

A STUDY ON PERFORMANCE EVALUATION OF MUTUAL FUND SCHEMES AND RISK PERCEPTION OF INVESTORS

Nittan Arora¹, Dr. Jasdeep K Dhami², Dr. Sonia Chawla³

¹Research Scholar, Department of Management, IKGPTU

²Professor & Director, Department of Management, CTIMIT, Jalandhar

³Associate Professor, Department of Hum. & Management, NIT, Jalandhar

ABSTRACT

People generally want good return from investments but feeling unsecure while investing their money in the stock market. Most of the investors don't have skills, time and knowledge to manage their money even they can't predict the movement of stock market. Investment in one company is always risky so need to go for diversification i.e. investment in different companies of different sectors at the same time. Diversification is one of tool to reduce risk. Mutual Fund is one of the good option for investment in such cases. Mutual funds also carry some sort of risks but it is diversified by expert fund managers and professionals by investing funds in different companies. The Present study Seeks to evaluate the perception and Performance of mutual funds in India. It tries to evaluate the performance of different schemes of mutual funds and association of demographic profile with Risk perception of the investors. 274 investors contact from majha region to know their perception about mutual funds. UTI Hybrid Equity Fund rank 1st and SBI Equity Hybrid Fund rank 6th by Sharpe ratio. Income and occupation significantly associated whereas gender, age & education are not associated.

Keywords: Association, Investors, Mutual funds, Perception, Risk-Return

I. INTRODUCTION

Investment means commitment of money for generating income or profit in future. It includes surplus of money that people or an investor sacrificed today for the generation of future income. It may be of fixed or variable nature. Fixed investment is like bonds, fixed deposits etc. and variable investment includes buying of equity shares. So to gain something in future, people used to invest in various kinds of investment for long term or short term. There are Various kinds of investment includes share market, debentures or bonds, money market instruments, mutual funds, life insurance, real estate, precious objects, derivatives, non-marketable securities. Each kind of investment has its different features like terms of risk, return, term etc. Mutual funds are professionally managed funds by an expert. It

offers us diversification of risk. In this type of investment, people collectively buy and sell stocks through a single hand.

Advantages of Investing in Mutual Funds

Professional Management, Liquidity, Diversification, Safety, Low Cost, Transparency, Choice of schemes, Flexibility, Return Potential

According to Securities and Exchange Board of India (SEBI) Regulations 1996, “Mutual Fund means a fund established in the form of a trust to raise money through the sale of its units to the public or a section of the public under one or more schemes for investing in securities, including money market instruments.”

History of mutual fund in India

Mutual fund Industry Started in India with the initiative of the Government of India and Reserve Bank of India with the formation of Unit Trust of India in 1963. Mutual fund industry has observed four phases till now-

First Phase (1964-1987)

In 1963 Unit Trust of India (UTI) was established by an act of parliament and functioned under RBI (Reserve Bank of India). In 1978, administrative control was shifted from RBI to Industrial Development Bank of India (IDBI).

Second Phase (1987-1993, Public Sector Funds Entry)

In 1987 non-UTI, public sector mutual funds came into existence by Public sector banks, Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC) after the permission of Government of India. First non-UTI mutual fund was the SBI mutual fund (June 1987).

Third Phase (1993-2003, Entry of Private Sector Funds)

With the introduction of private sector funds in 1993, a new era was started and investors got a wide range of options in case of mutual fund schemes.. Kothari Pioneer (now merged with Franklin Templeton) was the first private sector mutual fund registered in July 1993.

Fourth Phase (since February 2003)

In February 2003, the UTI act was repealed and bifurcated into 2 entities UTI mutual fund and specified undertaking of the Unit Trust of India. The specified undertaking of UTI comprised of 64 schemes and assured return scheme and functioned under Government of India. Indian mutual fund industry has witnessed impressive growth with their number of schemes increased from 1 in 1964 to 2000 in 2019, with 42 players i.e. mutual fund companies in the market. The total AUM had also increased from Rs. 24.67 crore in March 1965 to Rs. 24,78,757 crore in March, 2019.

II. REVIEW OF LITERATURE

Sharpe (1966) examined the average annual returns of 34 mutual funds for the period 1944 to 1963. He tried to predict the future performance of the funds on the basis of past performance and ranked the sample of mutual funds over two periods i.e. from 1944-53 & 1954-63. Actual return and standard deviation was applied to predict the performance of funds. Sharpe found a significant average degree of positive relationship between the rank of funds as $r = .360$ and direct relation between risk & return. Good performance of the fund was based upon fewer expenses ratio but not upon the fund size. Funds kept relatively constant risk level. Average reward to variability ratio of the sample was .633 which was less than from Dow Jones Industrial Average (DJIA) as .667. Sharpe developed a composite measure of risk and returns as the reward to variability which defines higher the ratio, higher the performance.

Symbolically:

$$St = (AR_{pt} - R_f) / \sigma_t$$

AR_{pt} = average return on portfolio t.

R_f = riskless rate of interest/return

σ_t = Standard deviation of return on portfolio t

Singh and Chander (2004) studied the perception and withdrawal reasons of investors towards mutual funds. Convenience and purposive sampling techniques were applied to select the respondents. Pre-testing was done to structure the questionnaire properly. 400 respondents were contacted through emails and questionnaire sent to them. Out of 400 questionnaires, 260 were found suitable for analysis. Weighted average score and factors analysis techniques were applied for analysis. Most of the salaried and professionals of 20-35 year of age had the same perception. Factor analysis converted 14 statements into 5 factors only. Study concluded that 106 respondents were not interested in continuing their investment in mutual funds. Uncontrollability by SEBI and lesser return than expectations were the reasons for discontinuity of investment.

Parihar et al; (2009) studied the impact of demographic variables on investor's attitude and rank the factors for selection of mutual funds. The questionnaire was used to collect the data from 200 respondents of Agra region with judgmental sampling technique. Hypothesis established that demographic factors and attitude towards mutual funds were independent to each other. Chi-Square and weighted average technique was used to analyse the data. Age, gender and income had the association with an attitude of investors towards mutual funds but education & occupation had no such association. Return ranked 1st and transparency ranked 5th as factors responsible for investment in mutual funds. 57 respondents had a positive attitude, 95 had neutral and 48 had a negative attitude towards mutual funds.

Pandey (2011) analysed investor behaviour, investment pattern and factors affecting their periodic investment. Convenience sampling technique was applied to get the response from 50 investors through structured questionnaire. Hypothesis testing was done and accepted in both the cases i.e. investors did not go for periodic investment and high saving potential did not invest much in mutual funds. Study concluded that investors were ignorant regarding mutual funds so there was a need to change the mindset of investors. Objectives and time constraint must be asked from investors while making investment plan or decision by financial advisors.

Jain and Rawal (2012) studied the preference, pattern and factors affecting the selection of investment. Descriptive research design was used. Convenience sampling technique was applied to collect the data from 123 respondents of Delhi and Gurgaon with a pretested questionnaire, out of which 90 were selected for further study. Hypothesis testing was done to know the association/relation between preference of financial Instrument, mutual fund schemes with age, gender and annual savings respectively. It was found that men were more interested in real estate investment and women were in mutual funds. Growth schemes in the age category of 20-30 and tax savings schemes in above 50 age category were more preferred for investment. Chi-square showed age, gender and saving had an association with preferences towards the financial instrument. In the case of mutual fund schemes, age and saving had an association but gender had no association. Factor analysis extracted 4 factors from 18 variables affected the choice of schemes.

Bhuvaneswari (2014) evaluated investor's perception, performance and consistency of Equity/Tax saving mutual funds. In this study, the hypothesis was established as an opinion of the respondents towards grievance handling and performance of mutual fund was independent of age & experience. Descriptive research design and Convenient (Purposive) sampling technique were used. 120 respondents had been taken as sample size. Primary data collected with the help of a structured questionnaire. Simple percentage analysis, chi-square test & rank correlation were used for data analysis and interpretation. Study concluded that liquidity, Rate of Return and market share were the parameters that govern the investor perception towards equity/Tax saving Mutual funds.

Karthikeyan and Preetha (2014) studied the factors that guide the choice of investment, awareness level, Perception, saving behaviour of the investors towards mutual funds. Descriptive research design was applied and Convenience sampling technique used to collect the data from 126 respondents with pre tested structured questionnaire. Percentage & Correlation were used to find out the degree of relationship. Chi-Square used to find out association between variables and one way ANOVA used to analysis the significant difference between groups and within groups. Findings of the study state that the majority of respondents invested 11-20% of their annual Income in mutual funds and that investment was done majorly due to Tax benefits. The study found no association between the risk in mutual funds and future investments. There was positive and significant relation between percentage

investment in mutual funds and annual income of respondent but level of satisfaction had no significance with future investment chances.

Jatana and Barodawala (2015) attempted to identify the factors affecting the choice of investors towards mutual funds investment. The study was based on survey method. Data was collected through interview schedule from the sample of 1000 respondents by convenience sampling technique from various parts of the country. The reliability and internal consistency were tested by Cronbach Alpha Coefficient. Bartlett's test of sphericity was used for analysing the correlation matrix. Factor analysis converted 20 variables into 5 factors-monetary returns, regulations, customer support, promotional measures and market risk. Monetary return was the important factor affecting the investment decisions of the investors in relation to mutual funds in India.

Acharya (2016) studied the influence of demographic factors, like age, education, mentality, gender on investment behaviour of the investors. Hypothesis established as Investment and education were independent to each other. The sample size was 256 respondents from the Gujarat state. One way ANOVA (5% level of significance) was applied for analysis the data. The study revealed that education group with graduation & higher had highest average investment in the mutual funds. Youngsters had keen interest to invest in mutual funds.

OBJECTIVES OF THE STUDY

- To assess the association of demographic profile and Risk perception of the investors.
- To examine and compare the performance of the selected public and private sector mutual fund's scheme by using Sharpe ratio.

RESEARCH METHODOLOGY

Research Design- In this study, descriptive research design is applied.

Sampling Design- Sampling design describes the way of selecting the sample for the study.

(A) Population-Population includes mutual fund investors of Majha region of Punjab state.

(B) Sampling Technique- Multistage sampling technique applied to collect the primary data. **Sample Size-**

The sample size of the study is 200. 274 investors will be asked to fill up the questionnaires to be sent through emails or by personal investigation. Out of 274 respondents 200 investing in mutual funds.

(C) Questionnaire design- A structured questionnaire was prepared and distributed among the selected mutual fund investors of the Punjab state to study their behaviour towards mutual fund investment.

(D) Tools of analysis - The data analyzed with the help of statistical tools and techniques such as percentages, Chi- square test and Sharpe Ratio.

$$\text{Chi-square } (\chi^2) = \frac{\sum (\text{Observed frequency} - \text{Expected Frequency})^2}{\text{Expected Frequency}}$$

Area of the study- The study is limited to the Punjab state of India

Sources of data

For the purpose of the study, both Primary and secondary data is used.

DATA ANALYSIS AND INTERPRETAION

Table 1.1

Variables	Factors	Frequency	Percentage
Gender	Female	64	32.00
	Male	136	68.00
	Total	200	100
Age	Below 30	87	43.50
	30-40	58	29.00
	40-50	23	11.50
	50-60	19	9.50
	Above 60	13	6.50
	Total	200	100
Education Level	Secondary/High School	21	10.50
	Graduation	97	48.50
	Post Graduation	67	33.50
	Ph.D	9	4.50
	Others	6	3.00
	Total	200	100
Annual Income	Below Rs. 2 lakh	24	12.00
	2-5 lakh	107	53.50
	5-10 lakh	57	28.50
	Above 10 Lakh	12	6.00
	Total	200	100
Occupation	Govt. Employee	31	15.50
	Professionals	23	11.50
	Private Employee	81	40.50
	Businessman	56	28.00
	Others	9	4.50
	Total	200	100
Risk Associated	Low	17	8.50
	Moderate Low	23	11.50
	Moderate	87	43.50
	Moderate High	43	21.50
	High	30	15.00

	Total	200	100
Investment Pattern	Monthly (SIP)	93	46.50
	Quarterly	19	9.50
	Once in Six Months	22	11.00
	Once in a Year	46	23.00
	Very Rare	20	10.00
	Total	200	100
Risk Taking ability	Risk Averter	51	25.50
	Moderate Risk Taker	92	46.00
	Risk Taker	57	28.50
	Total	200	100

Interpretation: out of 200 respondents, majority 68% were male and the rest 32% were female. As shown in table, 43.5% belong to age group of less than 30 years, 29% of respondents belong to age group of 30-40 years, 11.5% belong to age group of 40-50 years, 9% belong to age group of 50-60 and remaining are of 60 years and above age. It can be observed that around 10.5 % of respondents are secondary/high school level, 48.5% are graduates followed by 33.5 % postgraduates, 4.5% respondents are PhDs and remaining 3% are having other educational qualification. Above table shows that 12% of respondents have income less than Rs. 2 lacs per year. About 53.5% of respondents have income between Rs. 2 lacs to Rs. 5 lacs per year, 28.5% of the respondents have income of Rs. 5 lacs to Rs. 10 lacs per year and very few, around 6% of respondents have earning more than Rs. 10 lacs per year. Above table states that among selected respondents 16.81% are Govt. employees, 39.82% are employed in private service, 23.89% are businessman, about 14.16% are professionals and remaining have other occupations

1.2 Association of Risk Perception and Demographic Profile of the investors

H₀₁: There is no significant association between demographic profile and risk perception

H₁₁: There is significant association between demographic profile and risk perception

Table showing Association of Demographic Profile of the investors with Risk Perception

Demographic Factor	Factor	Hypothesis Frame	Chi-Square Value	p value	Sig. Level		Decision	
Gender	Risk	H0-No significant Association between Gender and Risk Perception	5.679	0.224	0.05	P>T	Accept Null	No significant Association
Age	Risk	H0-No significant Association between Age and Risk Perception	22.043	0.142	0.05	P>T	Accept Null	No significant Association
Education	Risk	H0-No significant Association between Education and Risk Perception	12.993	0.673	0.05	P>T	Accept Null	No significant Association
Income	Risk	H0-No significant Association between Income and Risk Perception	36.501	0	0.05	P<T	Reject Null	Significant Association
Occupation	Risk	H0-No significant Association between Occupation and Risk Perception	29.751	0.019	0.05	P<T	Reject Null	Significant Association

Interpretation- The above table shows that there is no association between risk perception of investors and demographic factors, viz. gender, age and education where p-value is higher than 0.05 in all three cases. It can be inferred that, there is no significant association of criteria of risk perception and gender, age and education except two criteria Income and occupation, where (P-value= 0.224, .142, .673 > 0.05 respectively So, null hypothesis is not rejected in these three cases specified above.

From table 1.2, it can be inferred that demographic factors, viz. Income and Occupation are significantly associated with criteria used to judge the Risk perception of mutual funds investors for investment decision. As P values in all cases are less than significant level (p-values< 0.05), this led to rejection of null hypothesis. This indicates that Income and occupation of respondents have significant effect on criteria used to judge the risk perception of the investors.

Performance evaluation of Mutual Fund Schemes by Using Sharpe Ratio:

Sharpe Ratio: The Sharpe ratio helps to study the risk-adjusted performance of a mutual fund scheme. Technically, the ratio is defined as the excess returns of a scheme (over a risk-free rate) divided by the standard deviation of the scheme's returns for a given period.

Through investment in scheme, a risk is taken and return earned. Sharpe ratio uses standard deviation as a measure of risk. So higher the Sharpe ratio better the scheme is considered or vice versa.

Sharpe Ratio of Various Open End Mutual Fund Schemes

Sr. No	Scheme	Sharpe Ratio	Ranking
1	HDFC Balanced Fund	0.034	4
2	ICICI Balanced Advantage Fund	0.011	5
3	Reliance Balanced Advantage Fund	0.321	2
4	UTI Hybrid Equity Fund	0.407	1
5	SBI Equity Hybrid Fund	-0.233	6
6	Canara Robeco Equity Hybrid Fund	0.123	3

Interpretation: The table shows the performance of open end schemes by using Sharpe ratio. UTI Hybrid Equity funds rank 1st where as SBI Equity Hybrid fund rank 6th by Sharpe ratio. Reliance Balanced advantage fund rank 2nd, Canara robeco rank 3rd and ICICI rank 5th. As compared a market index UTI is earning good return where as reliance fund getting better returns. But overall all the funds performed well with respect to its respective companies.

Sharpe Ratio of Various Close End Mutual Fund Schemes

Sr. No	Schemes	Sharpe Ratio	Ranking
1	HDFC Annual Interval Fund	-1.5301	6
2	ICICI Prudential Capital Protection Orientation	-0.2713	4
3	Reliance Dual Advantage Fixed Tenure	1.41177	1
4	UTI Capital Protection Orientation	-0.25	3
5	SBI Dual Advantage Fund	-0.223	2
6	Canara Robeco CPO Fund	-0.7753	5

Interpretation: The table reflects the Sharpe's value for the selected close ended schemes of selected companies during 2008 to 2018. Most of Schemes have shows negative sharpe value which depicts the poor performance of close end schemes in the market. As per Sharpe, only Reliance Dual Advantage Fixed Tenure fund had positive values which rank 1st, SBI Dual Advantage fund rank second where as HDFC Annual Interval fund rank 6th. By comparing it with market return all the funds are giving low returns except Reliance fund schemes.

FINDINGS

- Majority of respondents were males, age group less than 30 category, graduate qualification, income 2-5 lacs annually and private employees.
- Income and Occupation significantly associated with Risk perception of mutual funds investors for investment decision whereas Gender, Age & Education are not associated.
- UTI Hybrid Equity Fund rank 1st and SBI Equity Hybrid Fund rank 6th by Sharpe ratio.
- Reliance Dual Advantage Fixed Tenure fund had positive values which rank 1st where as HDFC Annual Interval fund rank 6th in case of close ended schemes.

CONCLUSION

Mutual fund has emerged as one of the important class of financial intermediaries which cater to the needs of the potential investors. From this research it is quite clear that the balanced and income mutual fund schemes have lot of potential to give the high returns but the investor should be aware about schemes those are really operating and give high returns. The investors have the options to invest in open end as well as in close end schemes by considering the objective and time duration of the investment. This research is helpful to analyze the public and private sector mutual fund Company's performance by using Sharpe ratio. Overall all selected mutual fund companies have positive returns during 2008 to 2018. UTI and reliance perform well and SBI and ICICI funds have low level of risk compared to HDFC and Canara Robeco funds.

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