

Which fund yields more returns ?

A comparative analysis on the NAV performance of select public V/s Private/Foreign open-ended mutual fund schemes in India

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Mutual funds are intermediaries in the investment business which indirectly connect the public and the corporate sector. The public invest their savings in the mutual funds and the fund managers invest the money so collected in diversified portfolio of securities in various high rated companies. Net Asset Value (NAV) is considered as the most reliable indicator of performance of mutual funds. A comparative analysis of the NAV of select public and private/foreign mutual funds to identify the best sector as well as the fund schemes which have registered increased NAV, has been attempted. The study has revealed that, among others, parameters such as mean, range and standard deviation could also be applied to identify that best schemes among the public, private and foreign funds. The analytical results further reveal that private/foreign funds and their schemes have registered superior NAV performance. Also, it has been found out that the past performance in NAV have strongly influenced the NAV of the current year in all the schemes analyzed.

Economic liberalization and globalization have brought about a new and competitive environment for the common and small investors who are willing to participate in the equity of the corporate sector in our country. There are a large number of small investors, who have the ability to save and make an investment in equity but a majority of them lack professional expertise to judge or forecast the violent volatility and swings which rock the stock markets. As most of the investors are not experts in choosing the right scrip or portfolio, sometimes they get their fingers burnt on certain investment choices. Lower per capita income, apprehensions of loss of capital and economic insecurity significantly influence the investment decisions of the investors. Nevertheless, the avowed objective of every investor is to reduce the risk as low as possible and ensure the re-

turns as high as possible.

Mutual funds, obviously, are the most popular channel in the investment activity as they, by and large, not only guarantee repayment of the principal money invested but assure a reasonable and regular return. But, there are some exemptions to this phenomenon. Mutual funds, being an institution/investment agency, are treated as a suitable vehicle specifically for small investors, who normally feel shy of the capital market and are unable to predict its conditions through different schemes.

Mutual Fund Industry in India

In the Indian context, Mutual Fund Industry was monopolized by the, public sector financial institution, Unit Trust of India (UTI) for well over more than two decades. Only in the later part of 1980's, did the Government of India permit public sector banks and development financial institutions (DFIs) to enter into the mutual fund industry. In the year 1987, State Bank of India and

Canara Bank established their mutual funds followed by other banks and financial institutions. The Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC) set up their own mutual funds in 1989. A few years later in 1993, mutual funds were permitted to be set up in the private sector also.

Mobilization of Funds By The Mutual Funds

Till 1993, there were 7 mutual funds all established in the public sector, which had launched 116 schemes with Rs. 8,011 crore asset under their management. Mutual Fund Industry witnessed further developments after the liberalization of the Indian economy in 1991. The most significant development in this sector was the entry of private and foreign mutual fund companies into the Indian financial markets. An estimated 15 million, which is nearly 9% of all households representing at least 23 million unit holders, had invested in various units of mutual

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funds. The announcements made by the Central Government that from the financial year 2003- 2004 income by way of dividends (under the provisions of the Income Tax Act, 1961) from companies as also income received in respect of mutual funds shall be fully exempt from Income Tax Act. It means that the entire income received from different mutual funds would be completely exempt from the purview of the Income Tax Act. This resulted in massive turnout of investors towards mutual funds. Total investible resources of Mutual Funds account for about 23% of market capitalization compared to more than 50% in developed countries. It is a well-known fact that investors always look for safer investment avenues, especially mutual funds, as these funds have lesser risk when compared with the highly volatile shares and securities. This paradigm shift towards mutual funds has assumed greater importance ever since the Indian economy was liberalized and financial sector reforms introduced. These two measures have brought about healthy competition in the mutual fund industry providing wider choices to the investing population. In other words, presence of many players in the market, among other things, helped the investors to choose the right type of mutual funds based on their returns as well as safety. In addition to this, investors in mutual funds look at the Net Asset Value (NAV) as one of the criteria to identify and choose the mutual fund for investment purposes.

By introducing various schemes, funds are mopped up from the investors by the mutual funds and are invested in the securities transacted in the market. The prices of units in the market reflect the state of affairs in the capital market. Generally, mutual funds announce the NAV of the units in a particular scheme. NAV, which is

considered as the reliable indicator of performance of mutual funds depends upon the efficiency of the fund managers in choosing the right portfolio. Based on the skills of the fund managers, the funds are invested and it results in either increase or decrease in the NAV.

How Is NAV Computed?

NAV(Net Asset Value), represents the net assets on a per unit basis. It is equal to the net assets divided by the number of outstanding units under a scheme. It is the sum total of the market value of all investments plus accrued income minus the liabilities and expenses for a given scheme.

$$\text{NAV} = \frac{\text{Total market value of all mutual fund holding} - \text{All mutual fund liabilities}}{\text{Number of mutual fund units}}$$

There has always been a contention (after the UTI's US-64 fiasco) that public sector funds neither register more NAV nor pay reasonable returns to the unit holders in addition to the continued erosion in the asset base of the funds mopped up from the investors. This is one of the reasons as to why this research study was undertaken. But, before discussing the methodology and analytical results of the present study, a brief summary of the previous research studies on mutual funds has been given.

Previous Studies on the Performance of Mutual Fund

Several research studies have been conducted on the performance of mutual funds in the past. Treynor(1965), Jenson(1968) and Ippolito(1989) conducted research studies on the performance of mutual funds. They concentrated on the performance of active funds and found that these funds did not register superior performance in terms of returns. Jayadev (1998) in his analytical study

on the performance of mutual funds analyzed 44 schemes of mutual funds during the period of 1994-95 and compared Jensen's measure and Sharpe's differential returns of the schemes. He has stated that there was high difference between the two measures and concluded that lack of diversification was the reason for the declining trend in performance. Shah and Thomas(1994) who analyzed the performance of eleven mutual fund schemes reported that failure to diversify the portfolio as the reason for the poor performance of funds. Later in 2001, Narasimhan and Vijayalakshmi focused on evaluating the performance of the mutual funds in India and the investment strategies followed by them. They analyzed the performance of 76 mutual fund schemes of around 25 asset management companies (AMC's) mutual funds. The study examined the impact of change from large portfolio to thin portfolio. They found out that there was a general shift in the investment strategy of diversified portfolio and optimizing the risk return of investment in predictive winners of the period.

The Present Study

A comparative analysis of the NAV of public and private / foreign mutual funds with a definite purpose to identify that particular sector which registers high NAV is of crucial importance from the investors' point of view.

So, in this context, the present study focuses on the NAV of select public and private/foreign mutual funds so as to serve as a guide to the investing public to help them find out as to which mutual fund whether public or private register increased Net Asset Value. The specific objectives of the study are as follows;

- i) to identify the best sector registering increased NAV based on a random sample of select mutual funds chosen from the pub-

lic and private/foreign mutual funds.

- ii) to analyze whether past performance has any association or influence with future increase/decrease in the NAV of mutual funds during the study period
- iii) to analyze which sector registered heavy fluctuation in NAV during the study period.

Hence the present study analyzes 30 schemes comprising 15 public sector and 15 private/foreign schemes applying measures of associations and differences and other suitable statistical tools.

The study is organized as follows:

In section I, the concepts of mutual funds and related terms are dealt with. In section II, the methodology, which includes sample units, and analytical tools used in the study have been given. The III and IV sections discuss the analytical results of the public sector and private/foreign funds. The last V section summarizes the findings and gives suggestions for choosing the right form of mutual funds.

Section I

Mutual Fund Schemes

All Mutual Funds in India are governed by the SEBI (Mutual Funds) Regulations, 1996 which define a Mutual Fund as “a fund established in the form of a trust by a sponsor to raise monies by the Trustees through the sale of units to the public under one or more schemes for investing in securities in accordance with these regulations.” A mutual fund is thus a vehicle for collective investment of funds of the investors in the securities permitted under the regulations.

Open-ended Mutual Fund

Open-ended Mutual Fund schemes are not closed for public

subscriptions at anytime and it has no specific period of maturity. It also provides liquidity by re-purchasing the units at a specific price which is normally linked with NAV.

Closed-end Mutual Fund

These schemes are open for public subscription for limited period only and hence the corpus of the scheme is thus fixed for the future period. Closed-ended funds have a definite period of life and at the expiry of the period, say 5 or 7 years, the underlying assets are liquidated by the mutual funds and the sale proceeds are distributed among the unit holders pro-rata.

Computations of Net Asset Value

The performance of a scheme is reflected in its asset value (NAV) which is disclosed on daily basis in the case of open-ended schemes.

As stated earlier, Net Asset Value (NAV) represents the net asset on a per unit basis.

Section II

Need and Methodology

Mutual Funds provide the much needed fund requirements for the corporate sector. In the present day scenario, most of the corporates have been reportedly tapping the mutual fund route as a reliable source of finance. This decisive shift by the corporates towards the mutual fund route is due to the fact that there is no need to declare dividends/interests as in the case of shares. Also, a minimum or reasonable but assured rate of return would be sufficient in the case of mutual funds to satisfy the investors. So, whether investing in mutual funds would be an ideal choice has to be probed from the viewpoint of the investor population. And if the answer is yes, which type of mutual fund will help investors to get regular return based on the NAV performance? In a nutshell, among other objectives, the

present study aims at helping the investor to apply basic minimum criterion while making investments in mutual funds.

Period of Study

The present study covers the investment in Mutual Fund schemes for the three financial years (36 months) namely, April-1999 to March 2000, April-2000 to March 2001 and April 2001 to March 2002. Here again, it must be stated that only open-ended schemes are considered for analysis.

Data Collection and Sampling

The required data for the research study were collected from secondary sources. The data relating to NAV of various public and private sector and foreign schemes were collected from the published reports of the Centre for Monitoring Indian Economy (CMIE) monthly reports and from the popular daily ‘The Economic Times’. Various web-sites relating to mutual funds were browsed and data collected. This study adopts convenience-sampling method with a stipulation that complete data were available for the three-year period for the schemes. In other words, such of those schemes for which data were unavailable had been left out from the purview of the study.

Data Analysis

Simple averages and growth percentages using excel software of the MS-office have been computed. Simple regression and Student’s t-test have also been applied to analyze the significance of association and differences using SPSS (Statistical Package for Social Sciences) software. The formula used and the necessity of using a set of selected tools have been explained at the appropriate places where analysis has been carried out.

Limitations of the Study

- i. The present study covers only

fifteen public sector and fifteen private sector/foreign schemes. Insufficient data on NAV and time constraints have restrained the researcher to limit the sample units to 30 schemes only.

- ii. The study is related to three financial years only namely, 1999-2000, 2000-2001 and 2001-2002 spanning 36 months.
- iii. Since huge volume of data are to be analyzed, the researchers included only a few selected schemes which ensured data availability for all the three-year period ensuring randomness.
- iv. Only open-ended schemes are analyzed
- v. For the purpose of the present analytical study, a few foreign funds operating in India have also been included in private sector schemes as both of them have similar features in terms of performance. This is justified as the primary focus of this analytical study is to measure the performance of public sector schemes and other schemes.
- vi. Though the researcher has taken every care to collect data, information were found missing for one or two months. Here, the researcher has applied statistically acceptable projection techniques to complete the time series.

Section III

Results and Discussion

Analytical Results I

In order to analyze the performance of the mutual funds during the study period, year-wise analysis was done; the results are given in Table 1 :

Table 1
Public Vs. Pvt & Foreign Funds
NAV Average

Here***

The table presented above shows the NAV average of the study period i.e., 1999-2000 to 2001-2002.

The grand average NAV indicates that the private/foreign funds have reported satisfactory NAV(Rs.17.83) during the study period whereas public sector schemes have shown poor performance (Rs.11.89) during the same period. Also, a declining trend has been noticed in the case of public sector schemes during the study period.

Figure 1

Public Vs Private/Foreign Funds(Average NAV)

Here***

Analytical Results II

In order to examine the trend in performance of NAV during the study period, growth rate in NAV was computed. The growth rate was computed based on the following formula:

$$\text{Growth Rate } R_g = (Y_1 - Y_0 / Y_0) \times 100$$

where, R_g is the growth rate registered during the current year

Y_1 is the current year, and
 Y_0 the previous year

Table 2

Public Vs. Private & Foreign Funds

Average Growth Rate

Here * * *

A comparative analysis of the growth rates in NAV reveals that on an average the public sector schemes had grown at 0.23 during the study period while the private & foreign schemes had registered a growth rate of 0.78 during the study period. Here again, the private/foreign funds have shown improved growth rate.

Section IV

Results of Statistical Testing

Analytical Results III

In order to examine whether past is any indicator of future growth in the NAV six regression analyses were carried out. NAV of the base year (Y_0) was considered as the Dependent variable (y) and Current year (Y_1) as the Independent variable (X).

$$\text{Equation } Y = a + bX$$

Dependent Variable Y = NAV of the year 1999-2000

Independent Variable X = NAV of the year 2000-2001

In the same way, the second regression equation took the NAV of 2000-2001 as the dependent variable (Y_1) and 2001-2002 as the independent variable X for both the schemes. The third regression equation kept the NAV of 1999-00 as the dependent variable and 2001-2002 as the independent variable.

The results are presented in Table 3:

Table 3

Results of Regression Analysis

Public Sector Vs. Private/ Foreign funds

Here ***

A close look at the analytical results indicate that the 'past is an indicator of future performance' in the case of NAV of mutual funds. In both the sectors, there existed a strong association between the NAV of the past and current year as the p-value is highly significant for both the sectors. From the results, it could be noticed that there existed a very high association between first and second year as well as second and third years. But, relationship, though statistically very high in the case of public funds in terms of R-Square value the relationship is moderate. However, private funds have shown a high positive association between the past and current years. The R-Square value of 0.849, 0.890 and 0.726 indicate that

past Net Asset Values have strongly influenced the current year NAV.

Analytical Results IV

Comparison of both the funds and schemes is essential to identify the best performer. So, five essential parameters were applied to examine the NAV. The results are presented in Table 4.

Table 4

Year-wise Comparison of NAV based on Select Parameters

Public Vs. Private/Foreign Funds

Here ***

The results of the five parameters used for comparative analysis indicate that the private/foreign funds have registered a very consistent and excellent performance during the study period. In all the three years, the performance of the private/foreign funds have been comparatively very high. Secondly, in terms of minimum NAV also private/foreign funds have registered a high NAV. The minimum NAV recorded by the private/foreign funds was in the year 2001-2002 whereas public funds have recorded a sum of Rs.5.17 during the same period.

In the case of maximum NAV, one of the private sector schemes has recorded Rs.52.30 as its NAV in 2000-2001 whereas in the public sector the maximum NAV recorded was Rs 27.55 only which was recorded in the year 2000-2001.

In the same way, the Range, which is the difference between minimum and maximum NAV registered, is very high, in the case of private/foreign funds as its value of Rs.42.73 was recorded by the private/foreign funds in the year 2000-2001.

In terms of volatility, public funds have recorded a very low standard deviation of Rs.4.69, Rs.5.48

and Rs 3.84 in the years 2000, 2001 and 2002 respectively. Private/Foreign funds have shown greater variability during the study period which is not generally considered good as high variability indicates low consistency.

Analytical Results V

In order to test whether there existed any significant difference between the average NAV of public and private/foreign funds, Student 't' test was performed. The results indicate that there existed a highly significant difference between the NAV of public and private/foreign funds. The results are presented in Table 5.

Table 5

Results of Student's 't' test with regard to NAV

Here * * *

The NAV of private/foreign funds have registered a mean value of 17.8400 whereas public funds have recorded a low mean value of 11.8933 during the study period. So, the difference is -5.9467 which is statistically highly significant.

Section V

Summary Of Findings And Concluding Remarks

Summary of Findings

On the basis of NAV of mutual fund schemes, the major findings are as follows:

1. In the year 1999-2000, the public sector fund which registered an outstanding performance was UTI Master Plus '91 with a NAV of Rs. 23.95 whereas Alliance 95(a) registered a whopping Rs. 44.70 in terms of NAV. In 2000-2001, UTI Service Fund registered Rs. 27.55 as NAV and Alliance 95(G) recorded Rs.

52.30. In the final year of analysis, i.e., 2001-2002, UTI Service Fund recorded Rs. 16.70 as NAV which was the highest in public sector schemes, in the private & foreign fund schemes, Alliance 95(G) recorded Rs. 42.31 as the NAV. In terms of average NAV, the grand average NAV recorded was the highest in the case of private/foreign fund schemes at Rs.17.84 while it was Rs. 11.89 in the case of public sector. So, superior performance was registered by the private/foreign fund schemes during the study period.

2. In the case of minimum and maximum NAV recorded, private/foreign funds have taken a decisive lead. In terms of range also (Range = Maximum NAV – Minimum NAV) private/foreign funds have done much better than the public funds.
3. The analytical results of standard deviation (σ) applied for the three-year period revealed that volatility was very high in the case of private sector mutual fund schemes. The variation was as high as 11.82 in the case of private/foreign funds and it was 5.48 in the case of public funds. This means that public funds were more consistent in their NAV.
4. In terms of association between previous year and current year NAV, the results of regression analysis indicated that both public and private/foreign funds have shown a highly significant association at 1 % level of significance. However, the association in terms of R-Square value is more in the case of private/foreign funds than the public sector funds. So, both the sectors have

recorded a highly significant association with the previous year NAV during the study period.

5. On the basis of variety of schemes offered, it has been found out that private/foreign mutual fund schemes offer innovative products and also deployment of funds on various successful ventures and securities has been accurately predicted by the private/foreign funds which is evident from the superior performance by this sector during the study period.

Concluding Remarks

Mutual funds are the intermediaries in the investment business which indirectly connect the public and the corporate sector. So, based on this, they are considered to be the powerful engines and catalytic agents for resource mobilization from the common investors to the corporate sector. Reducing the level of risk and diversifying the risk are the two normal strategies applied by the mutual funds. Also, changing the portfolio structure and making investments on various stocks following appropriate timings are very important. Our analytical results indicate that more than public sector schemes, private/foreign funds have been consistent in their performance and have recorded high NAV during the study period. It is suggested that aggressive and risk-seeking investors might opt for private sector schemes as they yield high returns based on the NAV performance. The public sector fund managers have to apply suitable methodology to choose the best securities and investment avenues based on reliable analytical measures as the investors might lose confidence if the performance is not satisfactory over a long period of time. It is further suggested that prospective investors may apply the basic minimum analytical tools used in this study for choosing a fund as well as schemes for investment.

LIST OF TABLES AND FIGURES

Table 1

Public Vs. Pvt & Foreign Funds NAV Average

Year	Performance of NAV	
	Pub-Sec Schemes NAV Average Rs.	Pvt & Foreign Schemes NAV Average Rs.
1999-2000	13.17	18.88
2000-2001	12.31	18.38
2001-2002	10.19	16.25
Grand Average	11.89	17.83

Figure 1

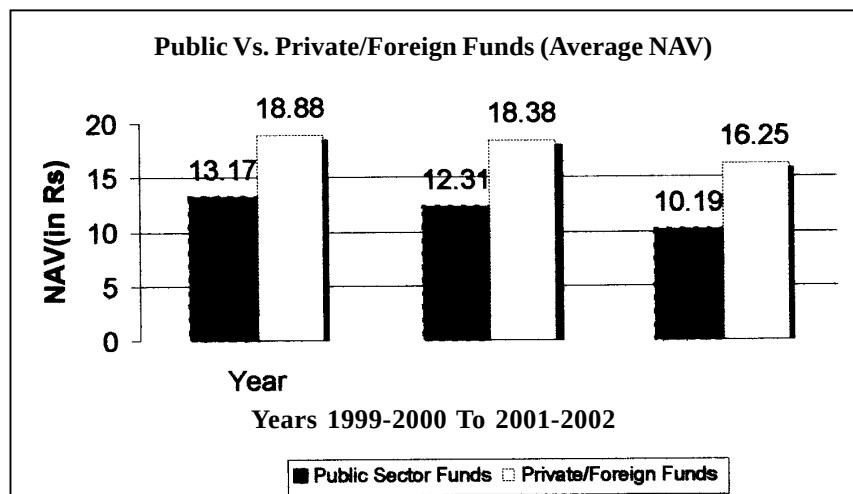


Table 2

Public Vs. Private & Foreign Funds Average Growth Rate

Year	Public Sec Rs.	Pvt. Sec Rs.
1999-2000	1.96	2.89
2000-2001	-2.02	-2.11
2001-2002	0.762	1.55
Grand Mean	0.234	0.776

Table 3
Results of Regression Analysis
Public Sector Vs. Private/Foreign funds

Comparative Analsis	Dependent Variable (y)	Independent Variable (x)	R	R-Square	Adj.R-Square	t-value
Public Funds Private/Foreign Funds	NAV of 99-00	NAV of 00-01	0.897 0.921	0.805 0.849	0.790 0.837	7.321** 8.534**
Public Funds Private/Foreign Funds	NAV of 00-01	NAV of 01-02	0.819 0.943	0.671 0.890	0.646 0.882	5.148** 10.260**
Public Funds Private/Foreign Funds	NAV of 99-00	NAV of 01-02	0.669 0.852	0.447 0.726	0.405 0.705	3.242** 5.869**

** indicates that the association is highly significant at 0.01 level

Table 4
Year-wise Comparison of NAV based on Select Parameters
Public Vs. Private/Foreign Funds

Variable	1999-2000		2000-2001		2001-2002	
	Public Rs.	Pvt/Foreign Rs.	Public Rs.	Pvt/Foreign Rs.	Public Rs.	Pvt/Foreign Rs.
Mean (x)	13.17	18.88	12.31	18.38	10.19	16.25
Std. Deviation(σ)	4.69	10.15	5.48	11.82	3.84	8.69
Minimum	8.17	10.63	6.42	9.57	5.17	7.71
Maximum	23.95	44.70	27.55	52.30	16.70	42.31
Range	15.78	34.07	21.13	42.73	11.53	34.60

Table 5
Results of Student's 't' test with regard to NAV

NAV	N	Mean	S.D	S.E of Mean	Mean Differ	P-Value
Public	3	11.8933	1.5351	0.8863	-5.9467	0.008**
Pvt. & Foreign	3	17.8400	1.3986	0.8075		

** indicates the difference is highly significant at 0.01 level

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Appendix -1

Public Sector Schemes (Open-ended)

1	Canganga
2	Can Premium
3	GIC D'mat
4	GIC Fortune '94
5	IDBI Child I-NIT'97 (REC)
6	LIC Dhanvikas (I)
7	LIC Bond Fund (G)
8	PNB Balanced (G)
9	SBI Magmam Contra Fund
10	SBI Magnum FMCG Fund
11	UTI Master Index Fund
12	UTI Master Plus '91
13	UTI Service Fund
14	UTI Brand Value Fund
15	GIC Growth Plus II

Appendix-2

Private/Foreign Schemes (Open-ended)

1	Alliance '95(G)
2	Alliance Equity Fund
3	Birla MNC Fund
4	Birla Balance (G)
5	Birla IT Fund
6	Chola Freedom Income(CUM)(G)
7	Chola Triple Ace (CUM)(G)
8	Dundee Corporate Bond
9	Dundee Sovereign Trust
10	DSP Merrill & Lynch Equity Fund
11	JM Balanced Fund (G)
12	Reliance Income Fund (G)
13	Sundaram Tax Saver
14	Sun F&C Money Value Bond (G)
15	Sun F&C Money Value Liquid (G)