Risk Perception of Mutual Fund Investors

Every investor likes return and dislikes risk, but risk is deeply rooted in all financial markets. A positive relationship persists between risk and return. Mostly investors are risk averse, which means that if everything else is the same, they will select the investment that offers greater certainty. The main objective of this study is to reveal the risk perception of Mutual Fund Investors of Jammu and Kashmir, as risk perception of individual investors usually affects their investment decision. The study considers some of the important factors for understanding the risk perception of individual/retail mutual fund investors of Jammu and Kashmir. For measuring the respondents' perceptions, the study employs the Likert scale technique. The study employs the Factor Analysis technique to identify the underlying dimensions or factors that explain the correlations among a set of variables regarding the risk perception of mutual fund investors.

Keywords : Mutual Fund Investors, Risk Perception, Factor Analysis, Risk Averse, Market Risk



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An investment refers to the monetary asset acquired with the intention of generating income or capital appreciation. Investment involves sacrificing a certain present value to have an uncertain reward in future. The risk may be defined as "the probability of the actual return (HPR) on an investment being different from the expected return (ER)". Risk may also be defined as "the uncertainty that an investment will earn its expected rate of return". When the investment has a larger range of possible returns, this makes the investor uncertain about what the actual return can be. Therefore, a larger range of expected returns makes the investment riskier. The present study revolves round revealing the risk perception of the mutual fund investors. The financial risk tolerance has been defined as 'the maximum amount of variability in returns from an investment that an investor is willing to bear regarding his/her financial decision (Grable, 2000). Different investors have different investment objectives decided by the stage of life they are in. Generally, investors who have reached the age of their retirement prefer to park their investment in safe avenues with lesser returns. However, the case is different for investors lying in the age group of 30s and 40s who are ready to take higher levels of risk for higher returns. Most investors are risk averse, which means that if everything else is the same, they will select the investment that offers greater certainty.

There are two broad sources of risk viz. Security-specific risk (also

known as unsystematic risk) and Market risk (also known as systematic risk). Security-specific risk arises from the activities of the specific companies, and the industry to which they belong, and act as the major determinants of the income flows of companies. This risk-type is grouped into business risk (examples: prolonged labour strike, arrival of serious competition from offshore, harmful management decisions, changes in product / service quality); financial risk (when debt is utilized as a source of capital, and is used injudiciously by the company); and liquidity risk (the risk of the segment of the share market in which the relevant share is being illiquid so that fair market value cannot be obtained). Market risk is made up of the risks that persist in the financial and/or economic system. Such risk affects all markets.

This type of risk is of upward changes in interest political instability (country war (country risk), a major (exchange rate risk), and risk).

Positive perceptions about lead to the increased and underestimation of hand, negative perceptions Security-specific risk arises from the activities of the specific companies, and the industry to which they belong, and act as the major determinants of the income flows of companies. following types: tax changes, rates (interest rate risk), risk), the declaration of a change in the exchange rate change in inflation (inflation

life and events could at times overestimation of the market possible risks. On the other could lead to overestimation

of risks and underestimation of the possible loss of profitable investment opportunities (Lo et al., 2005). John von Neumann and Oskar Morgenstern developed a theory to determine the amount of the return that an investor wishes to earn based on the risk appetite of the investor (Binmore, 2008). With time, the fund management companies have learned to some extent to come up with such financial products which have varying degrees of risk to meet differing investor preferences. Mutual fund is that type of investment avenue which is offered by 'banks and other financial institutions' for investors. The pooled up resources by Mutual funds are invested in different types of securities. *Finally, investors choose from a wide variety of investment options available to them after making a trade-off between risk and return based on their risk capacity, investment objective, and availability of funds for investing.* The decision of investing is coupled with a lot of things storming the minds of investors like the influence of expert advice from fund managers, their past investment experience, information sources on which they depend for decision making etc. All these things work to shape the investors' risk perception behaviour.

Literature Review

Several studies confirm that an investor's perception regarding the risk associated with an investment is highly influenced by the psychological makeup exhibited by him/her (Young et al., 2012). The personal traits, emotions, past experiences and financial knowledge play a significant role in shaping an investor's risk-taking attitude and investment decisions (Hunter and Kemp, 2004; Young et al., 2012). The demographic characteristics of investors like age, gender, educational qualification, etc. play a significant role in shaping the risk perception of investors. The age of the investors and their risk tolerance level are related to each other. Older investors have low level of risk tolerance than the young investors, probably because older individuals have lesser time to meet their goals and objectives. Similarly, younger individuals have more time to cover up the financial losses, in case there are any, because of the risk in the investments they undertake to accumulate more wealth (Grable and Lytton, 1999b). Gender is one of the most important demographic characteristics that significantly influences the behaviour of investors towards investment (Hallahan, Faff, and McKenzie, 2004). Men and women as investors have never been treated alike by the financial advisors because of the difference in their risk tolerance levels which are inherent to them because of their different personality settings. In previous studies men have been described as "seekers of thrill or sensation" largely because of their personality traits and women have been described as more risk averse personalities with conservative nature (Roszkowski et al., 1993).

Objective of the Study

The main objective of the study is to highlight the risk perception of mutual fund investors of Jammu and Kashmir.

Research Methodology

The study is both descriptive as well as empirical in nature based on the survey method.

Sample Size

The data is collected through a survey by administering a structured questionnaire to 450 respondents. As it is hard to approach the investors, the Convenience Sampling Method (Mittal and Vyas, 2008) is preferred. Therefore, all the local offices of the Asset Management Companies are approached that are operating in the state of Jammu and Kashmir and the comprehensive list of mutual fund investors

enrolled through these the sample size suggested by Bartlett, Kotrlik on the Cochran's formula, to be a minimum of 384 the adequate sample size level at 0.05 margin of error population to be 384 sample sample more representative, size of 450 respondents such



companies is obtained. From determination table, and Higgins (2001) based the suggested sample size has sample units (as per them with 95 percent confidence for above one lakh units), but to make our the study selects a sample that 150 respondents belong

to each geographical region of the state of Jammu and Kashmir, ensuring equal representation of each region in the final sample under consideration. Simple random sampling by using random number table is employed for the selection of 450 sample units from the sample frame.

Data Collection

Both primary and secondary data sources have been used in the study. However, the study largely depends on the primary data. The primary data is collected from 450 respondents who make investments in Mutual funds and belong to the State of Jammu and Kashmir, using a pretested structured questionnaire. Additionally, the discussions with officials of AMCs, agents and distributors of MF products, and experts in this field were conducted to elicit the relevant information and purposeful guidance for the study. Proper editing, coding and classification of the primary data is carried out to make it ready for analysis purpose. For obtaining the relevant secondary data for the study several books, journals, various websites, etc. were used.

Risk Perception of Mutual Fund Investors of Jammu and Kashmir

Risk perception of individual investors usually affects the investment decision in financial assets. Fourteen variables are chosen after thorough discussions with the experts, in order to assess the Risk perception of the mutual fund investors of Jammu and Kashmir. Incorporating these variables, several statements are developed and the opinions of investors are measured on a five point Likert-type scale ranging from "Strongly Agree (1)" to "Strongly Disagree (5)". These statements include:

"Return on mutual funds depends on overall performance of the market"; "Mutual fund returns should be better than the savings schemes like Fixed Deposits, Savings account etc."; "Large-cap funds are less risky since they are diversified."; "Diversified portfolio reduces volatility risk."; "Funds with high NAV are risky."; "Debt mutual fund schemes carry interest rate risk."; "Short term Mutual Funds are also relatively less risky."; "Fixed Income mutual fund schemes are safer than other fund schemes."; "Equity mutual fund scheme is considered as the riskiest one."; "The Fund Manager's ability to manage and balance risk affects the returns."; "Fund Manager may fail to perform up to the expectations of the investors."; "The investment value gets adversely affected by the Unavoidable risks of market."; "It is difficult to sell the mutual fund units with declining value."; and "Returns earned depend on the market performance and the timings at which the sum is being invested."

The past researchers have established that the Likert scale is the most suitable and reliable technique for measuring the respondents' perceptions (Miller and Salkind, 2002; Zainudin, 2010). Experts having experience in the field of investments are consulted and their suggestions are included while finalizing the questionnaire so that the content validity of the instrument is ensured. Determining the reliability of the scale is important as it reflects the degree of dependability, consistency or stability of the scale of measurement. To analyze the reliability of the instrument, the study employs the same internal

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consistency reliability test used by the past researchers Cronbach's alpha coefficient reliability of the instrument The rule of thumb is that an Cronbach's alpha coefficient an average reliability while more reveals that the reliability (Hair et al., 2010; The Cronbach's alpha stands at 0.778 for (N items reliability of the scale of measu

reliability of the scale of measurement.

which has been frequently (Zainudin, 2010). Thus, the is employed to measure the (Sekaran and Bougie, 2010). instrument with the of 0.60 is considered to have the coefficient of 0.70 and measurements has a high Sekaran and Bougie, 2010). measured for the study =14) thereby, confirms the

Data Analysis

The study employs the factor analysis technique to identify the underlying dimensions or factors that explain the correlations among a set of variables regarding the Risk perception of mutual fund investors, see Table I. With factor analysis technique, from a number of variables available only the core variables are extracted. In research studies, a number of variables may exist which are correlated and which must be reduced to a manageable level. With factor analysis, it is possible to study the relationships of many interrelated variables and can be represented in the form of a few underlying factors. It is noteworthy to mention that factor analysis makes no distinction between the variables as dependent and independent. However, the entire set of variables is analyzed to examine the interdependent relationships among the variables. That is why, factor analysis is also known as "Interdependence Technique".

In order to determine the suitability of the factor analysis for the study, the Kaiser-Meyer-Olkin test and Bartlett's Test of Shericity- measure of sampling adequacy are used. Normally, 0 < KMO < 1. *The value closer to 1 is better and the value greater than 0.5* is desirable for this test. Bartlett's test of Sphericity tests the hypothesis that your correlation matrix is an identity matrix, which would indicate that the given variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that a factor analysis may be useful for the data.

If KMO > 0.5, the sample is adequate. Here, KMO = 0.681 which indicates that the sample is adequate, hence Factor Analysis is suitable for the study. For Bartlett's Test of Shericity the values less than 0.05 are better, here the value is 0.000 < 0.05 with approx. Chi-Square of 1485.762 and degrees of freedom = 91 which is a green signal for conducting factor analysis. Hence, factor analysis is considered as an appropriate technique for further analysis of the data. After determining the suitability of factor analysis for analyzing the data, it becomes important to select an appropriate method of factor analysis. The method selected for the study is the *Principal Component Analysis*. In Principal Component Analysis, the total variance in the data is considered. This method is recommended when the primary concern is to determine the minimum number of factors that will account for maximum variance in the data for use in subsequent analysis (Malhotra and Dass). The extracted factors are called as the *Principal Components*.

Determination of the number of Principal Components on the basis of Eigenvalue

The initial component column represents the number of variables used in the factor analysis. The total column represents the *eigenvalues*. It is noteworthy to mention that only those factors (Principal components) are retained who have eigenvalues greater or equal to 1.0 and the other factors are not included. Therefore, *five core factors* are extracted by the factor analysis on the basis of their eigenvalues, see Table I. It is also recommended that the factors extracted should collectively account for at least 60 percent of the variance. The first factor will always account for most of the variance and hence, has the highest eigenvalue. The next factor will account for as much of the left over variance as it can and the same will continue till the last factor. The percentage of variance represents the percent of total variance explained by each factor and the cumulative percentage gives the cumulative percentage of variance accounted by the present and the preceding factors.

A total of five factors were extracted from the variables considered by the study to analyze the Risk perception of the mutual fund investors. These extracted factors explain 63.002 percent of the variability in the Risk perception of mutual fund investors. This explains over half of the variability.

Rotation does not affect the percentage of total variance explained. However, the percentage of variance accounted for by each factor does change. This is made clear after comparing "Extraction Sums of Squared Loadings" with "Rotation Sums of Squared Loadings." The variance explained by the individual factors is redistributed by rotation. Hence, different methods of rotation may result in the identification of different factors.

Total Variance Explained													
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings						
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulativ e %	Total	% of Variance	Cumulative %				
1	3.007	20.785	20.785	3.007	20.785	20.785	3.007	20.428	20.428				
2	1.988	14.01	34.795	1.988	14.01	34.795	1.988	14.053	34.481				
3	1.755	11.788	46.583	1.755	11.788	46.583	1.755	11.792	46.273				
4	1.442	9.275	55.858	1.442	9.275	55.858	1.442	9.279	55.552				
5	1.116	7.144	63.002	1.116	7.144	63.002	1.116	7.45	63.002				
6	0.928	7.573	70.575										
7	0.861	6.152	76.727										
8	0.667	4.011	80.738										
9	0.587	4.003	84.741										
10	0.546	3.902	88.643										
11	0.47	3.644	92.287										
12	0.429	3.065	95.352										
13	0.346	2.3	97.652										
14	0.329	2.348	100										
Extraction M	ethod: Prin	ncipal Com	ponent Analy	sis.									

Table - I Principal Component Analysis

Source: primary data

The most commonly used method for rotation is the Varimax Rotation procedure. This is an orthogonal

method of rotation that minimizes the number of variables with high loadings on a factor, thereby, enhancing the interpretability of the factors. The rotated factor matrix forms the basis for interpretation of the factors (Malhotra and Dass).

Identification of the Core Factors

The correlations of the variables with each of the extracted factors is given by the Rotated Factor Matrix that represents the rotated factor loadings, see Table II. The Component column represents the rotated factors that have been extracted after the employment of the factor analysis out of the total factors. These are the core factors we are left with after data reduction.

Rotated Component Matrix									
		Component							
	1	2	3	4	5				
Return depends on overall performance of the market	.752								
Mutual fund returns should be better than the savings schemes like Fixed Deposits, Savings account etc.	.524								
Large-cap funds are less risky since they are diversified.			.768						
Diversified portfolio reduces volatility risk.			.801						
Funds with high NAV are risky.		.623							
Debt mutual fund schemes carry interest rate risk.		.745							
Short term Mutual Funds are also relatively less risky.		.812							
Fixed Income mutual fund schemes are safer than other fund schemes.		.711							
Equity mutual fund scheme is considered as the riskiest one.		.687							
The Fund Manager's ability to manage and balance risk affects the returns.				.714					
Fund Manager may fail to perform up to the expectations of the investors.				.755					
The investment value gets adversely affected by the Unavoidable risks of market.					.676				
It is difficult to sell the mutual fund units with declining value					.728				
Returns earned depend on the market performance and the timings at which the sum is being invested.					.671				
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.									

Table - II

Source: primary data

Across the column corresponding to factor 1/component 1, the variables that are highly loaded are included in the extracted factor1 and so on. Thus, after rotation, Factor1 namely *Performance of the Mutual Funds* comprising two variables viz., "Return depends on overall performance of the market." and "Mutual fund returns should be better than the savings schemes like Fixed Deposits, Savings account etc.", accounts for 20.785 percent of the variance, see Table II.

Factor2 namely *Type of Mutual Fund* comprising five variables viz., "Funds with high NAV are risky", "Debt mutual fund schemes carry interest rate risk", "Short term Mutual Funds are also relatively less risky", "Fixed Income mutual fund schemes are safer than other fund schemes", and "Equity mutual fund scheme is considered as the riskiest one", accounts for 14.01 percent of the variance.

Factor3 namely *Diversification comprising* two variables viz., "Large-cap funds are less risky since they are diversified" and "Diversified portfolio reduces volatility risk." accounts for 11.788 percent of the variance.

Factor4 namely *Managerial risk* comprising two variable viz., "The Fund Manager's ability to manage and balance risk affects the returns" and "Fund Manager may fail to perform up to the expectations of the investors", accounts for 9.275 percent of the variance.

Factor5 namely *Market conditions* comprising three variables viz., "The investment value gets adversely affected by the Unavoidable risks of market", "It is difficult to sell the mutual fund units with declining value" and "Returns earned depend on the market performance and the timings at which the sum is being invested." accounts for 7.144 percent of the variance.

Discussion

The five core factors that surfaced as the important factors in determining the risk perception of investors included *Performance of the Mutual Funds*, *Diversification*, *Type of Mutual Fund*, *Managerial risk and*

Market conditions. These 63.002 percent of the total the investors. This is Fredman, (1996) who tolerance of the investors is time horizon, investor toward price fluctuations. "Performance of the Mutual important factor influencing investors in the study.

Remaining updated and equipped with the necessary skills, knowledge and attitude will enable the managers to win the confidence of the investors. factors collectively explained variance in risk perception of supported by the findings of examined that the risk contingent on factors like knowledge, and attitude The study finds the factor Funds" as the most the risk perception of Because this factor accounts

for the maximum amount of variance regarding the risk perception of investors. The performance factor influences the risk perception of investors which in turn affects the investment decision of the investors. The study finds that the performance of the mutual funds depicted by the return on portfolio of an investor depends on the overall performance of the fund company. That is why, we could see the performance factor occupying the top most position among the other factors influencing the risk perception of the investors in the study. This result is consistent with previous research (Barber, Odean, and Zheng (2004); Capon, Fitzsimons, and Weingarten (1994); Ippolito, (1992). Ippolito examined that the past performance of the funds was the deciding factor in the selection of fund/scheme by investors. He examined that the winning funds attracted heavy money inflow to them more rapidly. The performance factor is considered as one of the important factors in mutual fund investments by the investors (Wilcox, 2003). The study also finds the factor "Type of Mutual Fund schemes" as one of the important factors affecting the risk perception of the investors. This is consistent with previous research of Saini, Anjum, and Saini (2011). "Diversification" which emerged as one of the important core factor in this analysis points to the fact that most of the investors have a tendency for having a low-risk portfolio which is possible by diversifying the portfolio. That means the investors are risk averse in general. This result is consistent with previous research Capon, Fitzsimons, and Weingarten (1994); one of the variables that loaded on the diversification is the nature of Large-cap funds to withstand economic downturn because of their low risk levels due to diversified portfolio. This is consistent with previous research (Ramasamy and Yeung, 2003). The present study also finds the factor "Managerial risk" as one of the core extracted factors influencing the risk tolerance level of the investors. Investors do care about to whom they are handing over their hard earned money. Managerial underperformance affects the decision of mutual fund investors and discourages the investors for investing in mutual funds. This is consistent with previous research of Saini, Anjum, and Saini (2011). "Market conditions" is another important factor affecting the risk tolerance level of the mutual fund investors. The mutual fund investors pay attention to the market performance and the timings at which the sum is being invested because these affect the returns earned on mutual funds. This is consistent with the previous research of Deb, Banerjee, and Chakrabarti (2007). The market conditions are determined by the prevailing stage of the business cycle. The business cycle in turn affects the risk perception of investors which keeps on changing across the business cycle. The volatile market conditions affect the returns on mutual funds adversely, i.e., the NAV

of the mutual fund units gets adversely affected by such volatility and the investors feel scared of the volatile market conditions.

Conclusion

Risk is one of the basic concepts of the investment decision making process and understanding its impact in shaping the risk perception of investors may be imperative for all the stakeholders including government, financial institutions, banks, business associations, educational institutions, etc. The present study employed factor analysis to determine the important factors that impact the risk perception of the

mutual fund investors. investment options and it is for investing. At the same the invested value which is investment. Risk and return aspects of the investment. It risk perception of mutual analysis is helpful in paving a service providers to assess the well as existing investors'.

The investment companies need to direct their efforts towards tailoring the suitable product mix for each identified market segment which will in turn help the fund company in accomplishing its broad objectives. Investors invest in different the return which drives them time, investors fear of losing reflected by the risk of the are the two inseparable is important to analyze the fund investors because such way for the mutual fund risk tolerance of potential as This assessment will help

them out in tailoring heterogeneous but appropriate product mix of investment options. This way investors will be offered with customized asset-composition in a portfolio with the risk and return levels crafted as per their investment objective.

The investment companies should not treat all the mutual fund investors alike as a homogeneous group, rather they should consider the difference in risk perception of investors as a strong ground to segment them in separate target markets. Thus, targeting such market segments, having a different set of characteristics, preferences, and investment objectives, will enable the fund companies to penetrate deeply into the market. The tailor made products for investors suiting their investment requirement is necessary for the survival of the mutual fund companies. Therefore, the investment companies need to direct their efforts towards tailoring the suitable product mix for each identified market segment which will in turn help the fund company in accomplishing its broad objectives.

For fund managers, it is important to revitalize their stock selection skills and assess the timing of investments well in advance before making the investments. This will reduce the management risk faced by the mutual fund investors to a greater extent. In fact, the competence of fund managers plays a crucial role in deciding the fate of the mutual fund company, in general and the mutual fund investors, in particular. Managers need to learn not to follow their intuitions about the future market performance, instead they should conduct research and carry out analysis on different market inputs and then make informed decisions regarding their investing so that the risk exposure of mutual fund investors is minimized. The fund managers need to be accountable for all the possible consequences of the investments. Remaining updated and equipped with the necessary skills, knowledge and attitude will enable the managers to win the confidence of the investors. Considering the differences among the investors regarding their perceptions about the risk involved in mutual funds, the managers should devise such innovative financial products which will lead to the satisfaction of the identified heterogeneous groups of investors. This will in turn help in the accomplishment of the broad objectives of the fund company.

For investors, it is of immense importance to consider the risk aspect of their investments as well, while looking for handsome returns on their investment. A proper assessment of their risk perception will help them in making appropriate decisions regarding the selection of a particular fund company and fund type. Also, the investors need to be clear about their investment objectives which will facilitate them in selecting suitable fund schemes, thereby, building the desired portfolio. Investors need to have some basic understanding about the mutual fund working, so that they could defend themselves against various risk exposures, undue charges, the malpractices of agents and managers, etc.

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