

Financial Risk Tolerance Based on Demographic Factors of Women Investors: Indian Perspective

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Abstract

The paper aims to examine the phenomenon of risk-taking ability in response to the demographic factors of women investors in Indian stock market and analyzes the impact of demographics of women on their risk-tolerance level. Women's risk-taking ability is very vital aspect to recognize their most favorable investment portfolio. A well-structured questionnaire was administered personally to 400 Indian women investors. The results stated that women investors in Haryana, India, have low-risk appetite. They cannot afford to take high risk. So, women prefer risk-free investment and avoid losing their money. Women's demographic distinctiveness plays a crucial role in identifying their risk-tolerance levels. In this regard, age, marital status, education, income, experience and occupation were found to have a major impact in determining the risk appetite of women. It is hoped that the findings will assist financial advisors, investment managers and financial consultant to understand and discover the solution to those demographic factors, which cause variations in risk-tolerance level. This study corroborates the importance of financial literacy to make women more aware and technically sound with dimensions of investment. Further, it will help in making ideal investment portfolio by accommodating the need of investors effectively. This study will contribute to the understanding investment behavior of investors. This empirical research represents how demographic variables influence risk-taking ability of women and provides precious understanding that how women investors of Haryana make their financial decision.

Keywords: Investment Behavior, Demographics, Risk Tolerance, Women Investors

Introduction

Taking financial risks makes most people nervous. Certain types of people enjoy taking risks, while others prefer stability and are averse to any type of risk. Risk tolerance is an important component in investing, which

means the degree of variability in investment returns that an investor is willing to withstand. Risk appetite is the risk-taking capacity of investors, which signifies how much risk an investor can afford to take and how much risk he can stand to take. However, the risk appetite of women investors mainly depends on their behavior as behavior determines the way to reach at a particular decision. However, behavior of women is influenced by numerous factors such as personal factors, psychological factors, social and cultural factors, economic factors, family factors, company-specific factors and market factors. In this way, an investor's ability to take risk predominantly depends on various factors such as age, gender, income, experience, occupation, family background, education and financial status. These factors strongly influence the behavior of women and determine their risk-taking capacity as to why they opt for moderate-risk, low-risk and high-risk investment options.

When it comes to taking risk for earning returns, different people have different attitudes. Some are risk lovers, some risk averse and some are neutral toward risk. Generally, investments giving lower returns come with lower risks as well (Bhattacharjee & Singh, 2017). On the other hand, investments giving higher returns involve higher risks. A risk-averse person would prefer investing in fixed deposits, bonds, etc., as they involve lesser risk, whereas a risk lover would prefer investing his money in stocks as they have the potential to give higher returns than fixed deposits. Women with a low-risk tolerance would most likely invest in conservative options where there is little to no fluctuations in the initial investment and earnings. Moreover, lack of knowledge and awareness, insecurity and high volatility in stock market are the concerned issues for women investors that prevent them from taking high risk (Vohra & Kaur, 2016).

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Besides, to identify the risk-tolerance level is a very complex and difficult task because an individual's risk-taking capacity is multidimensional issue; so, it is very hard to measure it. In simple words, every individual varies in his readiness to take risk. In view of this, it is imperative to investigate the risk-tolerance attitude of women investors to understand their investment behavior.

Literature Review

Financial Risk Tolerance

Vasagadekar (2014) examined the risk-tolerance level of women investors and their preference in stock market. The results indicated that women were less aware about the stock market investments and were unable to manage their portfolios. The risk-bearing capacity of women was found low with low educational level about the stock market. The author concluded that low financial literacy and low risk-bearing capacity were due to lack of adequate financial knowledge.

Larkin et al. (2013) analyzed the impact of demographic variables of investors on their risk-tolerance level. A survey was conducted on 300 Irish investors. The study concluded that occupations and educational qualifications have significant impact on the risk tolerance of investors, whereas income and experience of investors have no impact on the risk-taking capacity of investors.

Cooper and Faseruk (2011) examined the impact of demographic factors on the risk-tolerance level of investors. The findings confirmed that investors behave rationally while taking investment decision and avoid taking higher risk. Further, there was found significant impact of demographic variables on the risk-tolerance level of investors.

Muralidhar and Berlik (2017) addressed the risk-tolerance level of investors while selecting investment avenues. The study concluded that young investors are more risk seeking than adults when it pertains to losses, whereas women investors are more conservative and risk averse. The results suggested that corrective measures should be taken to enhance the risk-taking ability of women investors.

Rahmawati et al. (2015) investigated the determinants of risk tolerance of investors of Pakistan. A survey was conducted on 140 investors in Pakistan. The findings indicated that educated investors are more willing to take risk as compared to uneducated investors. Moreover, less

wealthy investors were less risk tolerant as compared to wealthy investors.

Caglayan and Abdieva (2014) analyzed the risk tolerance of investors influencing the investment decisions. The findings showed that men are more risk taker than women in Kyrgyzstan. It was discovered that investors become less risk lovers as their age increases and having salaried income increases the risk-taking capacity of investors. The study concluded that income of persons has significant impact on the risk-taking attitude.

Ayuub et al. (2015) examined the risk-taking capability of investors with respect to demographic variables. Random sample of 110 respondents from Pakistan was taken for this study. The findings depicted that marital status, gender and occupations have significant impact on the risk-taking ability of a person but age of investors, educational qualifications and income level have no significant impact on financial risk tolerance.

Annamalah et al. (2019) investigated the risk-tolerance level of investors. A sample of 200 respondents from Malaysia was selected through structured questionnaire. The results indicated that financial status, risk-taking behavior and sources of information significantly influence the investment behavior of Malaysian investors.

Mittal and Vyas (2011) investigated the risk-taking capacity of women investors. The findings revealed that women are not more engaged in risk taking and are less confident. The authors suggested that awareness program should be introduced to increase the confidence level of women for high-risk investment avenues to generate higher returns.

Sharma et al. (2017) concluded that this study would be helpful to investment firms in understanding impact of risk tolerances and demographic variables jointly on level of investment of investors, which could be used for designing a strategy or investment product to offer to the investors with different levels of financial risk tolerance and different demographic profiles.

Baruah and Kumar (2018) described that risk tolerance is popularly used in the personal financial planning industry to understand an investor's attitude toward risk. However, financial decisions of an individual not only depends on financial risk-tolerance level, but also upon different demographic factors. Thus, this study is undertaken to develop a model that helps in understanding the impact

of risk tolerance and demographic factors jointly on investment decision, especially, a decision related to level of investment. Also, an investor may be having higher risk tolerance for the calculative investment but may be having lower risk tolerance in speculative investment.

Demographic Variables

An investor's ability to handle risks may be related to individual characteristics. Financial managers and policy makers have observed that demographic factors both intrinsic as well as extrinsic like age, gender, marital status, qualifications, occupation, annual income, family income, experience, geographical location, etc., have an impact on risk.

The significance of demographic factors is confirmed by the fact that financial managers and researchers to be considerable in making differentiation between level of risk tolerance continuously use these variables and these factors are employed as significant mechanism by financial managers while investigating background information of their clients. In view of this, a brief overview of the literature was done in order to develop the necessary concept of the study.

Gender

Studies concluded that in spite of having same education level among women and men investors, males are willing to take high level of financial risk but studies like Gumede (2009) revealed that there is no difference found in risk-taking ability among men and women investors. Barber and Odean (2001) identified the reasons why men love risk more than women do. The results found that men are more self-assured and confident than women investors.

Moreover, studies like Ayuub et al. (2015) opined that women are not much violent, less certain and more careful. Moreover, women have less management power and problem-solving qualities. Women have a large extent of risk-aversion level than men. On the other hand, research like (Vohra & Kaur, 2017) discussed that women are balanced, intuitive and quality conscious, and adopt futuristic approach. All these features act as their strength while making investment decisions. On the other hand, conservative attitude, risk aversion, low financial knowledge and lack of confidence, and religiousness are their weaknesses.

Age

Many studies concluded that there is significant association between individual's age and the risk-taking ability. Naturally, it can be supposed that financial risk-tolerance level will decrease as a person grows up because younger persons have ability and time to recover any type of financial losses. Studies like (Al-Ajmi, 2008) concluded that younger investors would spend more efforts and time to recover all the losses of investment portfolio. Further, Yao et al. (2005) discovered that age is dominant factor in determining the risk-tolerance level of investors. This study concluded that there found decrease in risk-taking ability by 2% as every year increase in age of that investor.

On the other hand, studies like Anbar and Eker (2010), Hanna et al. (2001) concluded that age is less related to increase or decrease in financial risk tolerance of investors. The study also revealed that there is imperative difference in different age groups, but also concluded that there is not a clear association between age and financial risk tolerance. When people grew older, their investment experience increases. So, their capacity and willingness to take risk will increase, respectively.

Marital Status

Hallahan et al. (2004) concluded that married investors have less liking for risk taking whereas unmarried or single persons are more risk lovers. The study also revealed that married women are less risk averse as compared to single women. A married person has more responsibilities and duties and thus has more dependents on him. Thus, in comparison to single person, he will have less financial risk tolerance. Marital status is important indicator in determining the risk tolerance. According to research findings of Barber and Odean (2001), married people have less risk-tolerance level toward their investment portfolio as compared to unmarried people who have high risk-taking ability. In comparison of single females, married women preferred investment less risky assets. According to the Ayuub et al. (2015), there is no significant difference between the financial risk-tolerance level of investors and the marital status. Authors opined that over the marital status classifications of being single, married, divorced and widow, there was no distinction in risk-tolerance levels.

Income

Studies like Bashir et al. (2013) showed that there is an affirmative and significant association between income level and risk-tolerance level; but according to statistical results, the relationship is not so considerable. The research concluded that high level of earner either they are males or females have more risk-taking ability. According to studies like Rahmawati et al. (2015), Annamalah et al. (2019), Gumede (2009), as the income level of any person increases, the proportion of taking the risk also increases. The study concluded that improved level of earnings leads to amplified level of risk tolerance because increase in earnings is related to the entrance to additional investment avenues.

Education

Several researchers like Vasagadekar (2014) and Rahmawati et al. (2015) showed that there is clear and significant association between educational qualification of a person and risk-taking ability. The study concluded that there is relation between the investors' educational qualification and the level of financial risk taken by investors. An increase in educational qualification by one point leads to negative change of 0.029 points in the level of risk taken by investors.

Education is a vital interpreter of subjective financial risk tolerance and investors having higher category of educational status will have higher financial risk tolerance (Chang et al., 2004). The study concluded that a person is geared up to receive higher intensity of risk if he has attained a higher level of education.

Occupation

Many investment managers and administrators opined that occupational category is the best indicator of predicting risk-taking ability of any person. Occupation is any action in which any person is involved for getting a reasonable amount of return in form of profit, remuneration and salary. There is significant association between occupational position of a person and financial risk-tolerance level. As evident by previous studies, people engaged in self-employed business, non-government organizations and public organizations are more likely to have high risk-tolerance level. Ayuub et al. (2015) proved that there is a considerable effect of occupational positions on financial risk tolerance.

Experience

Many studies like Chowdhury (2016) and Kaur and Kaushik (2016) revealed that there is relation between investors' experience level and financial risk-tolerance level. The results of the study confirmed the positive correlation between these two variables indicating that an increase in experience of investors by one point leads to positive in level of risk taken by investors.

Justification of the Study

This study will contribute to the understanding investment behavior of women investors. This empirical research represents how demographic variables influence risk-taking ability of women, and provides precious understanding about how women investors of Haryana make their financial decision. The present research will assist the different financial institutions, investment consultants and agencies, stock broking houses, and other participants to be mindful of the opportunities and challenges faced by women investors. Along with this, it would enable the stock marketers and service providers to provide women with services relevant to their individual situations and constraints. Moreover, the analysis of risk tolerance of investors will help in accurately measuring how the investors think about their risk-taking capacity while taking investment options offered by the companies.

Need and Objectives of the Study

The intention of conducting this research was to investigate that whether the demographic factors like age, qualification, marital status, occupation and income level might be employed to identify and discriminate the level of risk tolerance of women investors. This is facilitated by the fact that financial markets have been moving to more of dynamism and are continuously changing the exposure to risk. Nowadays, investment administrators and managers, financial advisors and researchers are taking more interest in identifying the risk tolerance of investors because it is essential to attain the most favorable investment portfolio and it can be achieved by exploring the level of risk tolerance. In light of this, the present study attempts to identify the answer of these questions:

Do demographics of investors have an influence on their risk tolerance? Are women investors in Haryana risk averse or risk lover? Is there any significant relationship

between the demographic factors and level of risk-taking capacity? What is the risk appetite of women investors?

Hence, in view of above-mentioned need, the present study aim to examine the relationship between demographic factors and the risk appetite of women investors.

The following hypotheses were formulated:

H1: There is no association between the age of women and level of risk tolerance.

H2: There is no association between the marital status of women and level of risk tolerance.

H3: There is no association between the qualification of women and level of risk tolerance.

H4: There is no association between the occupation of women and level of risk tolerance.

H5: There is no association between the family income of women and level of risk tolerance.

H6: There is no association between the personal monthly income of women and level of risk tolerance.

H7: There is no association between the experience of women and level of risk tolerance.

Research Methodology

The survey was conducted on 400 women investors of Haryana, India, during January 2019 to August 2019. The data were collected from women investors from the four major cities of Haryana, India, i.e. Ambala, Panipat, Rohtak and Gurugram. Further, simple random and convenient sampling technique were used to select the list of regular women investors that have been obtained from the stock broking firms. Thereafter, a well-structured questionnaire was administered personally to respondents. In the first section, questionnaire contains seven questions about demographics of women. Into the subsequent segment, categorical questions relating to risk appetite of women were formulated. Out of 460 questionnaires distributed, 400 complete and usable responses were used for analysis, which represents an effective response rate of around 86% of the total sample. In addition, secondary sources including online research publications, articles, books, working and discussion papers were also used.

To examine the association between risk appetite and demographical factors of the women, Chi-square test was applied. In addition, cross tabulation technique has been used in differentiating each variable with level of risk tolerance of investors.

Data Analysis

Table 1: Respondents Profile (Investment Experience Percentage Digits are Not in Line with Upper Digits).

Characteristics	No.	Percentage
<i>Age</i>		
Below 30	64	16%
31–40	122	30.5%
41–50	184	46%
Above 50	30	7.5%
<i>Occupation</i>		
Salaried	133	33.3%
Business	143	35.8%
Professionals	100	25%
Others	24	6%
<i>Qualification</i>		
Under graduates	43	10.8%
Graduates	178	44.5%
Post graduates	133	33.3%
Others	46	11.5%
<i>Marital Status</i>		
Married	196	49%
Divorced	42	10.5%
Single	129	32.3%
Widow	33	8.3%
<i>Personal Monthly Income</i>		
Below 40,000	70	17.5%
40,000–60,000	195	48.8%
60,000–80,000	76	19.0%
Above 80,000	59	14.8%
<i>Family Monthly Income</i>		
Below 40,000	54	13.5%
40,000–80,000	170	42.5%
80,000–1,20,000	135	33.8%
Above 1,20,000	41	10.2%
<i>Investment Experience</i>		
Below 5 years	64	16%
6–10 years	109	27.3%
11–15 years	127	31.8%
16–20 years	61	15.2%
Above 20 years	39	9.8%

Source: Primary survey

About 16% of women respondents were of age less than 30, 30.5% of belong to age 30–40, 46% of women were

of age 40–50 and 7.5% of women belong to age above 50. With respect to qualification, 10.8% were under graduate, 44.5% women were graduates, 33.3% held postgraduate degree and 11.5% of respondents had other qualification.

Out of total respondents, 49% were married, 32.3% were single, 8.3% women were widow and 10.5% were divorced. With regard to occupation, about 33.3% of respondents were salaried, 35.8% women were doing business, 25% women were professionals and only 6% women were engaged in other occupations. 17.5% women respondents were having monthly income below Rs. 40,000 whereas 48.8% fell within Rs. 40,000–60,000 and only 19% women were having monthly income Rs. 60,000–80,000 and around 14.8% of women respondents were drawing income above Rs. 80,000. As far as family monthly income is concerned, 42.5% women having family monthly income Rs. 40,000–80,000 and 33.8% of women having family monthly income Rs. 80,000–1,20,000. Only 10.2% women respondents were having family monthly income above Rs. 1,20,000. In addition, 31.8% women have experience of 11–15 years whereas 27.3% women investors have experience of 6–10 years. On the other hand, 16% women investors have experience below 5 years.

Table 2: Risk Appetite of Women

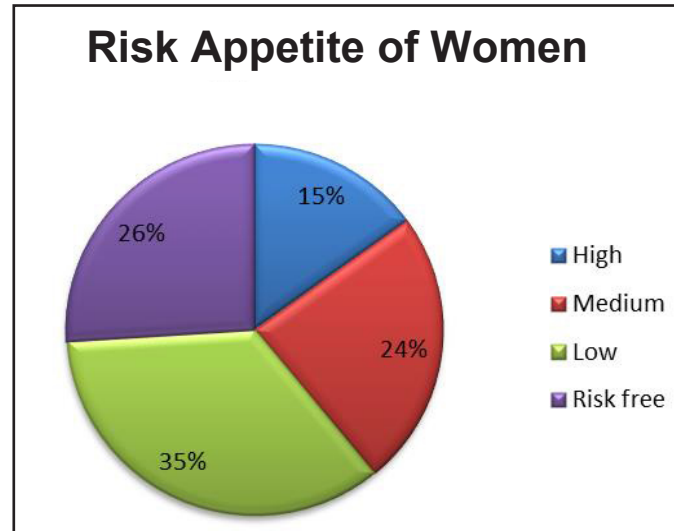
Risk Tolerance	Frequency	Percentage	Cumulative Percent
High	60	15%	15.0
Medium	96	24%	39.0
Low	140	35%	74.0
Risk free	104	26%	100.0
Total	400	100%	

Source: Survey

Table 2 and Fig. 1 show the level of risk-taking capacity of women investors. It can be observed that majority of women respondents (140) opined that they prefer investing in stocks having low risk whereas out of 400 women, 104 women are of view that they will prefer risk-free investment, as they were afraid to take risk of losing their money. In this way, almost 244 women are risk-averse investors who avoided risk and stayed away from high-risk investment and prefer investment, which

provided a sure-shot return.

96 women respondents have moderate level of risk tolerance, as they prefer stocks having medium risk for expected return. Moreover, out of 400, 60 women have high risk-tolerance level, as they are risk lovers who are willing to take more risks while investing in order to earn higher returns.



Source: Survey

Fig. 1: Risk Appetite of Women

As shown in Fig. 1, most of women respondents (61%) have very low level of risk tolerance, as they avoid risk entirely or were very cautious about taking chances with their money.

Association Between Women’s Age and Their Risk-Tolerance Level

Table 3 shows the cross tabulation analysis of age of women and their risk-tolerance level. It was found that age as a parameter has significant role on risk appetite of women investors. The results reflect that highest percentage (46.0%) and (30.5%) of women respondents came from the average age group of 41–50 and 31–40 years, respectively. 50% women of age group 41–50 have high-risk tolerance and 26% women of less than 30 have medium-risk appetite. In addition, 12.9% women of above 50 years have low-risk tolerance and 31.7% women of age group 31–40 choose risk-free stocks to invest.

Table 3: Degree of Association Between Women’s Age with Their Risk Tolerance

Risk Appetite		Age Groups				Total
		Less Than 30	31–40	41–50	Above 50	
High	Count	2	24	30	4	60
	Expected count	8	18.3	27.7	6	60.0
	%	3.0%	40.0%	50.0%	7.0%	100.0%
Medium	Count	25	22	46	3	96
	Expected count	15.4	29.3	44.2	7.2	96.0
	%	26.0%	22.9%	47.9%	3.1%	100.0%
Low	Count	19	31	72	18	140
	Expected count	22.4	42.7	64.4	10.5	140.0
	%	13.6%	22.1%	51.4%	12.9%	100.0%
Risk free	Count	18	45	36	5	104
	Expected count	16.6	31.7	47.8	7.8	104.0
	%	17.3%	43.3%	34.6%	4.8%	100.0%
Total	Count	64	122	184	30	400
	Expected count	64.0	122.0	184.0	30.0	400.0
	%	16.0%	30.5%	46.0%	7.5%	100.0%

Source: Survey

Table 4: Chi-Square Test

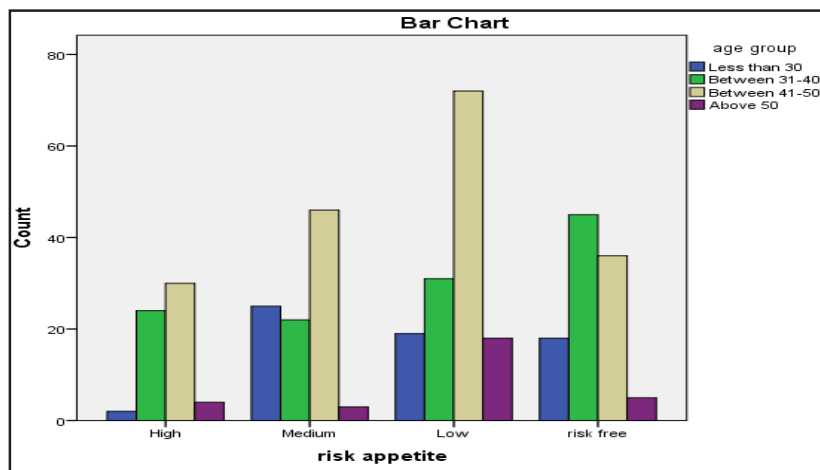
	Value	Df	Asymp.Sig. (2-Sided)
Pearson Chi-Square	38.026 ^a	9	.000
Contingency Coefficient	.295		
N of Valid Cases	400		

^a0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.0

Table 4 depicts that the relationship between age of women and their risk tolerance is high. This implies that there is significant association between risk-taking

capacity of women and their age. The calculated value of Chi-square (38.026) is more than the table value (27.877) at 1% significance level. The Asymptotic significance or p-value is $p < 0.01$, which determines the statistical significance of the relationship between age of women and their risk appetite. Thus, hypothesis H1 is rejected.

The coefficient of contingency was used in ascertaining the strength of relationship. The coefficient of calculated contingency is $C = 0.295$. However, the strength of relationship is rather moderate, but it has significantly influenced the risk-tolerance level of women investors.



Source: Survey

Fig. 2: Association Between Women’s Age with Their Risk Tolerance

Fig. 2 shows the graphical representation of association between age of women and risk-tolerance level. It can be observed that majority of women respondents have low- and medium-risk appetite whereas most of women prefer risk-free investments. In relation to age groups, women with 31–40 age groups strongly prefer risk-free investments whereas women with 41–50 age groups have low-risk tolerance. In addition, women having age less than 30 have moderate-risk tolerance and women with above 50 age groups have low-risk appetite.

Association Between Women's Marital Status and Their Risk-Tolerance Level

Table 5 indicates that marital status as a parameter has significant impact on risk appetite of women investors. The results show that higher percentage (49.0%) and (32.2%) of women respondents came from married and single group, respectively. 31.7% married women were willing to take high risk and 37.5% single women have medium-risk tolerance. In addition, 31% single women prefer investing in risk-free stocks and only 23.3% widow women have high-risk tolerance.

Table 5: Degree of Association Between Women's Marital Status with Their Risk Tolerance

Risk Appetite		Marital Status				Total
		Married	Divorced	Single	Widow	
High	Count	19	15	12	14	60
	Expected count	29.4	6.3	19.4	5.0	60.0
	%	31.7%	25.0%	20.0%	23.3%	100.0%
Medium	Count	44	9	36	7	96
	Expected count	47.0	10.1	31.0	7.9	96.0
	%	45.8%	9.4%	37.5%	7.3%	100.0%
Low	Count	76	4	48	12	140
	Expected count	68.6	14.7	45.2	11.6	140.0
	%	54.3%	2.9%	34.3%	8.6%	100.0%
Risk free	Count	57	14	31	2	104
	Expected count	51.0	10.9	33.5	8.6	104.0
	%	53%	13%	31%	3%	100.0%
Total	Count	196	42	129	33	400
	Expected count	196.0	42.0	129.0	33.0	400.0
	%	49.0%	10.5%	32.2%	8.2%	100.0%

Source: Survey

Table 6: Chi-Square Test

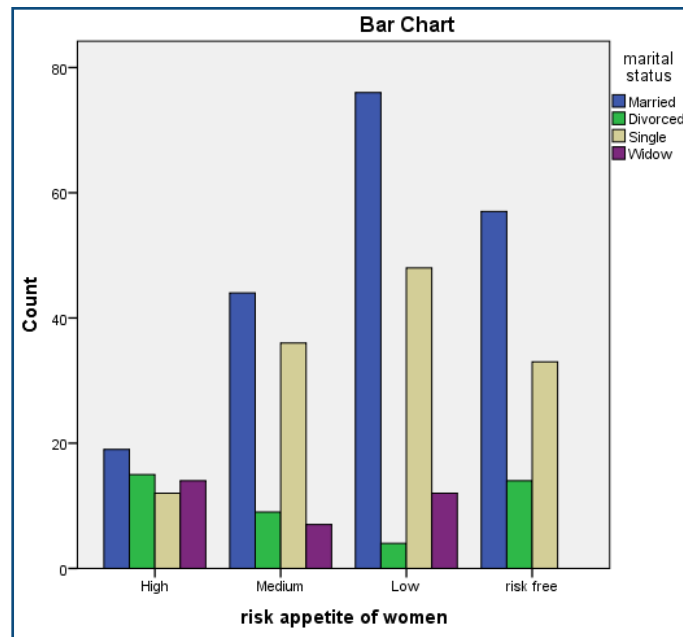
	Value	Df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	55.228 ^a	9	.000
Contingency Coefficient	.348		
N of Valid Cases	400		

^a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.50

As depicted in Table 6, there is a significant relationship between marital status of women and their risk-taking capacity as the p-value (.000) was found to be highly

significant and the calculated Chi-square value (55.228) is observed higher than table value (27.877), which recommends that there is a statistically significant association between marital status and risk-tolerance level of women. Thus, hypothesis H2 is rejected.

The coefficient of contingency was used in determining the magnitude of relationship which is $C = 0.348$. However, the strength of relationship is moderate and on the way to closer to 1, which indicates a significant influence on the risk-tolerance level of women investors. Thus, women's marital status is a significant factor influencing the risk appetite of women.



Source: Survey

Fig. 3: Association Between Women's Marital Status with Their Risk Tolerance

Fig. 3 indicates that over the marital status classifications of being single, married, divorced and widow, there is a distinction in risk-taking capacity. In view of this, it can be seen that women who are married are willing to take more risk than single, divorced and widow women. In addition, single women have low-risk appetite whereas most of women prefer risk-free investments. In addition, widow women have moderate- and low-risk tolerance and divorced women have low-risk appetite and prefer risk-free investments as well.

Association Between Women's Qualification and Their Risk-Tolerance Level

Table 7 exhibits that higher percentage (44.5%) and (33.2%) of women respondents came from graduate and postgraduate groups, respectively. In addition, 68.3% graduate and 11.7% postgraduate women are willing to take more risk than women who are under graduate. 40% graduate and 37.9% postgraduate women investors have low-risk appetite.

Table 7: Degree of Association Between Women's Qualification with Their Risk Tolerance

Risk Appetite		Qualification				Total
		Under Graduate	Graduate	Post Graduate	Others	
High	Count	0	41	7	12	60
	Expected count	6.5	26.7	20.0	6.9	60.0
	%	0.0%	68.3%	11.7%	20.0%	100.0%
Medium	Count	7	33	40	16	96
	Expected count	10.3	42.7	31.9	11.0	96.0
	%	7.3%	34.4%	41.7%	16.7%	100.0%
Low	Count	21	56	53	10	140
	Expected count	15.1	62.3	46.6	16.1	140.0
	%	15.0%	40.0%	37.9%	7.1%	100.0%
Risk free	Count	15	48	33	8	104
	Expected count	11.2	46.3	34.6	12.0	104.0
	%	14.4%	46.2%	31.7%	7.7%	100.0%
Total	Count	43	178	133	46	400
	Expected count	43.0	178.0	133.0	46.0	400.0
	%	10.8%	44.5%	33.2%	11.5%	100.0%

Source: Survey

Table 8: Chi-Square Test

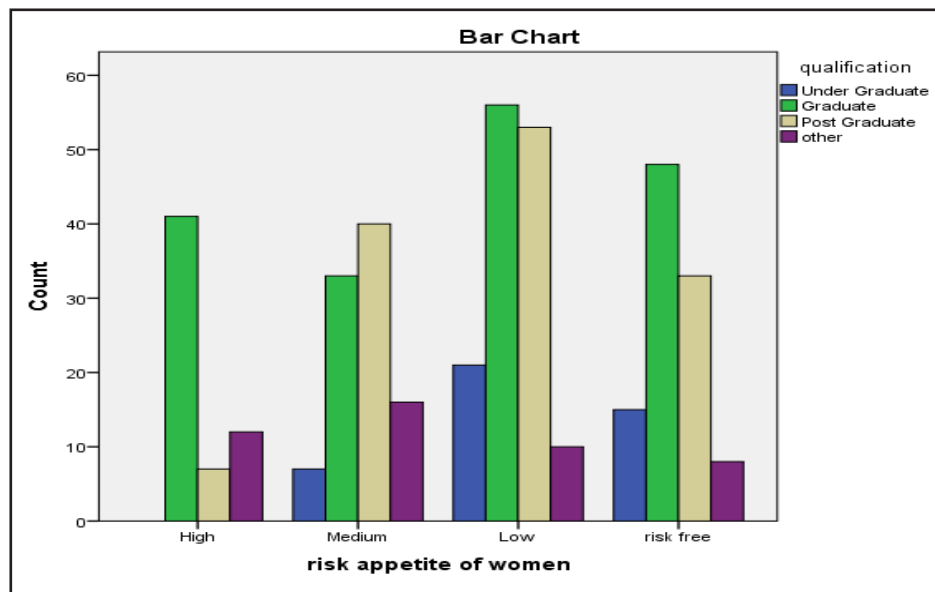
	Value	Df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	42.785 ^a	9	.000
Contingency Coefficient	.311		
N of Valid Cases	400		

^a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.50

Table 8 found a significant relationship between educational qualification of women investors and their risk appetite as the p-value (.000) observed highly significant

and the calculated Chi-square value (42.785) is found more than critical value (27.877), meaning that there is a statistically significant association between qualification and risk-tolerance level of women. Therefore, hypothesis H3 is rejected.

The coefficient of contingency exhibits the magnitude of relationship which is $C = 0.311$ showing the moderate strength of association, which confirms the significant influence on the risk-taking capacity of women investors. Thus, women’s qualification is a significant factor affecting the risk tolerance of women.



Source: Survey

Fig. 4: Association Between Women’s Qualification with Their Risk Tolerance

Fig. 4 reflects the graphical association between qualification of women and their risk-tolerance level. As shown in graph, postgraduate women have low- and medium-risk appetite than graduate and under graduate women. In addition, women having graduate degree prefer risk-free investment and low-risk options. Women who are undergraduates have low-risk appetite and they cannot afford to take high risk.

Association Between Women’s Occupation and Their Risk-Tolerance Level

Table 9 observed that higher percentage (33.2%) and (35.8%) of women were recorded in salaried and business categories, respectively. 53.3% professional women and 26.7% salaried women are willing to take high risk than business women. 34.3% salaried women and 40% business women investors have low-risk appetite than professional women. In addition, 39.4% salaried women and 33.7% business women prefer risk-free investment.

Table 9: Degree of Association Between Women’s Occupation with Their Risk Tolerance

Risk Appetite		Occupation				Total
		Salaried	Business	Professional	Other	
High	Count	16	7	32	5	60
	Expected count	20.0	21.5	15.0	5.7	60.0
	%	26.7%	11.7%	53.3%	8.3%	100.0%
Medium	Count	28	45	18	5	96
	Expected count	31.9	34.3	24.0	5.8	96.0
	%	29.2%	46.9%	18.8%	5.2%	100.0%
Low	Count	48	56	27	9	140
	Expected count	6.64	50.1	35.0	8.4	140.0
	%	34.3%	40.0%	19.3%	6.4%	100.0%
Risk free	Count	41	35	23	5	104
	Expected count	34.6	37.2	26.0	6.2	104.0
	%	39.4%	33.7%	22.1%	4.8%	100.0%
Total	Count	133	143	100	24	400
	Expected count	144.0	156.0	100.0	24.0	400.0
	%	33.2%	35.8%	25.0%	6.0%	100.0%

Source: Survey

Table 10: Chi-Square Test

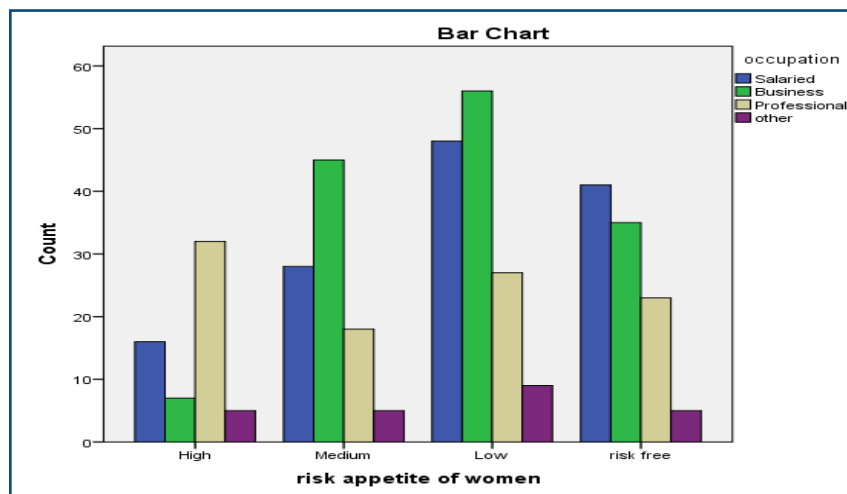
	Value	Df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	40.269 ^a	9	.000
Contingency Coefficient	.302		
N of Valid Cases	400		

^a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.70

Table 10 presents that there is a significant association between the occupation of women investors and their risk-taking ability as the p-value (.000) found highly

statistically significant and the calculated Chi-square value (40.269) is found more than critical value (27.877) reflects that there is a statistically significant relationship between occupation of women and their risk appetite. Thus, hypothesis H4 is rejected.

The coefficient of contingency (C = 0.302) indicates the magnitude of relationship. The strength of association is little moderate but reveals the significant influence on the risk appetite of women investors. Hence, women’s occupation is a significant measure influencing the risk tolerance of women.



Source: Survey

Fig. 5: Association Between Women’s Occupation with Their Risk Tolerance

As shown in Fig. 5, professional women have high-risk appetite than business and salaried women. In addition, salaried women prefer risk-free investment and have low-risk appetite as compared to business and professional women. Women who have business occupation have medium-risk appetite and they prefer risk-free stocks.

Association Between Women's Family Income and Their Risk-Tolerance Level

Table 11 depicts that higher percentage (42.5%) and (33.8%) were accounted in 40,001–80,000 and 80,000–1,20,000 income groups, respectively. 71.7% women belonging to income group 40,001–80,000 are willing to take high risk than women of other income groups.

Table 11: Degree of Association Between Women's Family Income with Their Risk Tolerance

Risk Appetite		Family Monthly Income				Total
		Below 40,000	40,001–80,000	80,001–1,20,000	Above 1,20,000	
High	Count	7	43	8	2	60
	Expected count	8.1	25.5	20.3	6.2	60.0
	%	11.7%	71.7%	13.3%	3.3%	100.0%
Medium	Count	12	48	33	3	96
	Expected count	13.0	40.8	32.4	9.8	96.0
	%	12.5%	50.0%	34.4%	3.1%	100.0%
Low	Count	31	38	49	22	140
	Expected count	18.9	59.5	47.3	14.4	140.0
	%	22.1%	27.1%	35.0%	15.7%	100.0%
Risk free	Count	4	41	45	14	104
	Expected count	14.0	44.2	35.1	10.7	104.0
	%	3.8%	39.4%	43.3%	13.5%	100.0%
Total	Count	54	170	135	41	400
	Expected count	54.0	170.0	135.0	41.0	400.0
	%	13.5%	42.5%	33.8%	10.2%	100.0%

Source: Survey

Table 12: Chi-Square Test

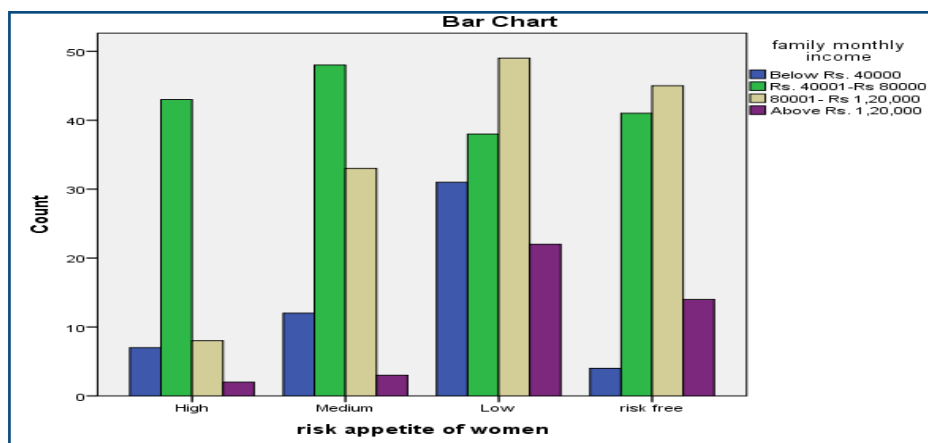
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	59.386 ^a	9	.000
Contingency Coefficient	.360		
N of Valid Cases	400		

^a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.2

Table 12 indicates the significant relationship between family monthly income of women investors and their risk

appetite. The p-value (.000) observed highly statistically significant and the calculated Chi-square value (59.386) is more than critical value (27.877) proves that there found statistically significant relationship between family income of women and their risk appetite. Thus, hypothesis H5 is rejected.

The coefficient of contingency ($C = 0.360$) indicates the strength of relationship which is found rather strong reveals the significant influence on the risk tolerance of women investors. Hence, women's family income is a considerable measure influencing the risk appetite of women.



Source: Survey

Fig. 6: Association Between Women's Family Income with Their Risk Tolerance

Fig. 6 shows the graphical association between family income of women investors and their risk appetite. Women having family income below Rs. 40,000 are less likely to take high risk as they have low-risk appetite. In addition, women having family income between Rs. 40,000 and 80,000 have medium-risk appetite and they also prefer risk-free investment. Women belong to income Rs. 80,000–1,20,000 group have medium-risk appetite.

Association Between Women's Personal Monthly Income and Their Risk-Tolerance Level

Table 13 exhibits that higher percentage (48.8%) and (19%) were observed in Rs. 40,000–60,000 and Rs. 60,000–80,000 income groups, respectively. 70% women having personal income Rs. 40,001–80,000 are willing to take high risk than women of other income groups. 2% women having income below Rs. 40,000 were ready to take high risk.

Table 13: Degree of Association Between Women's Personal Income with Their Risk Tolerance

Risk Appetite		Personal Monthly Income				Total
		Below 40,000	40,000–60,000	60,000–80,000	Above 80,000	
High	Count	2	41	10	7	60
	Expected count	10.5	29.3	11.4	8.9	60.0
	%	2.0%	70.0%	16.7%	11.3%	100.0%
Medium	Count	22	50	21	3	96
	Expected count	16.8	46.8	18.2	14.2	96.0
	%	22.9%	52.1%	21.9%	3.1%	100.0%
Low	Count	22	62	34	22	140
	Expected count	24.5	68.3	26.6	20.7	140.0
	%	15.7%	44.3%	24.3%	15.7%	100.0%
Risk free	Count	26	40	11	27	104
	Expected count	18.2	50.7	19.8	15.3	104.0
	%	25.0%	38.5%	10.6%	26.0%	100.0%
Total	Count	70	195	76	59	400
	Expected count	70.0	195.0	76.0	59.0	400.0
	%	17.5%	48.8%	19.0%	14.8%	100.0%

Source: Survey

Table 14: Chi-Square Test

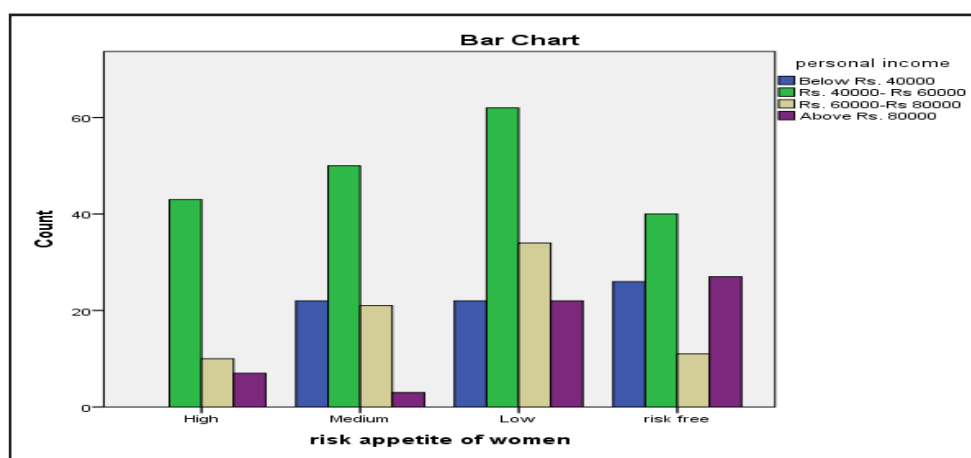
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	49.886 ^a	9	.000
Contingency Coefficient	.333		
N of Valid Cases	400		

^a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.85

As shown in Table 14, there is a significant relationship between personal monthly income of women investors and

their risk appetite. The p-value (.000) is highly statistically significant and the calculated Chi-square value (49.886) is found to be more than critical value (27.877), which confirms that there is statistically significant relationship between personal monthly income of women and their risk tolerance. Thus, hypothesis H6 is rejected.

The coefficient of contingency (C = 0.333) shows the magnitude of relationship which reflects a strong association between personal monthly income of women investors and their risk appetite.



Source: Survey

Fig. 7: Association Between Women's Personal Income with Their Risk Tolerance

Fig. 7 presents the graphical association between personal monthly income of women investors and their risk-taking ability. Women having personal income below Rs. 40,000 cannot afford high risk as women have low-risk appetite and they prefer investing in risk-free stocks. In addition, women having personal income of Rs. 40,000–60,000 have medium and low-risk appetite.

Association Between Women's Investment Experience and Their Risk-Tolerance Level

Table 15 explains that higher percentages, (27.2%) and (31.8%), were accounted in 6–10 years and 11–15 years of experiences, respectively. 33% women having 6–10 years' experiences and 25% women having above 20 years' investment experiences are willing to take high risk. 20% women having experience below 5 years have low-risk tolerance.

Table 15: Degree of Association Between Women's Experience with Their Risk Tolerance

Risk Appetite		Investment Experiences					Total
		Below 5yr	6–10yr	11–15yr	15–20yr	Above 20yr	
High	Count	6	20	14	5	15	60
	Expected count	9.6	16.4	19.1	9.2	5.9	60.0
	%	10.0%	33.3%	23.3%	8.3%	25.0%	100.0%
Medium	Count	12	27	33	21	3	96
	Expected count	15.4	26.2	30.5	14.6	9.4	96.0
	%	12.5%	28.1%	34.4%	21.9%	3.1%	100.0%

Risk Appetite		Investment Experiences					Total
		Below 5yr	6–10yr	11–15yr	15–20yr	Above 20yr	
Low	Count	29	27	38	27	19	140
	Expected count	22.4	38.2	44.5	21.4	13.7	140.0
	%	20.7%	19.3%	27.1%	19.3%	13.6%	100.0%
Risk free	Count	17	35	42	8	2	104
	Expected count	16.6	28.3	33.0	15.9	10.1	104.0
	%	16.3%	33.7%	40.4%	7.7%	1.9%	100.0%
Total	Count	64	109	127	61	39	400
	Expected count	64.0	109.0	127.0	61.0	39.0	400.0
	%	16.0%	27.2%	31.8%	15.2%	9.8%	100.0%

Source: Survey

Table 16: Chi-Square Test

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	51.928 ^a	12	.000
Contingency coefficient	.339		
N of valid cases	400		

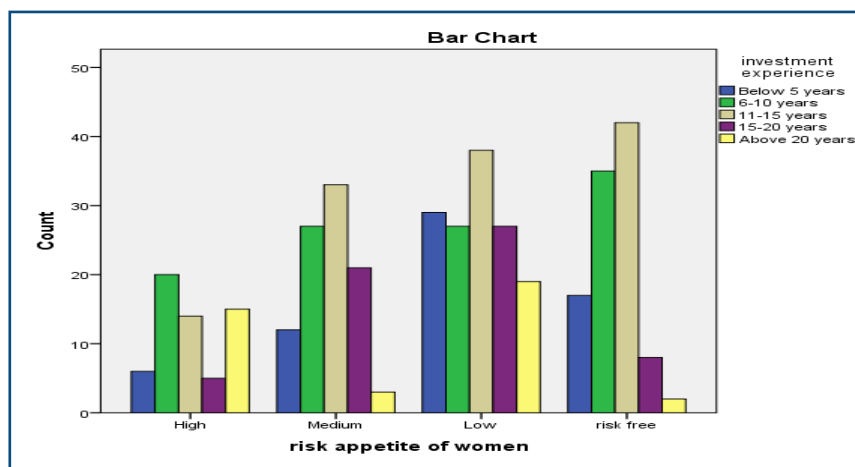
^a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.85

As revealed in Table 16, there is a significant relationship between investment experiences of women investors and their risk appetite. The p-value (.000) is recorded highly significant and the calculated Chi-square value (51.928) accounted more than critical value (32.909), which

supports that there is a statistically significant relationship between investment experiences of women and their risk-taking ability. Thus, hypothesis H7 is rejected.

The coefficient of contingency (C = 0.339) shows the strength of relationship, which reflects strong association coming closer to 1, indicates the significant influence on the risk appetite of women investors.

On the basis of above result, it can be concluded that there is statistically significant association between investment experiences of women investors and their risk-taking capacity, which advocates that investment experiences significantly influences the risk tolerance of women.



Source: Survey

Fig. 8: Association Between Women's Experience with Their Risk Tolerance

As shown in graph 8, women having below 5 years of experiences have low-risk appetite and are not capable to take high risk. Women who have above 20 years experiences

have moderate risk-tolerance level. In addition, women having 11–15 years' experiences can afford to take high risk.

Conclusion

It can be articulated from the results that there is significant relationship between demographic factors of women and their risk-taking capacity, which suggests that marital status, age, qualification, occupation, family monthly income and personal income, and experience have a significant impact on risk-tolerance level of women. The findings advocate that women with varying age groups have different level of risk tolerance. Moreover, highly qualified women have different level of risk tolerance in comparison of women who are less qualified.

Women's demographic distinctiveness plays a crucial role in identifying their risk-tolerance levels. In this regard, age, marital status, education, income and occupation were found to have a major impact in determining the risk-taking capacity of women.

Recommendations

The study recommends that the government and financial regulators should come forward to fortify the regulations and design such policies, which could foster the confidence of women and make them comfortable for taking considerable risk while investing their money. In this regards, financial institutions and companies should organize campaign and workshop to make women more aware and technically sound with dimensions of investment. Besides this, further study can be conducted on the factors, which will provide more clear representation of risk-taking ability of investors. In this way, additional factors like expectations, time period for investment, frequency of investment and socio-economic distinctiveness call for more consideration by researchers to accomplish more comprehensive research.

Implications of the Study

It is hoped that the findings will assist financial advisors, investment managers and financial consultant to understand and discover the solution to those demographic factors, which cause variations in risk-tolerance level. For giving proper and accurate financial advice, it is necessary to identify the risk-tolerance levels of that person appropriately. Thus, these results will provide guidance to financial analysts and advisors about how to predict risk-tolerance levels of women.

This study corroborates the importance of financial literacy to make women more aware and technically sound with

dimensions of investment. Further, it will help in making ideal investment portfolio by accommodating the needs of investors effectively.

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