admitted and so irrational behavioral factors are really effective on performances of the Bench mark stock indices in Indian stock market.

The test of Hypothesis 4 is related to the effects of investors’ rational behavior on perceptions about stock indices performances. Different investors are getting different information and their ability to interpret the information is also different. This behavior also can change the perceptions about stock indices performances. With this evidence, Hypothesis 4 is confirmed. The test of Hypothesis 5 is dealt with the effect of decision making process on stock indices performances. The test result shows that Stock decision making process positively affect the
performances of the stock indices performances. It means that investors’ decision making behavior can change the perceptions about stock indices performances. An individual investor’s investment decisions would basically be in the form of two types of reasoning namely traditional finance and behavioral finance. These types of reasoning will be related to risk perception of individuals. Traditional finance would cover the objective risk criteria and Behavioral finance cover subjective risk criteria. These two criteria can change the perceptions about the stock indices performances. With this evidence, Hypothesis 5 is accepted.

6. Conclusion

The main purpose of the research was to observe how the various dimensions of investors’ behavior such as investors’ rational behavior, irrational behavior and their stock decision making behavior affect perceptions towards benchmark stock indices performances, i.e. BSE-Sensex and NSE-Nifty. The results of the study proved that investors’ behavior have positive effects on stock indices performances. Furthermore it is also proved that there is a strong positive relationship between investor behavior and perceptions towards stock indices performances. The findings indicate that investors are partly rational and partly irrational because they collect complete financial information and use this information for investment decision making and also use short cuts for decision making.

It is suggested here that once investors’ behavior improved, the stock indices performances will also go high. The stock brokers, professionals, asset managers and investors can apply the results of this paper for selecting proper investment strategies making safety and optimum return investments in the stock market. Therefore investors’ behavior should be improved by controlling emotions and psychological biases.

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