

Impact of Age on Risk Preference and Investment Time Period of Retail Investors of Kanpur City

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ABSTRACT

Stock market investments have become the most friendly and convenient form of investment for every investor's age group. At present, almost everyone is investing in the stock markets. However, what type of security they invest in and what affects their investment decision depends upon several factors, which may include factors like age, gender, education, occupation, investment objective, risk appetite, income, etc. Age is one of the prominent factors influencing investment preferences not only directly but also indirectly. It is generally seen that the younger generation prefers investing in direct equity in the stock market, which is considered a risky investment, whereas people of old age are likely to invest in stable and risk-free securities like debt securities and mutual funds. It is also seen that young investors prefer investing for a short period because of their impatient behavior, but as they grow old, they start holding their investments for the medium to long term. This study attempts to determine the effect of age on the risk preference and investment period choice of retail stock market participants. 256 retail investors were selected for the study from Kanpur city, and data was collected using a structured questionnaire. Chi-square test, conducted under the study to determine the impact of age on the risk preference and investment period preference of retail investors. In addition to this, the value of Phi, Cramer's V statistic, and the contingency coefficient were all computed so that the "degree of association" between the variables could be determined. The findings of this study reveal that investors' age affects their risk preferences and the period for which they prefer investing. However, between age and risk preference, there was a moderate degree of association found, but in the case of age and investment period preference, the degree of association was weak.

KEYWORDS: Stock market; Retail investors; Age; Risk preference; Investment period

INTRODUCTION

The stock market has always been a lucrative option for investment, but in its initial phase, investors did not see it as a safe investment option and considered it a gamble where they might lose all their money. To some extent, they were not wrong, as initially stock markets were not properly regulated and this is the reason we hear about so many scams like the 'Harshad Mehta scam' in the year 1992, 'CRB scam', 'Ketan Parekh scam', 'Satyam scam', 'Sahara scam' and many others. But when SEBI was

established in 1988 and was given statutory powers on January 30, 1992, after becoming an executive body, the scenario of the Indian stock market changed, and gradually, it brought a drastic change in the functioning of the stock market and its participants. From 1992 to 2022, we can see the growth and modernization of the Indian stock market. Today, almost everyone is investing in the stock market as it offers a variety of investment options, from equity to debt and mutual funds. The stock

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market also helps in capital formation in the economy and is an important pillar of the Indian financial system. It allows you to invest any amount of money, from Rs. 10 to Rs. 10 cr. Also, with the emergence of 'Discount Brokers' like Zerodha, Upstox, Groww, etc., investing in the stock market has become the most convenient and simplest investment option.

Investment in the stock market can be made on a different basis such as 'Cash and Carry (CNC)' basis, also known as 'Delivery' and 'intraday' basis. On a CNC basis, investors invest their money for more than 1 day, which means they take delivery of the security bought by them in their DMAT account, whereas, in the case of an 'intraday' basis, they buy and sell, or they can also sell first and then buy the security on the same day; in this way, they get the margin profit or loss and do not take the actual delivery of the security. This study focuses on investors investing on a 'CNC' basis.

Risk is an important element in any investment decision making process. Every investor has to take into consideration the risk involved in investment along with the returns. Risk and return analysis is of utmost importance in every investment decision making, as higher the risk an investor is taking, higher should be the return also. There are many types of investments that are risk-free, like Fixed Deposits, Public Provident Funds, National Pension Schemes, etc. But these investments are not capable of generating good returns, and an investor gets only nominal returns after investing for a very long period. In the case of the stock market, the risk is generally high if the investment is made in direct equity, but there are also chances of getting very high returns even in the short run, and investing can also help mitigate this risk over a long time and also by diversifying the portfolio. The risk which normally an individual investor has to deal with in stock market investment is the risk of losing capital, as when an investment is made in equities, the whole capital can be washed out if the market falls or the company in which the investment is made winds up for any reason. So it is always advisable to invest after a proper analysis of risk and return. People generally invest according to their risk appetite, i.e., whether they are risk tolerant or risk-averse. Risk appetite is a personality trait, and this affects risk preference. The paper is designed to study the impact of the age of a retail investor on their risk preference, i.e., whether they would choose a risky investment or a low-risk investment. This paper also tries to establish a relationship between age and period of investment as with age, other variables get affected like the number of dependents, knowledge, investment objective, etc.,

which ultimately affects the investment period preference.

A. Literature Review

Amaraveni P, Archana M (2017), the respondents' preferences for various investing options were investigated. It was found that age has no effect on the investment decision whereas the income level has a considerable impact on the investment option chosen.

Mak, M. K., & Ip, W. (2017), psychological, sociological, and demographical aspects all have an impact on investment decisions, according to empirical evidence. The study concluded that income, education level, Gender, Age and investment experience of an investor influence the investment choices in Hong Kong and Main Land China.

Subramaniam, V.A., and Velnampy, T. (2016) studied the association between investor demographics and investing decisions. They discovered that educational qualification, age, income level, and investment experience affect risk tolerance. The study revealed associations between investment frequency, monthly income, age, and education, and investment duration, gender, education, age, monthly income, and social position.

Subramaniam and Athiyaman (2016) discovered that investors' risk tolerance is related to their age, education, investment experience, and income, but not their gender, occupation, or civil status.

Zanvar, & Bhola. (2016), studied the investments made in the risky vs. risk free investment options differ significantly. Two of the most popular investments were banks and insurance. The elements that influenced the decision were high yields, tax benefits, and safety.

According to Prabhat and Srivani (2016), demographic factors such as occupation, income, and educational qualification have a significant influence on investment preferences, however gender and age have little influence on investment decisions.

Rizvi, & Abrar. (2015), the investor's investment style is determined by his or her language, educational orientation, income, and age. Financial literacy is one of the most important variables influencing retail investors' decisions.

Dr. C. M. Shinde and Priyanka Zanvar (2015), evaluated the impact of demographic factors such as Educational qualification, age and Income level on the risk tolerance and choice of investment of an investor. It was found that demographic parameters of investor influences the investor's risk tolerance.

Geetha, S. N., and Vimala, K. (2014) explored the influence of demographic characteristics on an investor's investment decision-making process. It also studied the impact of advancement in information technology on the financial markets. The research showed that while gender age and education levels had no effect on an investor's risk taking abilities, family size does.

Chandra, A. (2008). Age, investment objective, income, education and other demographic aspects of and individual investors' influences their investment decisions. However, there are other important behavioural aspects also that affect the investment decisions but are frequently overlooked such as greed, anxiety, cognitive dissonance, heuristics, and mental accounting of investment.

B. Research Objectives

1. To investigate retail investors' investing preferences.
2. To study to impact of the age on the risk preference of retail investors and period of investment.
3. To analyse the magnitude of association between 'age and risk preference' and 'age and investment period'.
4. To suggest measures to retail investors to improve their investment decisions.

C. Research Methodology

1. Hypothesis Framed

- Hypothesis for impact of age on the risk preference of a retail investors.
H₀: There is no significant relationship between age and risk preference.
H₁: There is a significant relationship between age and risk preference.
- Hypothesis for impact of age on the period of investment.
H₀: There is no significant relationship between age and period of investment.
H₁: There is a significant relationship between age and period of investment.

2. Sample Design

The study collects primary data using a structured questionnaire with closed-ended questions designed to elicit responses from investors to determine their risk preferences and the period for which they are likely to invest their money. The study's sample unit consisted of retail investors who had made any type

of delivery-based investment in the stock market. 273 respondents in the city of Kanpur provided data, of which 256 samples were found to be representative.

3. Variables

Independent variables in the study is Age of Retail Investors and *Dependent variables* are Risk Preference and Investment Period

4. Analysis Tools

The data collected is analyzed using Chi-Square test, to evaluate the hypotheses of "impact of age on risk preference" and "impact of age on investment period preference". The probability value (p-value) of the chi-square test is compared to 0.05. If the p-value is greater than 0.05, the null hypothesis is accepted else, it is rejected.

In addition to that, the values for Cramer's V statistic, the contingency coefficient, and the Phi value were computed. The "degree of association" between two variables is something that can be measured using all three metrics. The formula used for computing the value of Phi (ϕ) is $\sqrt{\chi^2 / N}$. When the number of rows and columns is not equal, Cramer's V statistic is used, calculated using the formula $\sqrt{\chi^2(N \min(r-1, c-1))}$. The range of this matric lies between 0 and 1. The contingency coefficient, which employs a minimum and maximum value to assess the "strength of association" between the variables in question, is computed using the formula $\sqrt{\chi^2(\chi^2 + N)}$. The lowest possible value is zero. The maximum value is calculated as 0.91 using the formula $\sqrt{(r-1)/r}$. If the computed contingency coefficient is close to its maximum value, the degree of relationship between variables is strong.

Table No. 1: The table below shows the strength of the association for various Cramer's V Statistic values.

Cramer's V Value	Strength
V = 0	No Association
V = 1	Perfect Association
V < 0.25	Weak
V > 0.75	Strong
0.25 < V < 0.75	Moderate

Table No. 2: The table below shows the strength of the association for various Phi (ϕ) values.

Phi Value	Strength
0.00 - 0.20	Negligible
0.20 - 0.40	Weak
0.40 - 0.80	Moderate
> 0.80	Strong

D. Classification of Data**Table No. 3: Profile of Retail investors**

Age	No. of Respondents	Percentage
Less than 21 years	33	12.89
21 years – 30 years	62	24.22
31 years – 40 years	58	22.66
41 years – 50 years	47	18.36
51 years – 60 years	35	13.67
Above 60 years	21	8.2
Total	256	100

The data acquired from 256 samples classified by age are shown in the table above (Table No. 3). It is revealed that 12.89 percent of the 256 respondents are under the age of 21. This age group is primarily made up of students who are young investors interested in the stock market and crypto currency ventures. The majority of investors (24.22 percent) are between the ages of 21 and 30. This group mainly consists of fresher's who have just started their careers after completing studies and are investing in stock markets to gain high returns, future income, etc. 8.2 percent of investors belong to the age group above 60 years, and this group mainly consists of retired people. The age group of 31–40 years comprises 22.66 percent of the total population and consists of those investors who are already settled in their careers and are planning their families. Finally, the age groups of 41–50 years and 51–60 years respectively accounted for 18.36 percent and 13.67 percent of the total population.

The above data is further classified on the basis of Risk preference and period of investment of these retail investors in their age group.

Table No. 4: Age wise Risk Preference of Retail Investors

Age	No. of Respondents	Risk Preference		
		High	Moderate	Low
Less than 21 years	33	18	9	6
21 years – 30 years	62	37	18	7
31 years – 40 years	58	23	27	8
41 years – 50 years	47	11	23	13
51 years – 60 years	35	5	13	17
Above 60 years	21	5	6	10
Total	256	99	96	61

Table No. 5: Age wise Investment Period Preference of Retail Investors

Age	No. of Respondents	Investment Time Period Preference		
		Short (Less than 1 year)	Medium (1 year - 5 years)	Long (Above 5 years)
Less than 21 years	33	21	7	5
21 years – 30 years	62	33	21	8
31 years – 40 years	58	25	18	15
41 years – 50 years	47	17	14	16
51 years – 60 years	35	7	11	17
Above 60 years	21	5	7	9
Total	256	108	78	70

E. Data Interpretation**Table No. 6: Impact of Age on Risk Preference and Investment Period of Retail Investors**

Tests	Risk Preference	Investment Period
Degree of Freedom(d.f)	10	10
Calculated Value of χ^2	45.367	27.770
Table value of χ^2 at 5% level	18.307	18.307
p-value	0.000002	0.002
Phi coefficient	0.42	0.33
Cramer's V Statistic	0.30	0.23
Contingency Coefficient	0.39	0.31
H ₀	As $\chi^2_{Cal} > \chi^2_{Tab}$ and p-value < 0.05. Hence, the null hypothesis is rejected	As $\chi^2_{Cal} > \chi^2_{Tab}$ and p-value < 0.05. Hence, the null hypothesis is rejected

The results of the chi-square test and other tests can be seen in the table presented above. These tests were performed to determine the extent to which age affects risk preference and the amount of time that retail investors put their money into.

In the case of age and risk preference, the estimated result of the chi-square test was 45,368, which was considerably greater than the table value of 18,307 at the 5% significance level. Because the p-value is less than 0.05, the null hypothesis cannot be accepted. Consequently, we can establish that there is a considerable relationship between age and risk preference.

In the instance of age and investment period, the computed chi-square value of 27.770 is more than the table value of 18.307, and the p-value is also less than 0.05, indicating that the null hypothesis is rejected at a 5% level of significance. This indicates that the null hypothesis cannot be true and leads us to the conclusion that there is a strong relationship between age and the time period for which investors desire to put their money.

Table No. 7: Degree/Strength of Association

Category	H ₀ (Null Hypothesis)	Phi Value	Cramer's V Statistics	Contingency coefficient
Risk Preference	Rejected	Moderate Association	Moderate Association	Moderate Association
Investment Period	Rejected	Weak Association	Weak Association	Moderate Association

The above table shows the magnitude of association between the variables tested using Phi value, Cramer's V statistic and the Contingency coefficient.

In case of Age and risk preference the magnitude of association is moderate as per the Phi value, contingency coefficient and the Cramer's V statistic calculated under the study. But in case of age and period of investment, the magnitude of association is found to be weak as per Phi value and Cramer's V statistic and moderate as per the contingency coefficient.

Finally, it can be interpreted from the above discussion that age does affects the risk preference of retail investors and the period for which they would like to invest their money.

Conclusion

Income, investment objective, number of dependents, investment knowledge, etc. are those factors that are affected by the age of an investor, and these factors, in turn, affect the investment preference of an individual investor, which can be concluded from the review of past studies. With age, income increases, and so does the knowledge of an investor. Also, investment objectives change with age. Hence, it can be concluded that age is one factor that not only directly but also indirectly affects all investment decisions. From the study, it is clear that age affects risk preference. As age increases, the risk appetite decreases and the person moves from a risky investment to a moderate-risk investment and then to

a low-risk investment. It is quite logical also, as a young investor with no responsibility for a family, can take a risk for high returns, but with age, responsibility increases and he/she has to play safe for a better future for his/her family. Age also affects the period for which an investor likes to invest, as young investors generally lack patience and invest and disinvest regularly for high returns, but with age, he/she becomes patient, and his/her investment objective also changes from high returns to a stable future income, which is possible only when an investment is made for a long period. However, as said earlier, investment decisions are affected by several interrelated factors, and this study only considers age and tries to find its impact on risk

preference and period of investment. And risk preference and investment period preference will ultimately affect the investment preference or the investment choice. Hence, this leaves scope for future studies in this area.

Suggestions

1. Investors should plan their investments carefully and keep their investing goals in mind.
2. If necessary, investors should engage brokers or agents for correct information and proper direction at the start of their investing journey, but their decision should not be based exclusively on the advice of an agent or broker, but rather on their own research and understanding.
3. SEBI should organize more training and awareness camps most preferably through online mode for wide coverage, to educate people on how to invest in the stock market, how to analyse the securities, how to manage risk, etc.
4. Young investors should invest for the Long term as in the stock market long-term investments are always advantageous for returns and tax purposes. It will also help in securing their future.
5. Before investing, investors should select an investment option depending on their investment purpose and risk tolerance, and they should thoroughly read all relevant documents.
6. Investors should diversify their portfolios and examine their holdings at frequent intervals to reduce the overall level of risk they are exposed to.

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