PERFORMANCE EVALUATION OF INCOME SCHEMES OF MUTUAL FUNDS IN INDIA - A PUBLIC PRIVATE COMPARISON

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ABSTRACT

Using various statistical measures the present study aims to evaluating the performance of a few selected income or debt mutual funds schemes of India on the basis of their daily NAV recorded in the period starting on 1st April 2000 upto 31st March 2010. The paper also compares the results of public sector sponsored schemes with that of private sector schemes. Popularity of income schemes has only increased in the last decade. Income mutual funds they have seen tremendous growth in their number of schemes from 91 on 31st march 2001 to 330 on 31st march 2010. 506 in 2008 was the maximum ever in terms of total schemes floating in the market. This category has seen a decline only twice in the last decade. First fall was posted in the year 2003 and the second fall was reported in the year 2010. One striking fact which comes to light is the huge percentage contribution of income schemes towards the total AUM of the Indian mutual funds industry. On the basis of the facts and figures it can be easily concluded that looking at the parameter of average annual NAV and its percentage growth rate, private sector leads the race. As per the data collected it can be said that private sector mutual fund ICICI Prudential Income Fund (growth option) gave the maximum return as compared to other schemes considered in the study. Another conclusion which can be derived keeping in view the standard deviation is that public sector income schemes are more unpredictable when it comes to assessing returns.

Keywords: *Debt funds, Income Schemes, Mutual Funds, Performance Evaluation.*

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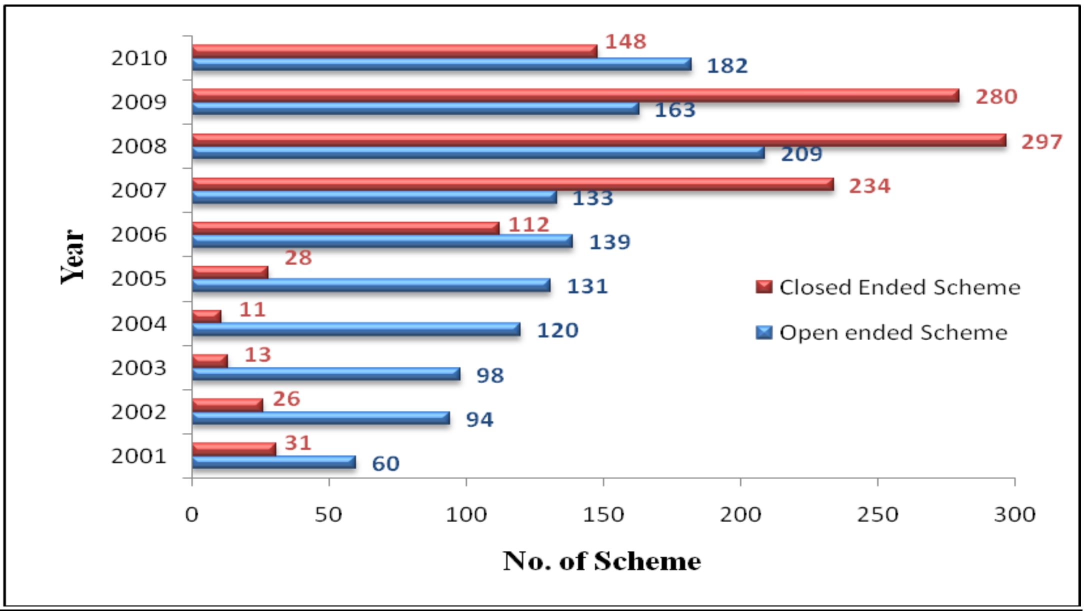
INTRODUCTION

Our society is full of wealth finders today who have idols like Donald Trump, Ratan Tata and Bill Gates; people are desperate to join the Billionaire's Club. Like these rich role models, such wanting to be rich people anticipates to attain their supercilious financial objectives by lynching their victory on a specific industry, product or idea. Other opportunists are seeing their own finances grow by providing what appears to be a fast track to earning big bucks. Choosing one of these 'wealth building systems' as they are known, requires a level of commitment that is equal to starting a small business. That commitment can be financial, as well as physical. One of these is the income schemes provided by mutual funds in India. They require commitment of funds for a longer period of time and in return give limited but steady returns in form of dividends. These are those mutual funds which are planned to bring into being current income for its unit holders. Several kinds of equity-oriented funds also can have income as their primary investment objective, such as utilities income funds and equity income funds. All distributions from income funds are taxable in the year received by the investors. These fund types seeks to primararily generate income and capital appreciation upto a limited extent by investing in a diversified portfolio of debt and money market securities. However, there can be no declaration that the income will be generated, regular or otherwise, or the investment objectives of the Scheme will be achieved. The Scheme does not providing any assured or guaranteed returns. Following tables predict the overall status of income scheme mutual funds in India.

Chart -1 show the growth of income schemes of mutual funds in India in the period starting from 1st April 2000 upto 31st march 2010. All the above figures are at the end of each financial year within the study period.

Chart – 1

Growth of income schemes in India in terms of no. of schemes



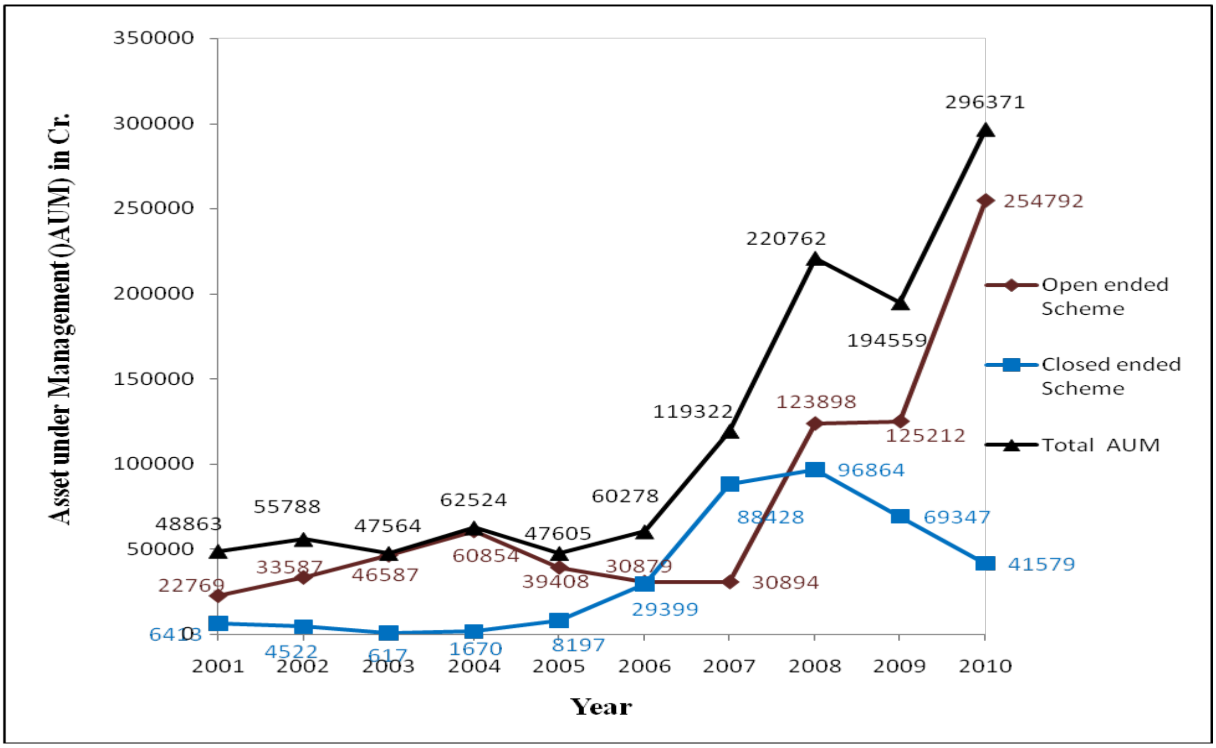
(As on 31st March) *Source- www.amfi.com*

The data is given in the form of no. of open ended schemes, no. of close ended schemes. Number of open ended schemes has always been more than the no. of close ended schemes except in the years starting from 2006 upto 2008. This was because in 2006 close ended schemes saw a huge increase in their no. from 28 in 2005 to 112 in 2006; such an amplification could not be matched by the open ended category. Where on 31st march 2001 the no. of open ended schemes were double the no. of close ended schemes, by the end of the study on 31st march 2010 both the categories were just at a difference of 40 schemes. Coming to the overall performance of income mutual funds they have seen tremendous growth in their number of schemes from 91 on 31st march 2001 to 330 on 31st march 2010. 506 in 2008 was the maximum ever in terms of total schemes floating in the market. This category has seen a decline only twice in the last decade. First fall was posted in the year 2003 and the second fall was reported in the year 2010.

Graph -2

Growth of income schemes in India in terms of AUM (Rs. Cr)

(As on 31st March)



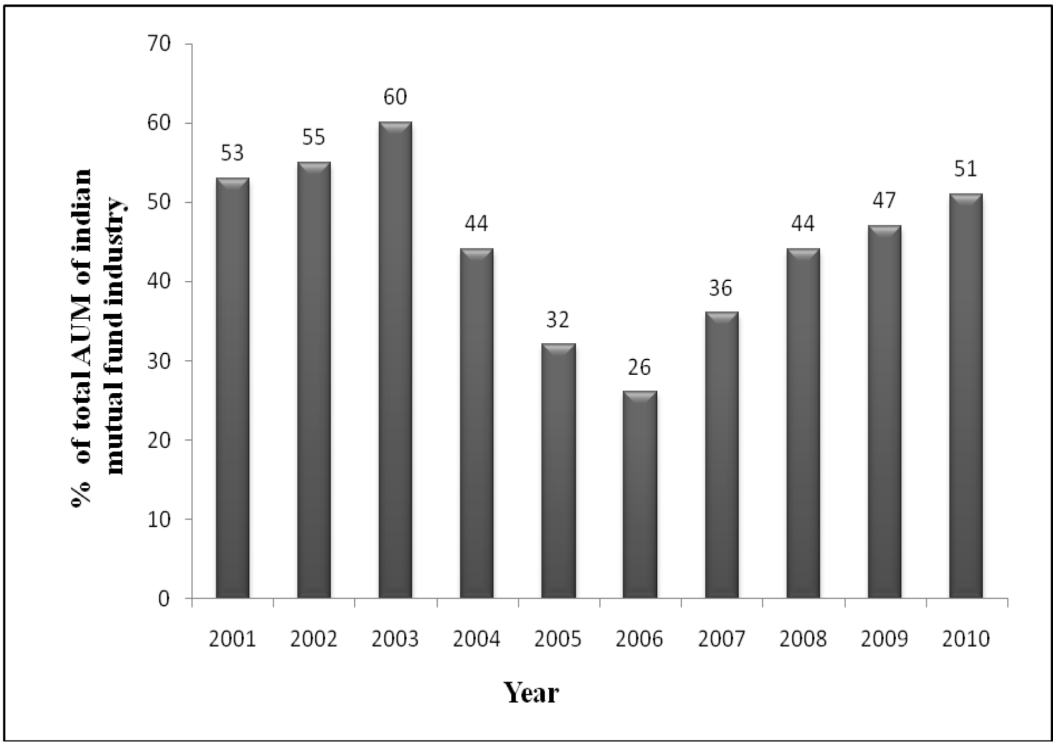
Source- www.amfi.com

AUM of the open end category has always been much higher than the close ended types. When on 31st March 2001 the AUM of open ended income schemes was Rs. 22769 crores, the AUM of close ended income mutual funds was merely Rs. 6413 crores. At the end of the study period on 31st march 2010 the AUM of close ended schemes was Rs. 213213 crores less than that of open ended funds. The least AUM of close ended has been Rs 617 crores in the year 2003 and in case of close ended the least AUM recorded was Rs. 22769 crores in the year 2001. The open ended schemes have seen a fall in their AUM twice in the last decade in 2005 and 2006. Whereas on the other side open ended have seen a decline four times in the years 2002, 2003, 2009 and 2010.

Chart - 3

Income schemes as % of total AUM of Indian Mutual Fund Industry

(As on 31st March)



Source- www.amfi.com

One striking fact which comes to light is the huge percentage contribution of income schemes towards the total AUM of the Indian mutual funds industry. This after seeing the lowest level of 26% in the year 2006 bounced back to 51 % on 31st March 2010 which was almost at par with its value of 53% on 31st March 2001. This proves that income schemes are the most popular in the Indian mutual funds industry.

METHODOLOGICAL FRAMEWORK

The period of study selected is 2000-2010 because of the availability of the data. The criterion for the scrutiny of Income Funds is their assets under management, net asset value, returns, standard deviation and Sharpe's ratio. Source of data is purely secondary in nature which will include journals, websites and factsheets of the selected mutual funds. Income schemes of those AMCs have been selected that have maintained highest levels of AUM throughout the study period in their respective fields. Two schemes from public sector two from private sector and one purely private have been studied.

Depending upon these criterion following five mutual funds are under scrutiny in this study:

1) ICICI Income Fund – PRIVATE SECTOR FUND
2) HDFC Income Fund – PRIVATE SECTOR FUND
3) Reliance Income Fund - PURELY PRIVATE SECTOR FUND
4) SBI Magnum Income Fund - PUBLIC SECTOR MUTUAL FUND
5) UTI Bond Fund - PUBLIC SECTOR MUTUAL FUND

The point to be noted here is that the AUM of all these five schemes has always ranged between 40 – 50 % of the total AUM of the entire Indian mutual funds industry during all the years of our study starting from 2000-01 up to 2009-2010. This makes the selection of these schemes as representatives of public and private sector funds for the study more compelling.

RESULTS AND ANALYSIS

Average Annual NAV

In table 1, features like, date of inception, minimum investment required, NAV of the schemes in the beginning of the study and the end of the study. Three features which make these schemes comparable are their fund type, options available and fund category. All the mutual funds discussed in this study are debt oriented, open ended and have two options available in them i.e. growth and dividend.

Table 1

Key features of the selected schemes

D = dividend option *G = growth option* *Source: www.mutualfundsindia.com*

Scheme Name	*Date Of Inception*	*Min Invest-ment (Rs.)*	*NAV in beginning of study*		*NAV at the end of the study*	
			D	*G*	*D*	*G*
HDFC Income Fund	Aug. 2000	5000	**10.13**	**10.13**	**10.83**	**21.46**
ICICI Prudential Income	June 1998	5000	**10.26**	**12.54**	**11.40**	**29.79**
Reliance Income Fund	Dec. 1997	5000	**10.22**	**13.10**	**12.27**	**30.85**
SBI Magnum Income Plan	Nov. 1998	1000	**10.41**	**11.94**	**10.52**	**22.42**
UTI Bond Fund	June 1998	2000	**12.55**	**12.55**	**11.23**	**26.58**

Annual Average NAVs

Table 2 gives an elaborate picture regarding the annual average NAVs of all the selected income Schemes of mutual funds for the period starting from 1st April 2000 upto 31st March 2010 on 31st march of every financial year. Also mentioned are the percentage growth rates in all the values, which is over and above the previous year's value.

Table – 2

Comparative table for Yearly Average NAV of the schemes

D = dividend option G = growth option (% growth = % growth over the previous year NAV)

Year	HDFC Income Fund				ICICI Prudential Income				Reliance Income Fund				SBI Magnum Income Plan				UTI Bond Fund			
	G	% growth	D	% growth	G	% growth	D	% growth	G	% growth	D	% growth	G	% growth	D	% growth	G	% growth	D	% growth
2000-01	10.48		10.44		13.05		10.43		13.75		10.67		12.41		10.55		13.08		13.1	
2001-02	11.81	12.69	10.47	0.29	15.05	15.33	10.7	2.59	15.72	14.33	10.93	2.44	14.18	14.26	10.62	0.66	14.89	13.84	14.94	14.05
2002-03	13.6	15.16	10.72	2.39	17.13	13.82	10.68	-0.19	17.82	13.36	10.81	-1.10	16.14	13.82	10.62	0.00	16.77	12.63	12.09	-19.08
2003-04	15.28	12.35	10.87	1.40	19.1	11.50	10.73	0.47	19.82	11.22	11.24	3.98	17.95	11.21	10.45	-1.60	18.29	9.06	10.98	-9.18
2004-05	15.61	2.16	10.42	-4.14	19.47	1.94	10.4	-3.08	20.6	3.94	10.7	-4.80	18.15	1.11	9.98	-4.50	18.74	2.46	10.5	-4.37
2005-06	16.08	3.01	10.22	-1.92	20.14	3.44	10.37	-0.29	21.65	5.10	11.25	5.14	18.75	3.31	10.14	1.60	20.19	7.74	10.86	3.43
2006-07	16.45	2.30	10.2	-0.20	21.06	4.57	10.47	0.96	22.67	4.71	11.78	4.71	19.42	3.57	10.2	0.59	21.22	5.10	10.89	0.28
2007-08	17.44	6.02	10.41	2.06	22.76	8.07	10.7	2.20	24.5	8.07	12.89	9.42	20.5	5.56	10.26	0.59	22.66	6.79	11.06	1.56
2008-09	18.70	7.22	10.47	0.58	25.33	11.29	11.06	3.36	26.97	10.08	12.61	-2.17	20.9	1.95	10.29	0.29	24.35	7.46	11.18	1.08
2009-10	21.02	12.41	10.34	-1.24	29.94	18.20	11.8	6.69	30.33	12.46	12.71	0.79	21.87	4.64	10.38	0.87	26.01	6.82	11.31	1.16

Source: author's own calculation

The maximum average NAV recorded by a private sector income scheme mutual fund during the study period was 30.33 by Reliance Income Fund (growth option) in the financial year 2009-2010. Whereas in case of public sector income schemes the highest average NAV of 26.02 recorded was by UTI Bond Fund (growth option) in the same year. In regards to the percentage growth in the average NAV value over and above the previous year's average NAV private sector again leads by posting a growth rate of 18.20 % by ICICI Prudential Income Fund (growth option) in 2009-2010. On the other side the maximum growth by a public sector income scheme was by SBI Magnum Income Plan (growth option) at 14.26% in the year 2001-2002. The average NAVs of dividend options of all the schemes under study have ranged between 10 to 12 except in case of UTI Bond Fund (public sector)which touched the level of 14.94 in the year 2001-2002. The dividend options have not seen much increase in their NAV because instead of reinvesting their profits they distribute them amongst investors on regular basis. Despite the ups and downs of the market not a single scheme's growth option has seen a decline in its average NAV in the last decade. But dividend options could not be left unaffected by the economic slowdowns. On the basis of the above facts it can be easily concluded that looking at the parameter of average annual NAV and its percentage growth private sector leads the race.

Total Return

In table-3 total return earned in the last decade ending on 31st march 2010 has been shown.

Table –3

Comparative table for Total Return (%) since 1st April 2000 up to 31st March 2010

*HDFC Income Fund**		*ICICI Pru Income Plan*		*Reliance Income Fund*		*SBI Magnum Income Plan*		*UTI Bond Fund*	
G	***D***	***G***	***D***	***G***	***D***	***G***	***D***	***G***	***D***
1.12*	0.07*	1.38	0.11	1.35	0.20	0.88	0.01	1.12	-0.11

G – growth option *D – dividend option*

**Introduced in Sept. 2000* *Source: author's own calculation*

Above table shows the return earned by a person if the money stayed invested in a specific scheme from 1st April 2000 upto 31st march 2010 except in case of HDFC Income Fund which was launched on 20th September 2000. As per the values mentioned in the above table it can be said that private sector mutual fund ICICI Prudential Income Fund (growth option) gave the maximum return of 1.38% as compared to other schemes considered in the study. UTI Bond fund (dividend option) a public sector income scheme was the only one to post a negative return of -0.11%. HDFC Income Fund despite being a late entrant has performed comparatively well. Growth option of SBI Income Plan is the only scheme which gave return of less than 1%. On the basis of the total return of mutual funds in the last decade it can be accomplished that private sector funds are ahead in giving composite returns to its investors.

Standard Deviation

Standard deviation refers to the level of variation of the data from its average.

Table – 4

HDFC Income Fund*		***ICICI Pru Income Plan***		***Reliance Income Fund***		***SBI Magnum Income Plan***		***UTI Bond Fund***	
G	***D***	***G***	***D***	***G***	***D***	***G***	***D***	***G***	***D***
0.21	0.34	0.25	0.46	0.20	0.53	0.22	0.46	0.22	18.74

Comparative table for Standard Deviations of fund returns

G – growth option D – dividend option (As on 31st March 2010)

**Introduced in Sept. 2000; Source: author's own calculation*

The highest standard deviation is of UTI Bond Fund (dividend option) at 18.74 which is exceptionally high as compared to all its competitors. The least value of standard deviation was recorded by Reliance Income fund (growth option) at 0.20. Amongst the private sector income schemes the maximum standard deviation is of Reliance Income Fund (dividend option) at 0.53, which is much below the maximum of a public sector income fund. For all the selected income schemes one rule applies in case of standard deviation that its values for dividend option are higher as compared to growth options. This means that returns posted by dividend options are more versatile as compared to growth options. Another conclusion which can be derived is that public sector income schemes are more unpredictable when it comes to assessing returns.

Sharpe's Ratio

Sharpe's index is a ratio of returns generated by the fund over and above risk free rate of return and the total risk related with it.

Table – 5

HDFC Income Fund*	***ICICI Pru Income Plan***	***Reliance Income Fund***	***SBI Magnum Income Plan***	***UTI Bond Fund***

Comparative table for Sharpe's ratios of the schemes

G	D	G	D	G	D	G	D	G	D
-30.11	-18.64	-25.11	-14.10	-32.11	-12.19	-28.53	-14.11	-28.66	-0.32

G – growth option D – dividend option (As on 31st March 2010)

**Introduced in Sept. 2000; Source: author's own calculation*

Income schemes of all the selected mutual funds are giving double digit negative Sharpe's ratios. A low and negative Sharpe's ratio is a hint of a poorer risk accustomed result. The most negative Sharpe's ratio amongst all is that of Reliance Income Fund (growth option) at -32.11 which means that this fund has been the most disabled in case of handling market as well as fund related risk. The least negative value recorded was by UTI Bond Fund (dividend option) at -0.32. Hence this scheme can be adjudged as the best in dealing with the risk factor. Amongst the private players Reliance Income Fund (dividend option) is the best in terms of Sharpe's ratio (-12.19). And in case of public sector UTI Bond Fund is the best. After comparing them all it can be concluded that public sector income schemes are the most risk adjusted schemes.

Compound Annual Growth Rate (CAGR)

It is the year-over-year growth rate of a portfolio for a particular period of time. The time period for which **C**ompound **A**nnual **G**rowth **R**ate (CAGR) is calculated may have seen highs and lows in the economy i.e. periods of boom and recession. CAGR isn't the actual return in reality but it's a make-believe number that explains the rate at which an investment would have grown if it at all grew at a firm rate. CAGR can be taken as a tool to find the smooth out the returns. This is evened out in the CAGR ratio and an overall effect of the performance of an investment can be found.

HDFC Income Fund*	***ICICI Pru Income Plan***	***Reliance Income Fund***	***SBI Magnum Income Plan***	***UTI Bond Fund***

Table - 6

Comparative Table of CAGR (%) of all the Income Schemes

G	*D*	*G*	*D*	*G*	*D*	*G*	*D*	*G*	*D*
7.21	-0.10	8.66	1.24	8.23	1.76	5.83	-0.16	7.12	-1.46

G – growth option *D – dividend option* *(As on 31st March 2010)*

**Introduced in Sept. 2000;* *Source: author's own calculation*

Table -6 shows the Compound Annual Growth Rate (CAGR) of the selected Income Schemes calculated on the basis of average annual return of the year 2000-2001 and 2009-2010. It can be clearly seen that in terms of CAGR, ICICI Prudential Income fund growth option has given the best results (8.66%). It means that the overall growth of the fund over these 10 years, taking into account the impact of compounding, is 8.66%. On the other hand the worst amongst the lot is UTI Bond Fund dividend option a public sector fund giving a CAGR of -1.46%. Other private sector funds i.e. HDFC Income fund and Reliance Income fund have also shown better results as compared to public sector Income funds. Hence according to this parameter also public sector income schemes are lagging behind in both the options dividend as well as growth.

HDFC Income Fund*	***ICICI Pru Income Plan***	***Reliance Income Fund***	***SBI Magnum Income Plan***	***UTI Bond Fund***

Risk Adjusted CAGR

In simple words, risk adjusted Compound Annual Growth Rate computes the growth achieved by a fund, assuming that it occurs at a steady rate with fixed levels of risks. The basic principle behind using risk adjusted CAGR is that we cannot look at the probable profit of any portfolio and merely rank them in terms of appeal. The rationale is that it's likely to extract profits by doing extremely unintelligent things, such as taking on risky ventures which have very minimal chances of changing into success stories.

Table –7

Comparative Table of Risk Adjusted CAGR (%) of the selected Income Scheme

G – growth option *D – dividend option* *(As on 31st March 2010)*

G	D	G	D	G	D	G	D	G	D
6.84	- 0.09	8.17	1.21	7.91	1.69	5.53	- 0.16	6.87	- 1.33

**Introduced in Sept. 2000; Source: author's own calculation*

Table -7 shows the risk adjusted Compound Annual Growth Rate of the selected Income schemes calculated on the basis of the daily NAV starting from 1st April 2000 upto 31st march 2010. The maximum compound annual growth rate achieved after considering the risks factor is by ICICI Prudential Income scheme growth option (8.17%) which is a private sector sponsored fund. As compared to this value the maximum from the public sector side is of UTI Bond Fund at 6.87% (growth option). The worst least risk adjusted Compound Annual Growth Rate is of UTI Bond Fund dividend option (-1.33%). Which means that given the level of risks this fund undertook, it reduced the value of its portfolio by 1.33% in the decade under consideration. Hence it can be summarized that under the parameter of risk adjusted Compound Annual Growth Rate private sector income schemes are performing well again as compared to their counterparts public sector sponsored.

Expense Ratio

Expense ratio is measure of what it costs an investment company to operate a mutual fund. The maximum and the minimum expense ratio during the study period have also been mentioned for better analysis of the results. The expense ratios of equity and debt funds differ. In the table -8 average Expense Ratios of the selected income schemes have been given on the basis of the data for the period starting from 1st April 2000 upto 31st March 2010.

Table –8

Comparative Table of expense ratios (%) of the selected Income Schemes

G – growth option *D – dividend option* *(As on 31st March 2010)*

SCHEME NAME	HDFC Income Fund*	ICICI Pru Income Plan	Reliance Income Fund	SBI Magnum Income Plan	UTI Bond Fund
Average	1.78	1.77	1.44	1.58	1.32
Maximum	2.11	2.10	1.80	1.85	1.07

Minimum	1.40	1.58	0.73	1.18	1.31

**Introduced on Sept.2000*

The least expense ratio recorded by an income scheme during the study period of 10 years starting from 1st April 2000 is of Reliance Income Fund (private sector sponsored) at 0.73% which means that its operational expenses are very limited. HDFC Income Fund is paying the maximum of 2.11% of its return on AUM. Average expense ratio is also maximum of HDFC Income Fund at 1.78%. The least average is of UTI Bond Plan a public sector fund at 1.32% which means that on an average in the study period it has incurred only 1.32% of it profits earned as its expenses for managing its this fund. Therefore it can be summarized that public sector is better off in this case.

SUMMARY AND CONCLUSION

The present study is an attempt to analyze and compare the performance of a few selected public sector and private sector income schemes on the basis of their NAVs and returns recorded for the period of ten years starting from 1st April 2000 up to 31st March 2010. The evidences have clearly revealed the following:

1. In income schemes close ended schemes are almost at par with open ended types. They have seen tremendous growth in their number of schemes from 91 on 31st march 2001 to 330 on 31st march 2010.
2. Double digit contribution of the income schemes towards the total AUM of the Indian mutual fund industry shows the high level of acceptance of this scheme by the mutual fund investors.
3. The highest average NAV recorded by a private sector income scheme mutual fund during the study period was 30.33 by Reliance Income Fund (growth option) in the financial year 2009-2010. While in case of public sector income schemes the highest average NAV of 26.02 recorded was by UTI Bond Fund (growth option) in the same year. This shows that there is not much scope of growth in this sector in terms of NAV.
4. On the basis of the total return of mutual funds in the last decade it can be concluded that private sector funds are at the forefront in providing composite returns to its investors.

5. Another conclusion which can be derived is it is more difficult to assess the returns of a public sector scheme.
6. After comparing the Sharpe's ratio of all the selected schemes it can be concluded that public sector income schemes are the most risk attuned schemes.
7. In the end on the basis of the study the examined income schemes can be adjudged slight evidently. Reliance Income fund which has given best results in case of maximum parameters can be said to be better than the others. The income fund which has given negative results in maximum number of parameters belongs to SBI income fund and HDFC income fund. Average performer amongst the lot is UTI Bond Fund and ICICI fund.
8. It can be clearly seen in the study that in terms of CAGR, private sector has given the best results (8.66% by ICICI Prudential Income fund growth option.).
9. It can also be concluded that under the parameter of risk adjusted Compound Annual Growth Rate private sector income schemes are performing well again as compared to their counterparts public sector sponsored.
10. The minimum expense ratio achieved by an income scheme during the study period of 10 years starting from 1st April 2000 was of Reliance Income Fund (private sector sponsored) at 0.73%.

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