

# EMPIRICAL STUDY OF INVESTORS BEHAVIOUR IN MUTUAL FUND MARKET

Aum Dave

M. J. College of Commerce,

Maharaja Krishnkumarsinhji Bhavnagar University.

## ABSTRACT

An important segment of financial markets is the field of mutual funds. So far, mutual funds have delivered value to the investors. Not a single industry can flourish without a proper regulatory mechanism. Here are some initiatives which would help towards making the Indian mutual fund industry more vibrant and competitive. The study is based on the formulation of the hypotheses: Male and Female Mutual Funds investor's preferences for "Risk Leads to Return (RLR)" is same. Male and Female Mutual Funds investor's preferences for "safety and risk are important determinants for good returns (SRR)" is same. Mean number of preferences for "Risk Lead to Return (RLR)" is the same for all education group. Mean number of preferences of Mutual Fund's investors for "safety and risk are important determinants for good returns (SRR)" is the same for all education group. Our study is based on the retail investors regarding the mutual funds in the state of Gujarat. Analysis is carried out using t-test, ANOVA and Post Hoc test.

**Keywords:** Mutual fund, Retail investors, investor's decision, Risk orientation.

## Introduction:

During last few years, the Indian capital market has been increasing in a tremendous manner. Many developments have taken place in the Indian financial market with the reforms in the field of economy, industrial policy, public and financial sectors. As a result, the economy has opened up. Indian mutual fund industry came into existence in the year 1963 as a part of development in the capital market. It has become an important and dynamic sector of the Indian capital markets particularly in the past five years.

## Literature Review:

It has been reviewed by Agarwal R.K. et al. (2010) that the performance of mutual funds has been receiving a great deal of attention from both practitioners and academics. The interest of the public in investment is understandable with an aggregate investment of trillion dollars in India. The goal of identifying superior fund managers is interesting as it encourages development and application of new models and theories as far as academic perspective is concerned. It is also our aim to identify the out performers for healthy investments. We have also ranked the investment opportunities for better evaluation of these funds based on various adjusted ratios like Sharpe ratio, Jensen Measure, Fama ratio, Sortino ratio, Treynor's ratio and few others. Therefore, an attempt has been made to capture the critical measures of performance evaluation of mutual funds. The ability of investors to tolerate the risk of return is referred to as risk tolerance (Schaefer 1978). As far as the expert's opinion is concerned, risk tolerance always tends to be subjective rather than objective.

- It was studied by Giridhari Mohanta & Dr. Sathya Swaroop Debasish (2011) that investors invest in different investment avenues for fulfilling their financial, social and psychological needs.
- An attempt was made by Haslem, Baker and Smith (2008) to investigate the relation between performance and expense ratios of 1,779 domestic, actively managed retail equity funds.
- They concluded that superior performance, on average, occurs among large funds with low expense ratios, low trading activity and no or low front-end loads.

- Agapova (2011) found that cash flow volatility is positively and negatively related as far as investment and opinions related to investments in the families are concerned.
- Cao, Ghysels & Hatheway (2011) have investigated global funds and specialized domestic equity fund. They found that risk and return characteristics of these two groups of funds are significantly different from funds employing derivatives sparingly or not at all.

### Need for the Study:

The study reveals the influence of gender & education on risk orientation.

### Objective of the Study:

1. To study the comparison of mean number of preferences of investors for “(RLR) Risk Leads to Return” and “safety and risk are important determinants for good returns (SRR)” among all education group and sex of responder investors of mutual fund.
2. To study the multiple comparison of preferences of Mutual fund’s investors for RLR and SRR.

### Methodology:

Our questionnaire consists of total 45 questions out of which first 15 questions were focused to know the demographic characteristics of the investors. Next 10 questions were to find the risk orientation of the investor and rest of the questions were to find the other objectives of the study. The survey was conducted with a sample size of 256 investors of Gujarat. Here in this paper, we only discuss the effect of gender & education on the risk orientation. On the responses of the questionnaire, analyses have been carried out. We have used statistical tool t-test, ANOVA and Post Hoc test for this purpose.

**Hypothesis Testing:** Our study is focus on following null hypothesis

**H<sub>0</sub>:** Male and Female Mutual Funds investor’s preferences for “Risk Leads to Return (RLR)” is same.

**H<sub>0</sub>:** Male and Female Mutual Funds investor’s preferences for “safety and risk are important determinants for good returns (SRR)” is same.

**H<sub>0</sub>:** Mean number of preferences for “Risk Lead to Return (RLR)” is the same for all education group.

**H<sub>0</sub>:** Mean number of preferences of Mutual Fund’s investors for “safety and risk are important determinants for good returns (SRR)” is the same for all education group.

### Comparison for preferences of male and female investors for “Risk Lead to Return (RLR)”.

In this section, we analyzed investor’s preference of “Risk Leads to Return (RLR)” and “safety and risk are important determinants for good returns (SRR)” among different education group’s investors and male and female investors. Here 104 male and 152 female investors are include in the study. For this respondents were asked to give points, based on 5 point Likert scale namely strongly disagree, Disagree, Undecided, Agree, strongly Agree, giving 1,2,3,4 and 5.

We analyzed comparisons for male & female group investor’s preference of “Risk Leads to Return (RLR)” The T- Test is found more appropriate to do comparisons for Preferences of investors for RLR. Results are shown in Table-1.

Table 1

## Independent Samples T- Test of preferences of investors for” Risk Leads to Return”

Risk Leads to Return	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	3.565	.060	4.763	254	.000	.76265	.16014	.44729	1.07801
Equal variances not assumed			4.683	208.001	.000	.76265	.16287	.44156	1.08374

Source: computed data

Levene's Test checks whether the *population* variances of preferences of RLR for the male & female groups are all equal, which is a requirement for ANOVA. “Sig.” = 0.060 > .05. Hence Null Hypothesis that variances are equal is accepted. So, we further do T test.

From the above table 1 it is found that the t-value 4.763 and significant value (p-value) is 0.000. p-value is smaller than 0.05. This explains statically significant at 5% level and this indicates that Male and Female Preferences of Mutual fund investment for “Risk Leads to Return (RLR)” differ significantly.

### Comparison for Preferences of investors for “Risk Leads to Return (RLR)” among education group.

**H<sub>0</sub>:** Mean number of preferences for “Risk Lead to Return (RLR)” is the same for education group.

The one way ANOVA is found more appropriate to do Comparison for Preferences of investors for RLR. The one way ANOVA of preference of “Risk Leads to Return” of five education group investors are given in following Table 2.

Table-2

## ANOVA Test for Risk Leads to Return

Risk Leads to Return	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.580	4	.645	.374	.827
Within Groups	432.858	251	1.725		

Risk Leads to Return	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.580	4	.645	.374	.827
Within Groups	432.858	251	1.725		
Total	435.438	255			

Source: computed data

The preference of Risk leads to return (RLR) of investors dose not differed significantly among the five group of education F(4, 251) statistic (= .374 at 0.05 level of significance). The significant value .827 indicates does not differed significantly between education groups.

**Comparison for preferences of male and female investors for “safety and risk are important determinants for good returns”(SRR).**

**H0:** Mean number of preferences of female and male investors for “SRR” is same.

Comparison for Preferences of male & female investors for SRR is done using **Independent t- Test** . The results are shown in table-3

**Table-3**

**Independent Samples Test of male and female investor’s preferences of “safety and risk are important determinants for good returns” (SRR)**

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Difference	
									Lower	Upper
“Safety and risk are important determinants for	Equal variances assumed	1.081	.300	1.786	254	.075	.27986	.15667	-.02869	.58840

good returns” (SRR)	Equal variances not assumed									
			1.758	208.783	.080	.27986	.15919	-.03398	.59369	

Source: computed data

Levene’s Test checks whether the population variances of preferences of SRR for the male & female groups are all equal, which is a requirement for ANOVA. “Sig.” = 0.300 > .05. Hence Null Hypothesis that variances are equal is accepted. So, we further do T test. From the above table-3 it is found that the t-value 1.786 and significant value (p-value) is .075. p-value is greater than 0.05. This explains statically no significant at 5% level and this indicates that Male and Female Preferences of Mutual fund investment for “safety and risk are important determinants for good returns” (SRR) does not differ significantly.

#### **Comparison for Preferences of investors for “safety and risk are important determinants for good returns(SRR)” among education group.**

**H<sub>0</sub>:** Mean number of preferences for “SRR” is the same for education group.

The one way ANOVA is found more appropriate to do Comparison for Preferences of investors for SRR. The one way ANOVA of preference of “safety and risk are important determinants for good returns(SRR)” of five education group investors are given in following Table 4

**Table-4: ANOVA for preference of “Safety and risk are important determinants for good returns” (SRR)**

Source of Variation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	140.740	4	35.185	35.454	.000
Within Groups	249.099	251	.992		
Total	389.840	255			

Source: computed data

The preference of SRR of investors dose not differed significantly among the five group of education F(4, 251) statistic (= 35.454 at 0.05 level of significance). The significant value .000 indicates significant difference between education groups. To detect which of the five education group’s preference of SRR mean scores differed significantly from one another; the Tukey HSD post hoc test was applied for the analysis (Table 5).

#### **Multiple Comparison for Preferences of investors for “safety and risk are important determinants for good returns (SRR)” among education group.**

**H<sub>0</sub>:** Mean number of preferences for “SRR” is the same for all education groups.

In this section ,we analyzed multiple comparison for five education group investor’s preference of “safety and risk are important determinants for good returns(SRR)”. The Tukey Post Hoc Test is found more

appropriate to do multiple comparisons for Preferences of investors for SRR. The Tukey Post Hoc Test of preference of “SRR” of five education group investors are given in following Table 5

**Table-5**

**Multiple Comparisons of preferences of “safety and risk are important determinants for good returns(SRR)” among education group of respondent using Tukey Post Hoc Test**

(I) Education category	(J) Education category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.49020*	.17830	.050	-.9801	-.0003
	3	-.29111	.21081	.640	-.8704	.2881
	4	-1.58976*	.21615	.000	-2.1837	-.9958
	5	-2.38909*	.26248	.000	-3.1103	-1.6679
2	1	.49020*	.17830	.050	.0003	.9801
	3	.19909	.18474	.818	-.3085	.7067
	4	-1.09955*	.19082	.000	-1.6239	-.5752
	5	-1.89889*	.24204	.000	-2.5639	-1.2338
3	1	.29111	.21081	.640	-.2881	.8704
	2	-.19909	.18474	.818	-.7067	.3085
	4	-1.29864*	.22150	.000	-1.9073	-.6900
	5	-2.09798*	.26689	.000	-2.8313	-1.3646
4	1	1.58976*	.21615	.000	.9958	2.1837
	2	1.09955*	.19082	.000	.5752	1.6239
	3	1.29864*	.22150	.000	.6900	1.9073
	5	-.79933*	.27114	.029	-1.5443	-.0543
5	1	2.38909*	.26248	.000	1.6679	3.1103
	2	1.89889*	.24204	.000	1.2338	2.5639
	3	2.09798*	.26689	.000	1.3646	2.8313
	4	.79933*	.27114	.029	.0543	1.5443

\*. The mean difference is significant at the 0.05 level.

Source: computed data

1= HS dropout, 2= HS grad, 3=Some College, 4= College grad, 5= Degree +

It is found that the sig. values for Preferences of (SRR)of education group 1 &group 4 is zero. All sig values those are zero indicates significantly difference between corresponding means.

#### Findings:

- By the help of T-test we find that Male and Female investor’s Preferences of Mutual fund investment for “Risk Leads to Return (RLR)” differ significantly.
- Independent two Samples t test reveals that Male and Female Preferences of Mutual fund investment for “safety and risk are important determinants for good returns” (SRR) does not differ significantly.

- Levene's Test reveals that the *population* variances of preferences of SRR for the male & female groups are all equal.
- The one way ANOVA reveals that the preference of (SRR) of investors differed significantly among the five group of education at 0.05 level of significance.
- The Tukey Post Hoc Test reveals that The mean preference of SRR of investors of HS drop out education group differed significantly from college grad & Degree +education groups at 5% significant level.
- The mean preference of SRR of investors of HS grade education group differed significantly from college grad & Degree +education groups at 5% significant level.
- The mean preference of SRR of investors of some college education group differed significantly from college grad & Degree +education groups at 5% significant level.
- The mean preference of SRR of investors of college grade education group differed significantly from HS dropout, HS grad, some college & Degree +education groups at 5% significant level.
- The mean preference of SRR of investors of Degree + education group differed significantly from HS dropout, HS grad, some college & college grade education groups at 5% significant level

#### Conclusion:

The present study looks at the perception level of the investors towards investment in mutual funds. The mutual fund industry today needs to develop products to fulfill customer needs and their perception. In the recent study it was found that gender & education still plays a vital role where safety in investments and risk orientation are concerned generally it is considered that women are more risk averse as compared to males.

#### References:

- Agapova, Anna, (2011) "The Role of Money Market Mutual Funds in Mutual Fund Families", Journal of Applied Finance, Vol. 21, Issue 1, pp. 87-102,
- Badrinath, S.G & Gubellini, S, July (2011) "On the characteristics and performance of long-short, market-neutral and bear mutual funds" Journal of Banking & Finance, Vol. 35 Issue 7, p1762-1776
- Giridhari Mohanta & Dr. Sathya Swaroop Debasish (2011) "A Study on Investment Preferences among Urban Investors in Orissa" Prerna Journal of Management Thought and Practice, ISSN: 0974-908X volume: 3 Issue: 1 March 2011, pp 1-9
- Cao, Charles; Ghysels, Eric & Hatheway, Frank, July (2011) "Derivatives do affect mutual fund returns: Evidence from the financial crisis of 1998", Journal of Futures Markets, Vol. 31 Issue 7, pp. 629-658
- Aman Srivastava (2007). An Analysis of Behaviour of Investors in India, ICFAI Journal of Behavioural Finance, June, Vol. 4, No. 2, pp.43-52.
- Black, A. et. Al. 2001. US Stock price and macro economics fundamentals. Aberdeen Working Papers, 1-3.
- Cao, Charles; Ghysels, Eric & Hatheway, Frank, July (2011) "Derivatives do affect mutual fund returns: Evidence from the financial crisis of 1998", Journal of Futures Markets, Vol. 31 Issue 7, pp. 629-658.