

## **Fiscal Alertness and Threat: Key Determinants of Investment Behavior**

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### **Abstract**

Everyone invests to gain. Some amount of risks is always associated with an investment. All available investment models advocate that every rational investor invests with a view to maximize his/ her utility for a given level of risk. Everyone wishes to enhance the returns to a desired level for a given level of risks. If it were true, all investment decisions would be taken judiciously and no one would suffer losses. But in reality it is witnessed that most of people are not able to gain the desired returns on their investment. Moreover, they have to bear risks much more than their expectations. This may be attributed to many other parameters which influence their investment decisions. The present study considers financial awareness and financial threat preferences. As far as investor's financial awareness is concerned, results reveal that there has not been any significant relationship between their financial awareness and investment behavior. Rather, interestingly it is found that investors possessing high financial awareness usually prefer to invest more only in a specific category mainly including equity, fixed deposits, gold and real estate. The findings also reveal that there is no significant association between investor's behavior and their threat preferences i.e. averse, moderate and aggressive investors do not differ as far as their investment behavior is concerned. The findings also reveal that there has been a strong relationship between financial awareness and financial threat preferences. The people with high awareness favor to invest more in risky avenues and less in less risky avenues.

**Key words:** India, financial risk, department, financial alertness, investment

## **Introduction**

It is well known that investment and risk go side by side. All conventional models of investment recommend that every rational individual invest with a view to maximize his/ her utility for a given level of risk. Everyone wishes to enhance the returns to a desired level for a given level of risks. If it were true, all investment decisions would be taken judiciously and no one would suffer losses. But in reality it is witnessed that most of people are not able to attain the desired returns on their investment. Moreover, they have to bear risks much more than their expectations. This may be attributed to many other parameters which influence their investment decisions.

There are many studies which indicate that individual's attitude to investment risk depend on factors such as personality, circumstances, educational attainment, level of financial knowledge and experience, and extent of financial product portfolio (Conquest Research Limited, 2004; Distribution Technology, 2005). Finke and Huston (2003) identified a similar range of factors, including income, wealth, age, marital status, gender and level of education.

Clark and Strauss (2008) have observed that women are more risk averse than men, the young are more risk seeking than the old, wealthier individuals manifest a greater willingness to invest in equities and the poor are risk averse. One US survey report reveals that a combination of education, financial knowledge, income and occupation explained the most between-group variability in risk tolerance. Even so, this model only explained about 22% of an individual's financial risk tolerance, suggesting that other factors might differentiate levels of risk tolerance more effectively, such as attitudinal or psychological factors (Grable, 2000). A review of psychological studies suggests that this reflects a lower tolerance to risk among women generally, financial or otherwise (Byrnes, Miller and Schafer, 1999, cited in Watson and McNaughton, 2007).

Attitudes to risk change over time as needs alter and people's capacity to afford to lose varies (Conquest Research Limited, 2004). The evidence indicates fairly clearly that willingness to take financial risk decreases significantly among people who are retired or nearing retirement. Recent qualitative research from the UK found that most consumers had a basic understanding of the risk-reward relationship (i.e. higher risk meant potentially greater rewards; lower risk meant they stood to lose less but in turn the rewards would be less). Beyond this, however, understanding was limited. Most did not have a clear idea of what

these risks actually were and many felt that long-term investments were riskier, mainly because they would not be able to access their money in the case of unexpected events (IFF Research, 2007). The Baseline Survey of Financial Capability indicates that some risk-averse consumers may take out investment products unaware that there is any financial risk involved (Atkinson et al., 2006).

A number of studies have variously controlled for age, education, income, wealth and marital status, and found a gender difference exists independently of the influence of these characteristics. Some studies indicate that marital status and wealth play bigger roles than gender, in some cases supplanting the effects of gender. Sunden and Surette (1998) found that gender differences in DC pension fund allocations could only be understood in combination with marital status: other things being equal, single women and married men were less likely than single men to choose "mostly stocks" (a riskier portfolio) and married women were more likely than single women to choose this.

Hence it is clear that there are so many factors which affect individual investment behavior but in the present paper, researcher has made an attempt only to examine the relationship of Individual Investment Behavior with financial knowledge and Investment Risk Preference. Individual investment behavior signifies one's decisions of selecting between alternate investments avenues in which one may deploy his/her income savings. The term "investment behavior" may be understood by measuring: (1) ones' savings with respect to total earning; and (2) investments of savings in different avenues like Equity / Equity Mutual Funds/ ULIPs, Fixed Income instruments (e.g., Fixed Deposits/ Debentures/ Post office Savings/ Endowment Life Insurance/ Money back Life Insurance, Real estate (including EMIs of Home loans), Gold / Precious metal, Cash / Bank and any other asset with respect to savings. A product of monthly savings as a percentage of income and investments in the aforesaid avenues as a percentage of savings is an indicator of Individual investment behavior in each of the avenues of investment. Investment risk preference refers to individual's attitude towards risk taking with respect to investments. It has been measured using Grable and Lyton Risk Tolerance scale (G/L scale): Risk as experience and comfort, Speculative Risk, Investment Risk. Financial awareness of an investor indicates how well an individual can understand and use personal finance-related information. It has been measured on the dimensions of financial basics, Investment knowledge and borrowing knowledge.

### **Review of Literature**

This is not the first time when researcher studies the issue of individual investment behavior.

There are many previously made studies that discussed this issue in much detail. Therefore, researcher has made an extensive review of previous relevant studies. The economic utility theory as proposed by Neumann and Morgenstern (1947) argues that investors are (i) completely rational; (ii) able to deal with complex choices; (iii) risk averse; and (iv) wealth maximizing. This theory suggests that individuals maximize their expected utility as measured by anticipated returns forgone level of risk measured by variance. Markowitz (1959) explained the role of utility theory in portfolio formation—how risk reward characteristics are maximized for a portfolio. More recently, Clark-Murphy *et.al.*(2009) studied investment strategy of members of four Australian superannuation funds and found that investors tend to chase recent historic returns for choosing which fund and option to invest in.

There are many studies that have also studied the role of demographic parameters to explain investor's behavior. According to Sunden and Surette (1998), age, sex, income and education affect investor preferences for capital gains. Blume and Friend (1978) also studied the significance of demographic variables and revealed that they have an impact to select investment avenue and portfolio composition course.

A study made by Warren *et al.*(1990) explored that investor's income plays an important role in determining their portfolio composition. He found that the heavy investors investing more than \$50000 and those with heavy concentration of investment stocks and bonds (>32% of total investment) have household income in excess of \$50000 p.a. Similarly, Cohn *et.al.*(1975), in his study also provided evidence that risk aversion decreases as investor's income increases. Marital status is also an important factor that affects investment behavior. Sunden and Surette (1998) in their study suggested that divorced, singles and widowed women tend to have a higher concentration of stocks and bonds than other form of investments.

Many studies reveal that sex is also an important determinant in deciding the investment behavior. According to Warren, William *et al.* (1990) and Valenti (2007), males tend to invest more in stocks and bonds than females. Differences in attitudes of men and women about retirement, in the lifestyles of men and women in retirement are also very critical. The causes of such differences include later entrance into the work force, interruptions in working life, lower pay, greater risk aversion, lower savings, and longer life expectancy for women (Gable and Lytton, 1999).

Warren *et al.*(1990) studied the effect of age on portfolio composition. He revealed that investors with heavier concentration of stocks and bonds in their portfolio were the children

above 18 year of age. In another study made by Clark-Murphy *et.al.*(2009), they suggested that as age increases the tendency to rush higher return investments increases. This also indicates that with increase in age, the investment in higher risk avenues like equity also increases, probably because of the increased awareness for need to save as retirement approaches. It is important to note here that the above findings are just opposite the theory that advocates that risk taking ability of individuals declines with increase in age. Therefore, probability of investment in higher risk avenues goes down.

Since the financial awareness is an important gradient of the present study, therefore researcher has also reviewed some studies pertaining to it. In available literature, the terms financial literacy, financial knowledge and financial education have been used interchangeably. Bodie and Crane (1997) explored that knowledge of investment principles represents individuals' understanding of the generally accepted investment principles communicated by the providers of financial products. Mandell and Klein (2007) applied the Goal setting theory of motivation to financial behavior and indicated that the better financial literacy results in improved financial behavior. According to March (1996), knowledge of problem may provide an individual with solution routines to use while choosing among risky alternatives. Sebastian and Martin (2010) examined how financial literacy affects the tendency to rely on actively managed funds rather than passively managed products. The present study is an attempt to measure if greater financial knowledge would result in a particular kind of investment behavior.

The next critical issue pertaining to financial knowledge is how to measure it? For this, Remund (2010) divided the conceptual definition of financial literacy into five distinct categories: (1) Knowledge of financial basics; (2) Ability to communicate about financial concepts; (3) Aptitude in managing personal finances; (4) Skills in making appropriate financial decisions; and (5) Confidence to plan effectively for future financial needs.

A few studies have also been reviewed to seek an idea about the risk preferences of any investor. Risk preference refers to an individual's attitude towards risk taking in a specific context (Brockhaus, 1982). According to Weber and Bottom (1990), risk preference represents an individual's tendency to be attracted or repelled by alternatives that he or she perceives to be more risky over those perceived as less risky. Dulebohn and Murray (2007) also conclude that individuals who prefer less investment risk select investments with an overall lower risk level, and those who prefer higher investment risk select investments with an overall higher risk level. Pratt (1964) and Arrow (1965) have measured Risk preference of

individuals by the proportion of individual wealth invested in risky assets using the asset allocation approach. Lewellwn and Schalbaurn (1975) have also studied the proportion of individual investment in risky assets as a measure of investor risk aversion. These studies have measured risk preference by the investment behavior of individuals. This may not be a rational way as there could be factors other than risk preference like time period of investment, knowledge levels, psychological biases and social norms that may influence investment behavior. The Grable and Lyton Risk Tolerance Measure (G/L-RTM) which is a 13 item multi dimensional measure is a wider measure of financial risk tolerance of an individual. The G/L RTM has found wide acceptance in the financial planning profession mainly due to its ease of availability and ease of administration.

### **Research Problem**

Though a large amount of literature is available on financial literacy and financial risk preference, but no one has devised any standardized scale till date to measure financial literacy and individual risk preference in the financial planning industry. Researchers are using the customized scales for the purpose. Therefore, there is a pressing need to experiment with different scales to establish their validity and reliability in the different contexts. Besides, India has been progressing rapidly in terms of its GDP size with its diversified demographic and cultural structure. They also need to know the influence of various variables affecting investment behavior in order to design marketable products. This paper attempts to address this issue.

### **Research Methodology**

Researcher intends to test the relationship between financial knowledge and investment risk preference with individual investment behavior. This paper aims to examine the nature and strength of the relationship, if any, that exist between the variables. Investment behavior has been considered as a product of savings in relation to income and investment spreading over six different investment avenues such as equity/equity mutual funds, real estate, gold/precious metals, fixed income instruments, and cash/bank balance. Financial literacy has been measured with respect to knowledge on the basics of finance, investments and borrowings. The existing financial literacy score model (Sebastian and Martin, 2010) has been used for the same. The responses have been scored and divided into low, moderate and high knowledge levels. Investment risk preference has been measured with respect to investment risk, Risk comfort and experience and ability to take speculative risk. The existing G/L Risk

tolerance scale (Grable and Lytton, 1999) has been used to measure speculative risk. Accordingly, investors have been categorized as risk averse, moderate risk takers and aggressive investors.

### **Locale of Study**

Gurgaon and Delhi were the locale of the study

### **Sampling Procedure**

All respondents were in the working age group of 18 years and above and necessarily from Delhi and Gurgaon districts. Since the population was almost homogeneous, therefore a small sample was thought to be effective to represent it. Researcher has used stratified random sampling to select a sample of 70 persons working in different organizations in Delhi and Gurgaon.

### **Data Collection**

Researcher drafted a questionnaire containing the questions pertaining to the variables of interest. In addition to demographic details of the respondents, there were 8 questions to gauge their financial literacy and 13 questions to know about their financial risk preferences. Besides, to understand their investment behavior, a few questions were also included which were based on their income, saving and their investment in avenues like equity, real estate, gold, cash, fixed income instruments, and other assets. This questionnaire was mailed to the selected persons using google document. The respondents filled it online. As a result of which individual responses were received. A total of 70 persons were mailed. Out of which, only 57 complete and valid responses were accepted for the further analysis; i.e. final response rate was 71.25 percent and found to be acceptable.

### **Software Used**

A number of statistical software are available but for the analysis of the data collected for this particular research, researcher has used SPSS 19 software.

### **Analysis and Interpretation of Data**

Firstly, researcher has tabulated the demographic profile of respondents as in table 1.

**Table 1: Demographic Profile**

S. No	Category	Frequency	Percentage
1	<b>Age</b>		
	18-36	18	31.57
	36-54	26	45.61
	54 and above	13	22.80
2	<b>Education</b>		
	12 <sup>th</sup> standard	11	19.29
	Graduation	16	28.07
	Post- Graduation	23	40.35
	Higher	7	12.28
3	<b>Gender</b>		
	Male	41	71.92
	Female	16	28.07
4	<b>Marital Status</b>		
	Single	18	31.57
	Married	39	68.42
5	<b>Occupation</b>		
	Employed/Salaried	33	57.89
	Self employed	24	42.10
6	<b>Yearly Income</b>		
	Less than 5 lacs	7	12.28
	5 lacs – 10 lacs	10	17.54
	10 lacs- 15 lacs	18	31.57
	15 lacs – 20 lacs	12	21.05
	Above 20 lacs	10	17.54

It is evident from Table 1 that most of the respondents were in the age bracket of 36 to 54 years and postgraduates. Almost 71 percent respondents were male and most of them were married. In the sample, about 58 percent were from the employed/ salaried category and remaining 42 percent from the self-employed category. A significant portion of our sample belonged to income group 10 lacs -15 lacs.

### **Hypotheses:**

To understand the relationship between financial knowledge and Investment Risk Preference (IRP) with Individual Investment Behavior (IIB).The following hypothesis have been formulated to conduct this study.

**H<sub>0</sub>1:** Individual financial knowledge/literacy is independent of individual investment behavior.

**H<sub>0</sub>2:** Individual risk preference is independent of individual investment behavior.

**H<sub>03</sub>:** There is a strong association between individual risk preference and financial knowledge/literacy

To test **H<sub>01</sub>**, chi-square test was conducted. It may be observed from results as shown in Table 2 that there is no statistically significant association between financial knowledge and investment behavior with respect to any investment avenue. The value of  $p > 0.05$  (insignificant) for all avenues therefore, we accept the  $H_{01}$ . The conclusion is that individuals with low knowledge, moderate knowledge or high knowledge do not differ significantly with respect to their investment behavior.

**Table 2: Chi Square Test for Independence of Financial Knowledge and IRP with IIB**

	Financial Knowledge		IRP	
	Chi-square Value	Asymp. Sig.(2-sided)	Chi-square Valuee	Asymp. Sig.(2-sided)
Real estate	2.425	0.343	2.372	0.352
Gold	2.972	0.187	6.264	0.089
Equity	1.286	0.736	3.273	0.199
Fixedincome	0.915	0.875	0.983	0.714
Cash	1.825	0.612	1.864	0.612

Similarly to test **H<sub>02</sub>**, again chi-square test was conducted. It may be observed from results as shown in Table 2 that there is no statistically significant association between IRP and investment behavior with respect to any investment avenue. The value of  $p > 0.05$  (insignificant) for all avenues therefore, we accept the  $H_{02}$ . The conclusion is that risk averse individuals, moderate risk takers and aggressive individuals do not differ significantly with respect to their investment behavior.

To test **H<sub>03</sub>**, we have computed pearsons' coefficient of correlation (table 3) to measure the association between financial knowledge and individual risk preference. In this case, we go for pearsons' coefficient of correlation in place of chi-square, because both financial knowledge and individual risk preference have been measured as scores. Results are depicted in table 3.

**Table 3: Correlation Analysis Between Knowledge Score and IRP Score**

		Knowledge score	I R P score
Knowledge score	PearsonCorrelation	1	.793
	Sig.(2-tailed)		.001*
	N	57	57
I R P score	PearsonCorrelation	0.793	1
	Sig.(2-tailed)	0.001*	
	N	57	57

This is clear from table 3 that there is very strong positive association between knowledge and individual risk preferences scores. This means when knowledge score increases, IRP score will also increase. Individuals with low financial knowledge are likely to be risk averse and those with high knowledge are likely to be aggressive.

### **Conclusion:**

Researcher has made the present study to understand the various factors which influence an investors' behavior. There are numerous factors influencing investors' behavior; however this study focuses on two main parameters; financial knowledge and risk preference. A sincere attempt has been made to understand the relationship of financial knowledge and risk preference with investor's behavior. Findings reveal that there is no relationship between financial awareness and investment behavior. The implications of this finding is that the providers of financial products may design newer products or modify the existing ones keeping in view that awareness is not a parameter that influences investors' choice. Second important finding is that risk preference and investment behavior are independent of each other. It means that low, moderate and high investment risk bearers show almost the similar investment behavior. Policy implications are that the providers of financial products may ignore the risk preference inclination of the investors while designing new products. This finding is reverse of the findings of previous studies as reflected in review of literature. Further, strong positive correlation was found between financial awareness and risk preference. This is a very critical finding revealing that more knowledgeable investors are also the more risk tolerant. Therefore, providers may focus on more knowledgeable people to sell more risky product which usually have high but uncertain returns. Similarly, people with less awareness may be targeted to sell the products which have stable returns.

### **Limitations of Study**

Like many other, this study is also not without the limitations. As literature review reveals that there are enormous parameters that affect the individual investment behavior but this paper only explores the relationship of financial knowledge and investor risk preference with individual investment behavior. There are many other factors such as psychological biases, social norms and time horizon of investment etc that influence the investment behavior but have not been covered in this paper.

Secondly, the data have been collected only from the Gurgaon and Delhi districts because of the time and financial constraints of the researcher. Both the cities are considered as a capital hub and therefore there is a great possibility that the people in these two districts may differ in their investment behavior from the people in other cities. Therefore, future researchers may carry the same work in other parts of the country to provide credibility to the findings of the current study.

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