

Performance Evaluation of Private and Public Sector Mutual Funds in India.

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Abstract

The Mutual funds industry is playing a major role in channelizing small savings and maximizing the returns to investor's right from its inception in 1963. Mutual fund pools the savings of a group of people and invests this money in stocks, bonds, and other securities. Mutual fund investment opportunities enables the investors to reduce risk and maximize returns. According to Association of Mutual Funds in India (AMFI) "a Mutual Fund is a trust that pools the savings of a number of investors who share a common financial goal and invest it in capital market instruments such as shares, debentures and other securities. The income earned and capital appreciation thus realised are shared by its unit holders in proportion to the number of units owned by them. Thus, it offers common man an opportunity to invest in a diversified and professionally managed basket of securities at a relatively low cost". India's mutual fund industry has grown at the rate of 12.5% annually on an average, according to a report by (AMFI) and Global Analytics firm CRISIL. Over the last decade, it is seen that there is a shift in investment pattern from real estate and gold to financial assets. The industry had 10 lakh Systematic Investment Plan (SIP) accounts each month on an average in 2018 with SIP collection on a monthly basis increasing to over 6,700 crore compared 4,950 crore in 2017. There are several schemes of Mutual funds available to the investors. The retail investors look for information regarding performance of schemes before investing in a particular scheme. This study is an attempt to assess whether the public and private sector mutual funds have similar risk and returns and assist the retail investors in decision making. In this study a sample of four companies each from public and private sector are randomly selected. The study analysed five mutual fund schemes from public sector and five schemes from private sector which are similar in nature. Mann-Whitney U test is used to analyse the data. The study found that private sector mutual funds performed comparatively better than public sector mutual funds.

Keywords: Mutual funds, performance evaluation, capital markets. Mann Whitney –U-test.

Introduction

In 1890, Mutual fund industry in the world was started in the US. The Unit Trust of India pioneered the mutual fund industry in 1963. With

the dawn of Private players in 1993; the MF industry grew by leaps and bounds. Within three years, the number of Asset Management Companies (AMCs) rose to 26. At present, we have 43 AMCs, number of schemes have increased from 59 in 1993 to almost 2,000 mutual fund schemes in 2018. The schemes include all open-ended, close-ended and interval schemes. Mutual Funds have grown as a popular investment vehicle during the last decade. According to AMFI reports, “The Asset Under Management (AUM) of the Indian MF Industry has grown from 4.17 trillion as on 31st March, 2009 to 23.80 trillion as on 31st March, 2019, more than 5½ fold increase in a span of 10 years”. The mutual funds in India has emerged as a strong financial intermediary and assist in bringing stability and efficiency in the financial system. The mutual funds increase liquidity in the capital and money market. They have been identified as one of the important factors pushing up market prices of securities. The direct lending by mutual funds to the corporate, has increased because SEBI guidelines allows companies to reserve 20% of public issues for Indian mutual funds. Mutual funds also enables the corporate sector to raise funds at much lesser costs and have enabled as alternative source of raising capital. According to Manish Mehta, Kotak Mahindra Asset Management Co.'s national head (sales and distribution alliances) “the factors that will drive the growth in 2019 include the untapped potential, rising investor awareness about mutual funds as an investment alternative”. The mutual fund industry is expecting robust growth as the sector is yet to tap its full potential. Indian mutual funds are thus playing a crucial developmental role in allocating resources in the emerging and developing market economy. Mutual Funds act as financial intermediaries between the providers and the users of money.

Literature Review

A vast gamut of research has been done on evaluation of Mutual funds. Researchers have analysed and appraised Standalone performance of mutual funds, selected mutual funds and few studies have also been made on comparing the public and private sector mutual fund schemes in India. Prajapati & Patel (2012) suggest that most of the mutual fund have given positive return during 2007 to 2011. Sharma (2013) analysed the perception of investors with regard to factors like liquidity, security, fees, quality, returns and tax benefits. Kanethia (2010) compared of various mutual fund schemes in India. The application of the Sharpe index made it feasible to measure performance and then the ranking of the funds. Ranking of the funds assist an investor to choose the funds and scheme and then decide their portfolio accordingly. The result of the study

shows that private mutual funds are more preferred than the public mutual funds. Agarwal & Patwa (2014) private sector funds are able to generate better returns than the public sector funds using Mann-Whitney U-Test. Pandow (2017) the industry is confronted with numerous challenges like low penetration ratio, similarity of products, low awareness level, lack of interest of retail investors and evolving nature of the industry. Sapar & Madava (2003) performance measures suggest 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. Fama & French (2008) found that mutual funds produce a portfolio close to the market portfolio but with high costs of active management that show up intact as lower returns. They have used Persistence tests and Bootstrap simulations for the study. Nitzsche Cuthbertson et.al (2006) found mutual funds are similar to those for equity mutual funds and hedge funds. Study suggests that investors should hold low cost index funds and avoid holding loss making funds. Bayesian approach is used for the study. Jayadev, (1996) determined that Master gain has performed better according to Jensen and Treynor measures but on the basis of Sharpe ratio it's performance is not upto the benchmark. Agrawal (2007) revealed that the performance is affected by the saving and investment habits, confidence and loyalty of the people. Tomer and Khan (2014) analysed the problems and prospects of mutual funds in India. The study says reduction on operational costs, skills and technology up gradation is required. Sathish and Srinivasan (2016) analysed value of beta of the schemes and found lower than one indicating that all the mutual funds are less risky and less volatile. Siva Kumar et al, (2010) in their study established that the private sector players hold the greater strength in resource mobilization. Arora (2015) assessed risk – adjusted performance of Indian mutual fund schemes during the bear period and the boom period and found that equity-oriented mutual fund schemes performed well during the bull phase. Santhi & Gurunathan (2012) found that all the tax-saving mutual funds are volatile, It is also observed that most of the schemes give higher return than the benchmark S&P CNX NIFTY. Vyas, et.al (2016), suggested that for investors the most important intrinsic fund quality is fund expense ratio and exit load. Panwar & Madhumathi (2006) there is a significant difference between public-sector sponsored mutual funds and private-sector sponsored mutual funds in terms of coefficient of variation (COV), excess standard deviation adjusted returns (SDAR), residual variance (RV). Rao (2006) Ratnaraju & Madhav (2016) Goyal (2015) opine that Equity Growth funds provide higher returns than that of Equity Dividend funds.

Data collection

The study is purely based on Secondary data. For the purpose of the study data is collected from website of Association of Mutual Funds in India (AMFI), www.mutualfundsindia.com, and Journals. The yearly returns of various schemes under study have been taken and then yearly average returns are used for further analysis. Mann-Whitney U test is used to analyse and interpret the data collected.

Limitations of the study

The study is restricted to only selected public and private-sector mutual funds company

The study analyses five schemes each of public and private sector mutual funds, hence the findings cannot be generalized

Objectives:

To analyse the performance of public and private sector mutual funds

To analyse whether there is any significant difference in the risk and average returns of public and private sector mutual funds.

Hypothesis

H01: There is no difference in returns of public and private sector mutual funds.

Ha1: There is difference in returns of public and private sector mutual funds.

H02: Risk is not the same in public and private sector mutual funds.

Ha2: Risk is the same in public and private sector mutual funds.

Research methodology

For the comparative analysis of mutual funds 4 companies

have been randomly selected from each sector and from each of these sectors 5 schemes of similar in nature has been considered. The study is done for a period of 5 years starting from 2014 to 2018. To calculate Average Returns Daily Net Asset Value of the mutual fund companies and Annual Average of these mutual fund companies was calculated. Then, using Average Returns, Standard Deviation was further calculated for the Average Returns. Standard Deviation and Average Returns are the two variables used for analysis. Generally, calculation of returns of funds is done after adjusting the Net Asset Values to dividends, capital gains, right and bonus issue. In the current study the schemes that are selected for both private and public sector are growth based, hence they do not have any of the above factors. Risk refers to the amount of variations in the returns of mutual funds during the given period. These fluctuations might be because of various general market movements which affect the market securities present in the portfolio of a fund. Mann-Whitney U Test is used to test the data collected.

Mann-Whitney U Test is a Rank Sum Test. The test is conducted on the ranks which are given to the sample observations. It is a nonparametric test and hence is distribution free. In order to determine whether two independent samples are from the same population this test is used. Thus, this test helps the study to find out whether private sector and public sector mutual funds have similar risk and return profile. For this purpose ranks are given for Average Returns and Standard Deviation of public sector and private sector mutual funds selected.

The formula for U test

$$U = (n_1 \times n_2) + \frac{n_1(n_1 + 1)}{2} - R_1$$

Mean of Sampling Distribution of U

$$\mu_u = \frac{n_1 \times n_2}{2}$$

Standard Error of U statistics

$$\delta_u = \sqrt{\frac{n_1 \times n_2 (n_1 + n_2 + 1)}{12}}$$

Formula for Hypothesis Testing

$$Z = \frac{U - \mu_u}{\delta_u}$$

Where

N_1 and n_2 = sample sizes

R = sum of ranks

Table No: 1 Showing the analysis of Private Sector

Fund Houses	Schemes	Average Returns	Ranks	SD	Ranks
HDFC Mutual Fund (Private)	Top 200 Fund (G)	16.54	27	21.87	19
	Index Fund (G)	14.54	31	17.88	31
	Equity saving Fund (G)	11.72	38	6.77	40
	Growth Fund (G)	16.12	29	21.11	22
	HDFC Capital Builder (G)	23.14	6	23.09	17
ICICI Prudential Mutual fund (Private)	Top 100 Fund (G)	17.32	22	15.82	37
	Index Fund (G)	13.6	34	16.09	33
	Dynamic plan (G)	19.04	15	14.88	38
	Income Fund (G)	8.26	39	7.54	39
	Mid cap (G)	28.96	2	35.93	3
Reliance Mutual Fund (Private)	Equity Linked Savings Fund (G)	17.48	21	27.74	9
	Vision (G)	20.86	11	29.06	7
	Growth Retail Plan (G)	20.58	12	26	13
	Banking Fund (G)	20.4	13	33.07	5
	Tax Saver (G)	26.26	5	37.01	1
Kotak Mahindra Mutual Fund (Private)	Kotak - 50 Diret Plan (G)	17.3	23	18.53	28
	Opportunities Diret (G)	20.88	10	21.35	20
	mid cap (G)	26.72	4	32.79	6
	Equity (G)	18.12	19	19.32	27
	Tax Saver (G)	19.54	14	26.18	12

TableNo. 2 Showing the analysis of Public Sector

Fund Houses	Schemes	Average Returns	Ranks	SD	Ranks
UTI Mutual Fund (Public)	equity(G)	17.14	24	20.59	23
	Banking Sector (G)	18.74	16	34.55	4
	Opportunities (G)	14.28	33	19.92	26
	Mid Cap (G)	29.62	1	36.79	2
	Equity long term(G)	17.08	25	18.26	29
SBI Mutual Fund (Public)	M equity(G)	15.58	30	17.6	32
	M Multi cap(G)	22.12	9	23.03	18
	M Tax Gain(G)	18.48	17	21.33	21
	M Mid cap (G)	26.92	3	26.67	11
	M Inome Fund(G)	8.1	40	26.68	10
LIC Mutual Fund (Public)	equity(G)	13.14	36	20.28	24
	Index(G)	12.78	37	16.05	34
	Growth(G)	14.32	32	18.01	30
	Infrastructure Fund (G)	16.22	28	28.01	8
	Tax Plan(G)	18.34	18	23.11	16
Principal Mutual Fund (Public)	Large cap(G)	16.76	26	20.16	25
	Index(G)	13.28	35	15.86	36
	Growth(G)	22.44	8	23.76	15
	Balanced Fund (G)	17.8	20	15.88	35
	Tax saving(G)	22.46	7	23.8	14

Returns

$$R_1 = \sum \text{Ranks of Private Sector Funds} = 375$$

$$R_2 = \sum \text{Ranks of Public Sector Funds} = 445$$

$$U - Test = 20 \times 20 + \frac{20(20 + 1)}{2} - 375 = 235$$

$$\text{Or } 20 \times 20 + \frac{20(20+1)}{2} - 445 = 165$$

$$\text{Hypothesis Testing } \frac{235-200}{36.97} = 0.9467$$

Risk

$$R_1 = \sum \text{Ranks of Private Sector Funds} = 407$$

$$R_2 = \sum \text{Ranks of Public Sector Funds} = 413$$

$$U - Test = 20 \times 20 + \frac{20(20 + 1)}{2} - 407 = 203$$

$$\text{Or } 20 \times 20 + \frac{20(20+1)}{2} - 413 = 197$$

$$\text{Hypothesis Testing } \frac{203-200}{36.97} = -0.0811$$

$$\text{Mean of Standard Deviation of U: } \mu_U = \frac{20 \times 20}{2} = 200$$

$$\text{Standard Error of U-Statistics: } \delta_U = \sqrt{\frac{20 \times 20 (20 + 20 + 1)}{12}} = 36.97$$

Analysis and Interpretation

The table value of Z at 5% level of significance is 1.96. The calculated value of Z is 0.95. The above Normal Distribution Curve showing the acceptance and rejection area for similarity in the returns shows that the returns for

both private and public sector mutual funds are not at par. As the Z value 0.95 of the area under Normal Curve is less than table value of Z (1.96) the null hypothesis is accepted.

$$\text{Upper Limit} = \mu_u + 1.96\delta_u = 200 + (1.96 \times 36.97) = 272.46$$

$$\text{Lower Limit} = \mu_u - 1.96\delta_u = 200 - (1.96 \times 36.97) = 127.58$$

Here both upper limit and lower limit are accepted.

The table value of Z at 5% level of significance is 1.96. The calculated value of Z is 0.08. The above Normal Distribution Curve showing the acceptance and rejection area for similarity in the returns shows that the risk for both private and public sector mutual funds are not at par. As the Z value 0.08 of the area under Normal Curve is less than table value of Z (1.96) the null hypothesis is accepted.

The observed value of U for the first hypothesis of returns is 235, which is in the acceptance region, the first null hypothesis is accepted. Thus, it can be concluded that public sector funds and private sector funds do not give similar returns and there is a significant difference in the returns of both the sectors. The observed value of U for the second hypothesis of risk is 203, which is in the acceptance region, so the second null hypothesis is accepted. Hence it can be said that public sector funds and private sector funds do not face the same level of risk and there is a significant difference in the level of risk in both the sectors.

Conclusion

The above study examined whether the returns of public and private sector mutual funds are at par and whether risk of these both mutual funds are at par. There is a significant difference between public sector funds and private sector funds is observed from the study. Public sector funds are not at par with private sector funds in generating returns. They have lower returns compared to private sector. Similarly, both the sectors are not at par in case of risk. They face different level of risk. Public sector funds are more risky compared to private sector funds. It can be concluded from the above analysis that performance of private and public sector funds are not at par. The private sector funds performance is better when compare to public sector funds as they have better returns than the public sector funds during the period of the study.

References:

Agarwal, K., & Patwa, P. (2014). A Comparative

Performance Evaluation of Private Sector and Public Sector Equity Funds of India. *IUP Journal Of Financial Risk Management*, 11(2), 25-33.

Agrawal, D. (2007). Measuring performance of Indian mutual funds.

Arora, K. (2015). Risk-adjusted Performance Evaluation of Indian Mutual Fund Schemes. *Paradigm (09718907)*, 19(1), 79-94. doi:10.1177/ 0971890 715585203

Fama, E. F., & French, K. (2008). Mutual fund performance. *Journal of Finance*, 63(1), 389-416.

Goyal, M. M. (2015). Performance Evaluation Of Top 10 Mutual Funds In India. *Indian Journal of Commerce and Management Studies*, 6(1), 51.

Jayadev, M. (1996). Mutual fund performance: An analysis of monthly returns. *Finance India*, 10(1), 73-84.

Kanethia, D. K. (2010). Comparative Study of Various Mutual Funds Schemes in India. *Amity Global Business Review*, 5(1), 60-76.

Nitzsche, D., Cuthbertson, K., & O'Sullivan, N. (2006). Mutual fund performance.

Pandow, B. A. (2017). Performance of Mutual Funds in India.

Panwar, S., & Madhumathi, R. (2006). Characteristics and performance evaluation of selected mutual funds in India.

Prajapati, K. P., & Patel, M. K. (2012). Comparative study on performance evaluation of mutual fund schemes of Indian companies. *Researchers World*, 3(3), 47.

Puri, H. (2010). Performance Evaluation of Balanced Mutual Fund Schemes In Indian Scenario. *Paradigm (09718907)*, 14(2), 1-22.

Rao, D. N. (2006). Investment styles and performance of equity mutual funds in India.

- Ravichandran, M., & Iswarya, T. A Study on Performance of Risk and Return on Selected Mutual Funds.
- Santhi, N. S., & Balanaga Gurunathan, K. (2012). An Analysis of Risk-Adjusted Return on Tax-Saving Mutual Fund Schemes in India. *IUP Journal Of Financial Risk Management*, 9(3), 54-71.
- Sapar, N. R., & Madava, R. (2003). Performance evaluation of Indian mutual funds.
- Sathish, P., & Srinivasan, K. S. (2016). Performance Evaluation of Selected open Ended Mutual Fund Schemes In India: An Empirical Study. *Global Management Review*, 10(3), 93-105.
- Sharma, R. G. (2013). A comparative study on public and private sector Mutual Funds in India. *International Journal of Research in Humanities and Social Sciences*, 1(6), 23-25.
- Sivakumar, K. P., RajaMohan, S., Sezhiyan, D. M., & Narsimhulu, S. (2010). Performance Evaluation of Mutual Fund Industry in India. *Vidwat: The Indian Journal Of Management*, 3(1), 26-32.
- Tomer, J., & Khan, N. A. (2014). Problems and Prospects of Mutual Funds in India. *Journal Of Commerce & Management Thought*, 5(3), 378-408. doi:10.5958/0976-478X.2014.00329.2
- Vyas, V., Jain, P., & Roy, A. (2016). Construct Validity and Preferential Values: Mutual Fund as Investment Avenue. *SCMS Journal Of Indian Management*, 13(4), 103-115.

Weblinks:

- <https://www.amfiindia.com/indian-mutual>
- <https://www.livemint.com/Money/rUhHlzdUiB6UDgPSeI7ieK/2019-bright-for-mutual-funds-as-AUMs-rise-3-tn-in-2018.html>
- https://economictimes.indiatimes.com/mf/analysis/25-years-of-private-sector-mutual-funds-key-milestones/articleshow/65038546.cms?from=mdrhttps://www.dnb.co.in/Publications/IndiasLeadingBFSICompanies_2016/MutualFunds.asp