Retail investors’ investment behaviour and their income- an analytical Study of Indian equity market
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ABSTRACT

In this technological era, money plays a major role of determining one’s life. People have different options on investments. Investing is a word associated with risk and return. A stock market investment is one such option mostly preferred by investors while thinking about investments. This is the market which provides optimum return to the investors, if they handle in an appropriate way. Investors are often influenced by various biases in making investment decisions. Further, their investment behaviour is determined by certain demographic factors of age, marital status, gender, occupation, profession, financial dependents and income. Amongst these, income is the primary factor which determines most of the people’s investment behaviour. The present study focuses the influence of investors’ income on determining their investment behaviour. For this purpose, multistage random sampling method is used to collect the data from retail investors who are accessing the Indian equity market from Tamilnadu circle. The collected data were analyzed quantitatively by using the chi-square test and correspondence analysis test. The findings of this study reveal that individuals’ income has shown significant influences of determining their investment behaviour. Further findings reveal that individuals’ income is directly proportional to their financial literacy.

Key words: Demographics, decisions making, investment awareness, investment behaviour, income.

1. Introductions

The capital market is a market used for selling and buying of the stocks and bonds. In this market, companies and governments can raise long term funds using shares and bonds. Retail investors’ participation in the capital market is very low. More funds are channelized into real estates, gold, fixed deposits in banks and post offices and high-yield debt instruments. India has the highest saving rate of households than the rest of nations in the world. Almost 50 percent of the savings pumped into real estates and gold. The remaining 50 percent of the savings are invested in the financial assets, which includes only 4 percent of the total household savings in the equity market. According to the survey of SEBI sponsored household report (2011), only 11 percent of Indian households invest in equity, mutual funds, debt, derivatives and the other financial instruments in the market.

Remaining 89 percent of household savings diversified into non-risky investments of banks, insurance, post office deposits, etc. Many asset classes offer a steady income. It may be cash, real estate, fixed income from government, corporate bonds and high income shares. Some asset classes also offer a combination of income, capital growth and balanced one. The
capital market is one such class which satisfies all these financial needs of an individual. People have different investment income requirements. Some may have an investment objective of long-term investment which may expect their income should balance their current and future income needs. At the same time, investors with short-term objectives may expect their investments to produce a regular, stable income-stream while preserving their capital. Despite the consequences of any particular need, income plays an important role in individual’s investment decisions and their portfolio management. Investors have different investment avenues. The stock market is one such promising investment avenue which satisfies their long term and short term financial needs. The primary aim of this study is to find out the influence of income on determining the investment behaviour of the investors and the subsequent objective is to find out the financial literacy of the investors on capital market investments. This study will be helpful to retail investors who can understand the factors which hinder their successful investment decisions. Further, they can modify their portfolios often to optimize their investment return.

2. Review of literature

Rao (1980) explained the role of savings on income generation. He pointed that increased income leads to increased savings which is continuously lead to capital formation and economic development. Gupta (1970) has used annual time series data to analyze the factors which determine the individual’s saving. His findings suggest that individuals who are in urban are expecting a permanent income from their savings which are invested in various investment avenues. At the same time people from rural wish to expect an absolute income from their savings. Shanmuga sundaram and Balakrishnan (2011), analyze the factors which influence the behaviour of capital market investors. They found that demographic factors have contributed reasonable influence of investor’s investment decisions. Horvarth and Zuckerman (1993), find the relationship of peoples biological, demographic and socio-economic characteristics and their risk tolerance level. Verma, (2008) has studied the relationship of demographic profile and investor personality.

He discovered that these two factors determine the perception of the investor which later affects their investment decisions. Survey of SEBI (1998) reveals that investors risk appetite, investment objective, income and funds used for investment influence their investment behavior in corporate securities at various levels. Yu-Je Lee, Gao-Liang Wang, Kae-Shuan Kao, Ching-Yaw Chen, Fong-Ping Zhu (2012) found that investors age, education, occupation, income, average quarterly investment, assets level determine the their investment behaviour. A 2012 omnibus poll study conducted by Investor Education Fund Canada (IEF), believes that individuals not having a regular income struggle to manage their money or investing. Lewellen, Lease, and Schlarbaum, (1977) asserted that investors with high income, younger in age, higher education and less family members prefer riskier investment alternatives that offer high returns. They wish to invest more on stocks rather than hold on their savings or investments in banks and bonds.

Lutfi (2009) studies suggest that investors’ income is positively correlated with their risk taking behavior and the selection of investment. Further, his findings convey that high income investors would take more risk than less income investors. The high income investors wish to take higher risk if their investments have not affected their families’ living costs and survival. Volpe et al. (2002) opined that investors with higher income had more knowledge in investment than those with lower income. Further, he concludes that investors with high income group prefer online trading/investments than approaching the brokers for their
investments. ANZ Bank conducted a survey in Australia on 2005. Findings illustrated that there was a strong connection between financial literacy of an individual and their demographic status mainly education, age, marital status, income, savings and employment status. Investors who have the attributes of lower education, unemployed or unskilled workers, and people with low income, single people and those at both extreme as of the age profile reveal the lowest levels of financial literacy. According to Brabazon (2000), most of the investors investments are focused with an intention of wealth maximization. Report of SEBI and NCAER (2000) displays that safety and liquidity are the main objective of the investment made by investors in India. Shah et al (2011) has a different opinions of investment objective that most people made an investment for retirement, future obligation, health insurance and many more. Murugan (2012) opined that majority of investors expect a regular income from their investments. From this review, it is clear that income plays a significant role in determining the investment behaviour of the investors.

3. Objective of the study

The main objective of this study is to find out whether the investors’ income determine their investment behaviour or not.

3.1 Research methodology

Descriptive method was used to design the research questionnaire. Primary data were adopted to collect the data from Retail Investors living in Tamil Nadu. The study was conducted between the period of November 2011 and January 2012. The Multistage random sampling technique was employed to collect the data. Initially, 32 districts in Tamilnadu state are segmented into five zones as North, South, East, West and the Central part of Tamilnadu. For each zone, one place is randomly selected. After selecting the place, leading broking offices are identified in each place to collect a target data. Five broking offices are randomly selected to collect the target data. From the 800 questionnaires, 780 responses were received, out of which 38 were excluded because of incomplete data or response bias of extreme values. The remaining usable questionnaires were 742. This stands for an effective response rate of above 90 percent of the entire sample. Hence the sample size for this study is 742.

3.2 Hypotheses

Chi-square is used to find out the significant association between the demographic variable of investor’s income and their various investment awareness variables. The following hypotheses are structured to test the relationship between these two variables.

Ho: There exists no significant association between investors’ incomes and their different investment factors.

H1: There exists a significant association between investors’ incomes and their various investment factors.

3.3 Income and investment variables of investors

The chi-square test is used to find out the significant association between the demographic profile of investors’ income and their various investment variables. From the below table 1, it
is inferred that Reasons for investments in the equity market, Equity experience, Risk profile of the investors, Induces to stay in the market, Equity investments and the Pattern of investing have shown significant association with the income of investors.

**Table 1:** Association between Investors’ income and investment variables

<table>
<thead>
<tr>
<th>S. No</th>
<th>Investment Variables</th>
<th>Chi square value</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Attraction towards the equity market</td>
<td>8.107</td>
<td>0.523</td>
</tr>
<tr>
<td>2</td>
<td>Reasons for investing in the equity market</td>
<td>532.810</td>
<td>0.000</td>
</tr>
<tr>
<td>3</td>
<td>Investment type</td>
<td>38.605</td>
<td>0.065</td>
</tr>
<tr>
<td>4</td>
<td>Experience in the equity market</td>
<td>532.232</td>
<td>0.000</td>
</tr>
<tr>
<td>5</td>
<td>Approach towards the market</td>
<td>24.761</td>
<td>0.070</td>
</tr>
<tr>
<td>6</td>
<td>Total amount invested in various investment avenues</td>
<td>37.297</td>
<td>0.058</td>
</tr>
<tr>
<td>7</td>
<td>Risk profile</td>
<td>439.399</td>
<td>0.000</td>
</tr>
<tr>
<td>8</td>
<td>Induces to stay in the equity market</td>
<td>120.850</td>
<td>0.000</td>
</tr>
<tr>
<td>1</td>
<td>Proportions of investments in the equity market</td>
<td>474.152</td>
<td>0.000</td>
</tr>
<tr>
<td>2</td>
<td>Investment portfolio</td>
<td>11.038</td>
<td>0.227</td>
</tr>
<tr>
<td>3</td>
<td>Segmentations of stocks</td>
<td>12.166</td>
<td>0.204</td>
</tr>
<tr>
<td>4</td>
<td>Pattern of investing</td>
<td>42.256</td>
<td>0.048</td>
</tr>
<tr>
<td>5</td>
<td>Preference of Stocks to be invested</td>
<td>40.073</td>
<td>0.061</td>
</tr>
<tr>
<td>6</td>
<td>Source of fund utilized for investments</td>
<td>29.916</td>
<td>0.081</td>
</tr>
<tr>
<td>7</td>
<td>Holding period of investments</td>
<td>20.858</td>
<td>0.090</td>
</tr>
</tbody>
</table>

**3.4 Reasons for investments in the equity market**

The chi-square test reveals that there exists an association identified between the income of investors and reasons for investing in the equity market. The chi-square and significant value of this association are 532.810 and 0.000.

**Figure 1:** Association between income and reasons for equity investments
Association figure 1 implies that income of investors vary from 2 to 10 lakhs associate with wealth preservation, source of income and education funding, income less than 2 lakhs associate with capital appreciations and income above 10 lakhs associate with retirement planning. This shows that less income investors (less than 2 lakhs) are approaching the market in a short term perspective than middle (2-10 lakhs) and high income (above 10 lakhs) group. This signifies that middle and high income investors broadly set their financial goals than less income investors.

### 3.5 Equity experience

The chi-square and significant value of association between income and equity experience of investors are 532.232 and 0.000. What category of income associate with which type of equity experience is explored through correspondence analysis.

Investors’ income less than 2 lakhs associates with less than one year of equity experience, income between 2 and 5 lakhs have one to three years, income between 5 and 10 lakhs have three to five years and income above 10 lakhs have greater than five years of equity experience. This suggests that individual’s income increases as their experience increases. Thus, it can conclude that individual’s income is directly proportional to their equity experience.

### 3.6 Risk profile of the investors

Income and wealth are two key factors which are assumed to exert a positive relationship on the preferred level of risk (see Friedman 1974; Cohn, Lewellen, Lease and Schlarbaum 1975; Blume 1978; Riley and Chow 1992; Grable and Lytton 1999; Schooley and Worden 1996; Shaw 1996; and Bernheim et al, 2001). People can sometimes have dissimilar risk profiles with different pools of investments. They might be willing to take on considerable risk with their different investments they earmark for a particular goal, but not with others.
Investor whose income fluctuate between 2 lakhs and 5 lakhs associate with high risk, income between 5 lakhs and 10 lakhs have moderate risk and investors whose income above 10 lakhs associate with a low risk profile. Less earning investors are at the early stage of their job. Some of the attributes of this stage are less financial dependents, less financial commitments, energetic, less emotional maturity and high intuitiveness. These attributes force them to adopt a high risk investment strategy for the early part of their investment. High risk investors want the highest possible return on their capital during a short time, which forces them to adopt intuitive investment strategy. High income indirectly confirms that investors are somehow experienced in terms of their age and professions. High income investors have high financial responsibilities, moderately energetic, emotionally matured and deliberative. These attributes make them to take risk averse investment attitude. Low risk investors prefer not to take risks with their investments, but they can be persuaded to do so to a limited extent. Investors’ risk aversion increases as wealth rises for less wealthy individuals (Siegel and Hoban, 1982; Morin and Suarez, 1983). This shows that high income investors are somewhat wealthy. Moderate risk profile investors are willing to take risks and understand the nature of the short term to long-term risk/return trade off. They’re willing to take risks by optimizing their investment return. Further, they are typically experienced, and make up their minds on financial matters quite quickly.

3.7 Induces to stay in the market

The association between income of the investors and the factors induced them to stay on the market is analyzed with the help of the correspondence analysis test.

Association figure 4.22 reveals that investor whose income less than 5 lakhs have inorganic growth, income above 10 lakhs have organic growth and income vary between 5 and 10 lakhs have preferred both the organic and inorganic growth towards the market. This conveys that investors who earn above 10 lakhs want to safeguard the money to avoid speculations on their portfolios. But, investors whose income falls below 5 lakhs wish to take high risk to achieve their intuitive goal. Investors whose income varies from 5-10 lakhs stick on between these two growths patterns of investments.
3.8 Proportions of investments in the equity market

The association between equity investments and income of investors are confirmed through chi-square test. The chi square and significant values of association between equity investments and income of investors are 474.152 and 0.000. Correspondence analysis is used to explore, which income category of investor associate with what type of equity investments.

Investors’ income less than 5 lakhs associates with 75 to 100 percent of their investments in the equity market, income ranging from 5 to 10 lakhs associate with 25 to 75 percent and finally income above 10 lakhs associate with less than 25 percent of the investments in the market. This suggests that respondent’s income increases as their equity investments...
gradually reduces. High income investors (above 10 lakhs) reduce their risk due to family commitments and uncertainty prevailing in the market caused by speculations and crises. They reduce their equity holding periodically from the market to reduce speculative risk on their investments.

3.9 Pattern of investing

Investment pattern of an individual helps to understand the skill of managing the portfolios in an effective manner or not. The chi-square test reveals that there exists an association existed between income and pattern of investing variables. Correspondence analysis test is employed to identify which income group of investors associate with what type of investment pattern. Result of the correspondence associations are displayed in the following figure 6.

![Figure 6: Income and pattern of investing](image)

The associations between investors’ different pattern of investments and their income reveals that income of investors less than 5 lakhs associate with repeatedly invest or trade in the same set of stocks, income ranges from 5 to 10 lakhs prefer to invest in a variety of stocks and income above 10 lakhs prefer both the pattern of investments. This demonstrates that investor who earns above 5 lakhs per year have shown good skill of managing their portfolios than the income group of earning less than 5 lakhs.

4. Conclusion

Income is a major demographic factor which satisfies most of the financial needs of an individual. Findings of this study reveal that income has significant influence of determining the investment behaviour of investors. Further results of investment behaviour factors suggest that investors who are earning less have low financial literacy when compared to moderate and high income group investors. This study has constrained to some limitations. Firstly, retail investors are only targeted to carry out this research work. Besides, investors who access the Indian secondary market from Tamilnadu region are only taken for this study. Secondly, the research data was collected from investors who are located from major cities of Tamilnadu state. At last, income is the only demographic factors are taken to find out its
relationship with their investment variables are studied. The major implications of this study will be useful to retail investors to understand their income will directly contribute the successful investment decisions. Based on findings of this study, investment analysts, broking firm, and investment managers can guide their clients on making successful investments in equity market. At last, fund managers can use this study to design a suitable product to meet their clients’ needs.

5. Scope of the future study

The present study addresses the issue of individuals’ income on determining their investment behaviour. But, there is a need to study other demographic factors (age, financial dependents, profession, marital status and gender) and its influence of determining their investment behaviour is a promising area of future research related to this study.

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