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Performance Analysis of Indian Mutual Fund Schemes - A Comparative Study

Isha Roy Choudhary[1], Prof. Paheli Nigam[2], Prof. Ahmed Sayyed[3]
[1]Student, [2,3]Guide, Sri Balaji University, Pune

Abstract: Purpose – The purpose of this study is to analyse the performance of selected debt mutual fund schemes according to the terms of risk and return relationship, using simple statistical tools which can be easily understood by the investors.
Originality – This study tells us about the annual returns of selected two debt mutual fund schemes of 4 companies which will help the investor to understand which particular company is best in the scheme selected for investment. Also, it will guide them to invest in these mutual fund schemes taking into consideration the average maturity, yield to maturity factors.
Research Design - This descriptive research analysis has been carried out on the basis of secondary data where the facts were already available and on the basis of these facts the analysis has been done. The data has been collected from the annual reports of the company and internet. The tools and parameters used are total returns, average maturity, yield to maturity and Sharpe's ratio. Using all these tools a comparison has been shown amongst all the debt schemes of the company selected which will help the investors to select better scheme as per risk and return relationship.
Findings – Taking into consideration different parameters it has been showed that which scheme is better under which parameter so that investors can understand the risk adjusted performance of the scheme which will help them to take the investment decision.
Limitations – The performance analysis of selected debt mutual fund schemes is done only for past 3 years due to time constraint. The study is done with the help of secondary data obtained from the annual reports of the companies. Only the debt schemes of the companies have been taken into account.
Keywords – Rate of return, mutual funds, volatility, risk-return, financial performance

I. INTRODUCTION

Mutual fund is an assurance that acts as an investment vehicle, which pools the savings of various investors to invest in financial instruments like stocks, bonds, debentures, etc. enabling investors to achieve their financial goals. SEBI (Mutual Funds) Regulation 1993, defines Mutual Fund as "Mutual Fund means a fund established in a shape of a trust by a sponsor to boost money by the trustee through the sale of units to the general public under one or more schemes for investing in securities in accordance with these regulations". The relation between risk-return determines the performance of a mutual fund, as risk is correspondent with return, providing maximum return on the investment made within the suitable associated risk level helps in segregating the better performers from the laggards.

The period over which investors invest in an investment option is referred to as the investment horizon. This investment horizon decides their desired exposure to risk and income needs, all of which contribute towards the choice of securities. Investors of Mutual Funds need not to worry much about the return as mutual funds are managed professionally by well trained and experienced Managers. The investments in mutual funds are well differentiated and so the investors generally do not run the risk of keeping all the eggs in one basket. The other plus points of investment in mutual funds are portfolio diversification, low risk, low transaction cost, liquidity, and choice of schemes, transparency and safety. Mutual funds are now tailor made to suit the precise needs of the investors. There are Many asset management companies are running in India so, proper evaluation of various funds performance and their comparison with other funds helps retail investors for making investment decisions in a right way.

A. Research Objective

1) To analyse and compare the performance of selected two debt mutual fund schemes considering the companies - ICICI, Aditya Birla SunLife, State Bank of India, HDFC.
2) To evaluate the performance of Indian mutual fund schemes in terms of risk-return relationship.

B. Research Question

1) Which of the selected scheme gives better returns among each of the companies?
2) In which of the selected scheme an investor should invest according to investment horizon?

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II. LITERATURE REVIEW

A. Mutual Funds

Adhav, M. S. M., & Chauhan, P. M. (2015). Evaluated that Equity, Debt and Hybrid mutual funds have performed better than their benchmark and generated better returns for the investors of equity mutual funds during 2009-10 to 2013-14.

Prajapati, K. P., & Patel, M. K. (2012). Evaluated the performance of Indian mutual funds is carried out through relative performance index, risk-return analysis, Treynor's ratio, Sharp's ratio. The results of performance measures suggest that most of the mutual fund have given positive return during 2007 to 2011.

Sapar, N. R., & Madava, R. (2003). Evaluated the performance of Indian mutual funds in a bear market is carried out through relative performance index, risk-return analysis, Treynor's ratio, Sharp's ratio, Jensen's measure, and Fama's measure. They concluded that most of the mutual fund schemes in the sample of 58 were able to satisfy investor's expectations by giving excess returns over expected returns based on both premium for systematic risk and total risk.

Sathish, P., & Srinivasan, K. S. (2016). Evaluated by using statistical tools like average rate of return of funds, standard deviation, beta, correlation, regression analysis and risk adjusted techniques are used by using Sharpe ratio, Treynor ratio and Jensen ratio. Benchmark index has also done for the purpose of analysis.

Shruthi, M. P., & Manjunatha, T. (2019). Compared 8 equity mutual fund schemes daily NAV from the period from 2014 to 2018 and concluded that schemes with its benchmark is performing better.

B. Rate of Return

Annapoorna, M. S., & Gupta, P. K. (2013). Analysed the returns of mutual fund schemes and compared its average returns with SBI domestic term deposit rates. They showed that mean return on hybrid mutual fund schemes has shown volatility and equity mutual funds gives higher returns.

Bahl, D. S., & Rani, M. (2012). investigated the performance of 29 open-ended, growth-oriented equity schemes for the period from April 2005 to March 2011 (six years) of transition economy. the Sharpe ratio was positive for all schemes which showed that funds were providing returns greater than risk free rate. Results of Jensen measure revealed that 19 out of 29 (65.52 percent) schemes were showed positive alpha which indicated superior performance of the schemes.

Bhagyasree, N., & Kishori, B. (2016). Investigated the performance of open-ended, growth-oriented equity schemes for the period from April 2011 to March 2015 of transition economy. In the study, the Sharpe ratio was positive for all schemes which showed that funds were providing returns greater than risk free rate. Results of Jensen measure revealed that 19 out of 30 schemes were showed positive alpha which indicated superior performance of the schemes.

Lakshmi, N., Deo, M., & Murugesan, B. (2008). Growth schemes introduced in the year 1993 has been studied. Sharpe, Treynor, Jensen and Fama's measures reveals that all the 7 schemes showed negative risk premium, scheme's performance was in line with that of market performance, existence of a high degree of positive correlation in weekly time lag while the impact gets reduced as the time lag increases.

Santhi, N. S., & Balanaga Gurunathan, K. (2012). Evaluated the performance of 32 growth-oriented open-ended Equity Linked Savings Schemes (ELSS) of tax-saving mutual funds in India. Performance has been analysed by comparing the monthly returns of the funds with that of Indian stock market benchmark S& P CNX NIFTY. all the funds showed negative returns during 2008-09 and it was higher than that of the stock market index. The average return of most of the schemes is higher and the average risk is lower than the benchmark S& P CNX NIFTY.

Zafar, S. M., Chaubey, D. S., & Ali, S. (2009). Evaluated the performance of mutual funds assessed and ranked after analysing the NAV and their respective returns so as to measure investment avenues. For the purpose 13 most preferred public and private sector equity diversified growth schemes over a period of one year, 2007-08 have been taken tough judgment sampling and Yield on 10 yr. The study produced sufficient information of risk and return associated with fund and their rank depending on their performance which will ultimately help investors to choose the best mutual fund generating maximum return with minimum risk.

C. Risk-Return

Ayaluru, M. P. (2016). Analysed the top schemes offered by reliance mutual funds and made a comparative analysis of risk and return offered by these mutual funds. They concluded by saying that reliance small cap fund gives moderate returns with moderate risk whereas reliance bank fund gives high returns with high risk.

Choudhary, V., & Chawla, P. S. (2014). Analysed the performance of the growth-oriented equity diversified schemes on the basis of return and risk evaluation. The analysis was achieved by assessing various financial tests like Average Return, Sharpe Ratio, Treynor Ratio, Standard Deviation, Beta and Coefficient of Determination. The analysis depicts that majority of funds selected for study have outperformed under Sharpe Ratio as well as Treynor Ratio.

Duggimpudi, R., Abdou, H. A. H., & Zaki, M. (2010). Analysed the performance of equity diversified mutual funds and the relationship between risk and return of these funds based on total risk and systematic risk.

Ojha, S. C. (2017). Evaluated the performance of Indian equity diversified mutual funds and analysed the relationship between risk and return of these funds, based on total risk and systematic risk.

Pandow, B. A., & Butt, K. A. (2017). Concluded that mutual funds are expected to perform better than the market, therefore calls for a continuous evaluation of the performance of funds. The goal was to identify superior fund managers is of great interest due to the challenges it provides to the efficient market hypothesis. The study looked into the risk and return analysis of the selected mutual funds.

Puri, H. (2010). Analysed that HDFC (Growth) Mutual fund being the best performer and JM Financial (Dividend) Mutual fund showing poor below-average performance when measured against the risk-return relationship models.

Raju, P., & Rao, K. M. (2011). Evaluated the performance of selected mutual fund schemes in the framework of risk and return during the period 2008 to 2010. The results indicate failure of many selected schemes in infrastructure schemes and Index schemes outperforming the market, low average beta, disproportionate unsystematic risk, miss-match of the risk and return relationship in some schemes.

Selvam, M., & Palanisamy, B. (2011). The study found out that out of 35 sample schemes, 11 showed significant t–values and all other 24 sample schemes did not prove significant relationship between the risk and return. According to t-alpha values, majority (35) of the sample schemes' returns were not significantly different from their market returns and very few numbers of sample schemes' returns were significantly different from their market returns during the study period.

Siva, k., Rambabu, v., & scholar, p. (2019). Analysed the risk and return of selected mutual funds and which scheme is performing well in the market as market suffers from high volatility and risk. ICICI mutual funds is into negative whereas the HDFC Mutual funds are performing well in the market.

Subha, M. V., & Bharathi, S. J. (2007). Analysed the risk-return relationships of the select open ended mutual fund schemes. They concluded that there is a mixed performance among the mutual fund schemes selected and it all works with the market conditions.

Volatility

Bantwa, A., & Bhuva, K. (2012). Evaluated the performance of selected 20 equity diversified schemes during the study period of June 2007 to May 2012. The study revealed that except one all the sampled schemes have performed better than market. Risk adjusted performance in terms of Sharpe and Treynor ratio showed that 55% of the fund schemes bear positive values. The findings also revealed that majority of the schemes were adequately diversified.

Kumar, J., & Adhikary, A. (2015). Examined the relationship between fund return and market return, it is observed that there is no linear relationship between fund return and market return.

Kumar, V. (2012). Examined the funds sensitivity to the market fluctuation in the terms of Beta and to appraise the performance of mutual funds with regard to risk-return adjustment.

Rani, G., & Hooda, V. S. (2017). Evaluated the performance of mutual fund schemes ranked one by CRISIL. To analysis the performance of selected funds' schemes, mean returns and their standard deviation were considered and then basic measures. Finally, Tata equity P/E fund is found to be good performer among the selected schemes during April 2016 to March 2017.

Tripathy, N. P. (2004). Examined the investment performance of Indian mutual funds in terms of six performance measures. The results indicate that the fund managers under study have not been successful in reaping returns in excess of the market or in ensuring an efficient diversification of Portfolio.

Financial Performance

Narayanasamy, R., & Rathnamani, V. (2013). Analysed financial performance of selected mutual fund schemes through the statistical parameters such as (alpha, beta, standard deviation, r-squared, Sharpe ratio). The findings of this research study will be helpful to investors for his future investment decisions.

Nimalathasan, B., & Gandhi, R. K. (2012). Analysed the financial performance of selected mutual fund schemes through the statistical parameters (Standard Deviation, Beta and Alpha) and ratio analysis (Sharpe Ratio, Treynor Ratio, Jenson Ratio, Information Ratio). The paper is helpful to know the performance of mutual fund schemes.

Shanmugham, D. (2011). Addressed the financial performance of mutual funds in the framework of risk – return dimensions. In order to achieve the objectives, set, investment performance measures, cluster analysis and correlation analysis were used.

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D. Research Gap

After going through various literature reviews, we can say that many reports on mutual funds have been made. Retail investors finds it difficult to understand performance measures like Treynor's, Jenson's. Very few research papers have made an attempt to calculate rate of returns of different mutual fund schemes which investors can understand. The performance of mutual funds keeps on changing based on the financial performance of the market.

III. RESEARCH METHODOLGY

This descriptive research analysis has been carried out on the basis of secondary data where the facts were already available and on the basis of these facts the analysis has been done. The data has been collected from the annual reports of the company and internet. The tools and parameters used are alpha, beta, average returns, Sharpe's ratio and standard deviation. Using all these tools a comparison has been shown amongst all the debt schemes of the company selected which will help the investors to select better scheme as per risk and return relationship.

A. Data Analysis

Table 1 Banking and PSU debt fund

	ICICI Prudential banking & PSU debt fund	Aditya Birla Sun banking &PSU debt fund	SBI banking & PSU debt fund	HDFC Banking and PSU Debt Fund
total returns	8.02%	8.99%	9.08%	8.86%
credit rating	AAA	AAA	AAA	AA
Average maturity	4.84	3.89	4.06	3.44
Sharpe's ratio	2.05	2.56	2.9	2
yield to maturity	6.03%	5.32%	5.67%	6.05%

1) *Findings*

a) *Total Returns:* Taking into consideration banking and PSU debt fund among all the four companies we can see that total returns of SBI banking & PSU debt fund is highest among all the companies.

b) *Credit Rating:* From the above table we can say that HDFC banking and PSU debt fund has the lowest credit rating as compared to other companies. Remaining companies are on the same rating i.e. AAA.

c) *Average Maturity:* Higher the average maturity higher the risk involved with the investment. So, in the above table we can see that HDFC banking and PSU debt fund has the lowest average maturity and contains less risk and most of the investors are in hunt of low risk and steady returns so this scheme can be preferred.

d) *Sharpe's Ratio:* Sharpe's ratio tells us the risk- adjusted performance of a particular scheme higher the ratio better is the risk and return relationship of a particular scheme. In the above table we can see that SBI banking and PSU debt fund has the highest Sharpe's ratio which tells that its risk association with returns is better when compared to other companies.

e) *Yield to Maturity:* High yield to maturity indicates higher returns as well as high risk. So, investors who wish to take high risk can invest in HDFC banking and PSU debt fund as it is giving YTM of 6.05% as it is giving comparatively high yield than other companies. Whereas if the investors those who want to take less risk then they can prefer Aditya Birla sun life banking and PSU debt fund.

B. Data Analysis

Table 2 Credit risk fund

	ICICI Prudential credit risk fund	Aditya Birla sun life credit risk fund	SBI credit risk fund	HDFC Credit Risk Debt Fund
total returns	8.76%	6.00%	7.43%	7.80%
credit rating	A	AA	AA	AA
Average maturity	2.41	2.7	2.65	3.07
Sharpe's ratio	2.92	0.73	1.64	1.46
yield to maturity	8.96	9.15	8.33	9.81

1) *Findings*

a) *Total Returns:* From the above table we can say that ICICI prudential credit risk fund has the highest total returns when compared to different credit risk fund of the companies which is 8.76%.

b) *Credit Rating:* When it comes to credit rating, we can say that ICICI prudential credit risk fund has the lowest credit rating than the other companies. Whereas other companies have same credit rating i.e. AA.

c) *Average Maturity:* When it comes to average maturity, we can say that ICICI prudential credit risk fund has the lowest average maturity and caries less risk as compared to other companies' funds.

d) *Sharpe's Ratio:* From the above table we can say that risk adjusted performance is better in ICICI prudential credit risk fund when compared to other companies. So, when compared to same schemes of other companies we can say that risk and return associated with this scheme is better than other companies' schemes.

e) *Yield to Maturity:* Higher yield to maturity of a scheme means higher is the return and higher is the risk. So, the investors who are ready to take high risk and wants better returns can invest in Aditya Birla sun life credit risk fund as it gives higher YTM when compared to other companies. Whereas when it comes to take less risk investors can prefer SBI credit risk fund.

IV. SUGGESTIONS

As this study is based on only debt schemes in the same way the performance of all types of schemes can be measured and compared. Various performance evaluation models also can be applied for the evaluation of different mutual fund performances. Nowadays people are mostly preferring low risk investment options so mutual fund companies should create more awareness about their funds which caters to individual objective.

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VI. CONCLUSION

This study concludes that mutual funds are the secure speculation tools. It mainly depends on the capital market performance. If the market performance is good it will give better returns and vice-versa. In the above study we have seen the best schemes according to the parameters and have suggested the investors about the funds according to the risk and return relationship. All the schemes considered under each company are debt schemes and have been analysed using different tools such as average maturity, yield to maturity, total returns and Sharpe's ratio which will help the investors to invest in a right debt scheme fund according to their convenience. The investments in mutual funds are associated with a lot of market risk and the investment decision should be taken carefully, as there is no guarantee of return as the market fluctuates daily. The study shows the comparison of different debt mutual fund schemes of the selected companies and the results based on its parameters.

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