



Statistical Evaluation And Comparison Of IDBI Nifty Index (G) And IDFC Nifty (G) Mutual Funds

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Abstract:

The two mutual funds, IDBI Nifty Index (G) and IDFC Nifty (G) are compared and the performances were appraised. Both the funds have features in common, including the inception at the same time. The funds considered for the study were kept to a minimum in order to include the granular details. The portfolio characteristics are summarized by graphical representation to the extent possible. Statistical evaluation was performed with S&P CNX Nifty as benchmark index and the evaluation parameters: correlation, standard deviation, linear regression, Sharpe's Index, Treynor's Index, Jensen's Alpha, Fama's Measure and M^2 .

Keywords : Comparison and performance evaluation, IDBI Nifty Index (G) and IDFC Nifty (G) Mutual Funds

1.Introduction

Mutual funds offer a wide product range, convenience, tax-efficiency and other facilities to successfully implement a financial plan, these influence lot of investors to invest in mutual funds, also there is hectic competition has been arisen in the capital market. Different scheme providers provide different facilities and follow innovative promotional techniques to attract the new customers to sellout their products. Comparatively performance of mutual funds has to be analyzed properly. Companies, regulating bodies, exchanges like BSE, NSE, UTI have to arrange various tools, methods to analyze the performance of the mutual funds which are in trade, and the right results, information to be transparent to all the investors who hold the mutual funds units. Implementation of technological techniques in measuring performance, risk and return, portfolio selections, units allotted process will provide accurate results about the position of scheme in the market that will induce the investors to invest on mutual fund schemes.

Mutual Funds have become a widely popular and effective way for investors to participate in financial markets in an easy, low-cost fashion, while muting risk characteristics by spreading the investment across different types of securities, also known as diversification, which can play a central role in an individual's investment strategy. Mutual funds offer the potential for capital growth and income through investment performance, dividends and distributions under the guidance of a portfolio manager who makes investment decisions on behalf of mutual fund unit holders. Over the past decade, mutual funds have increasingly become the investor's vehicle of choice for long-term investment. It becomes pertinent to study the performance of the mutual fund. The relation between risk-return determines the performance of a mutual fund scheme. As risk is commensurate with return, therefore, providing maximum return on the investment made within the acceptable associated risk level helps in segregating the better performers from the laggards. As the choice is becoming wider and wider, it becomes an absolute necessity to evaluate the performance for a right selection. The choice may be further narrowed by comparison of funds of similar origin and characteristics.

2.Literature Review

Sapar & Narayan (2003) examines the performance of Indian mutual funds in a bear market through relative performance index, risk-return analysis, Treynor's ratio, Sharpe's ratio, Sharpe's measure, Jensen's measure, and Fama's measure with a sample of 269

open ended schemes out of total schemes of (433). The results of 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 based on both premium for systematic risk and total risk. Rao D. N (2006) studied the financial performance of select open-ended equity mutual fund schemes for the period 1st April 2005 - 31st March 2006 pertaining to the two dominant investment styles and tested the hypothesis whether the differences in performance are statistically significant. The analysis indicated that growth plans have generated higher returns than that of dividend plans but at a higher risk studied classified the 419 open-ended equity mutual fund schemes into six distinct investment styles. Agrawal Deepak & Patidar Deepak (2009) studied the empirically testing on the basis of fund manager performance and analyzing data at the fund-manager and fund-investor levels. The study revealed that the performance is affected by the saving and investment habits of the people and at the second side the confidence and loyalty of the fund Manager and rewards- affects the performance of the MF industry in India. Mehta Sushilkumar (2010) analyze the performance of mutual fund schemes of SBI and UTI and found out that SBI schemes have performed better then the UTI in the year 2007-2008. Selvam et.al (2011) studied the risk and return relationship of Indian mutual fund schemes. The study found out that out of thirty five sample schemes, eleven showed significant t-values and all other twenty four sample schemes did not prove significant relationship between the risk and return. According to t-alpha values, majority (32) of the sample schemes' returns were not significantly different from their market returns and very few number of sample schemes' returns were significantly different from their market returns during the study period.

3.Objectives Of The Study

- To evaluate and compare the characteristics and performance of (i) IDBI Nifty Index Fund – Growth option and IDFC Nifty Fund – Growth Option
- To compare the performance of the above mutual fund schemes vis-à-vis the market, S&P CNX Nifty

The funds selected for the study have few factors in common which includes launching period.

4.Methodology

The funds selected for the study are based on similarities in the background and characteristics. For the comparison of mutual funds generally consider very large number of funds and all the members of a group of funds with different characteristics like the time of inception. Further, all the statistical evaluation tests are applied. This is likely to result in missing the detailed examination of the minor aspects of comparison. The present study is expected to fill the gap in this direction.

With this background, now marched ahead for the evaluation of these funds. The evaluation started from the inception time of the funds, which is nearly the same to the present date, first half of the financial year 2012-13. The monthly NAV values of the funds were collected from the fund site and compounded for annual returns. (R_P). Similarly the annual returns of the market index, S&P CNX Nifty (R_M) were also computed. The risk free index (R_F) was taken as the Savings Bank Account interest rate offered by state Bank of India, which is 4% for the years 2002 and 2012 and 3.2% for the rest of the years, corresponding to 0.330 and 0.292% respectively.

The statistical evaluation parameters, correlation, standard deviation (σ), (Table.4.) Treynor's Index (T_i), Sharpe's Index (S_i), Jensen's Alpha (α_J), Fama's Measure (F_P) and M^2 (Table.5.) were computed from the above values of R_P , R_M and R_F for the appraisal of the funds.

4.1.Industrial Development Finance Corporation (IDFC)

IDFC is a leading private sector diversified financial institution established by a consortium of strong global and local institutions with the support and sponsorship of the Government of India.

A majority of IDFC's shareholding (67% as of March 31, 2008) is held by reputed global stalwarts that include respectable names like Government of India, International Finance Corporation (IFC) - a member of the World Bank Group, Government of Singapore, AIG, Morgan Stanley, Goldman Sachs, Citigroup, JP Morgan among others. The best Indian financial institutions such as HDFC, LIC, SBI, and IDBI are owners in IDFC, making it an institution of high repute and standing.

IDFC Mutual Fund is sponsored by Infrastructure Development Finance Company Limited (IDFC). The sponsor is the settler of the Mutual Fund Trust. The sponsor has entrusted a sum of Rs. 30,000 to the Trustees as its contribution towards the corpus of the Mutual Fund.

IDFC is a leading diversified financial institution providing a wide range of financing products and fee-based services with infrastructure as its focus area. IDFC's key businesses include project finance, investment banking, asset management, principal investments and advisory services. IDFC also works closely with government entities and regulators in India to advise and assist in formulating policy and regulatory frameworks that support private investment and public-private partnerships in infrastructure development. The Corpus of IDFC Mutual Fund as at 30th September, 2012 stood at 28,004.19 crores.

IDFC was established in 1997 as a private sector enterprise by a consortium of public and private investors and operates as a professionally managed commercial entity. IDFC listed its equity shares in India pursuant to an initial public offering in August 2005. As on March 31, 2010, IDFC's shareholders included the Government of India – 20.10%, FII/FDI – 45.4% and public / others – 34.5%.

4.2.IDFC Nifty Scheme

Open Ended Index Linked Equity Scheme

4.3.Investment Objective

The investment objective of the scheme is to replicate the S&P CNX Nifty index by investing in securities of the S&P CNX Nifty Index in the same proportion/weightage. However, there is no assurance or guarantee that the objectives of the scheme will be realized and the scheme does not assure or guarantee any returns.

4.4.Liquidity

Units of the scheme may be purchased or redeemed on every Business Day at NAV based prices subject to the prevailing load structure. The units of the Scheme are presently not proposed to be listed on any exchange. Investors having a bank account any Bank with whom the Fund has an arrangement from time to time can avail of the facility of direct debit/credit to their account for purchase/sale of their units. The Fund shall under normal circumstances, Endeavour to dispatch the redemption proceeds within 3 (three) business days from the date of acceptance of redemption request at any of the official point of acceptance of transactions. As per the SEBI Regulations the dispatch shall under no circumstances be later than 10 (ten) Business Days from the date

of such acceptance. NAV shall be calculated up to four decimal places and declared on each business day.

Asset Class	Range of allocation (% of Net Assets)	Risk Profile
Securities (including derivatives) forming a part of the S&P CNX Nifty Index	90 - 100	High
Debt & Money Market instruments	0-10	Low to medium

Table 1: Asset Allocation

The net assets of the scheme/Plan will be invested predominantly in stocks constituting the S&P CNX Nifty and / or in exchange traded derivatives on the S&P CNX Nifty. This would be done by investing in almost all the stocks comprising the S&P CNX Nifty Index in approximately the same weightage that they represent in the S&P CNX Nifty Index and / or investing in derivatives including futures contracts and options contracts on the S&P CNX Nifty Index. A small portion of the net assets will be invested in money market instruments permitted by SEBI / RBI including call money market or in alternative investment for the call money market as may be provided by the RBI, to meet the liquidity requirements of the scheme/plan and for meeting margin money requirement for Nifty futures and/or futures of stocks forming part of the Nifty Index. Further in case wherein the minimum lot size of the index scrip's is not available, then the scheme shall invest in debt and money market instruments.

4.5. Industrial Development Bank of India (IDBI)

Sponsored by IDBI Bank, the IDBI Asset Management Limited was incorporated under the Companies Act, 1956 on 25th January 2010. The Trustee Company has appointed IDBI Asset Management Limited to manage the Mutual Fund. IDBI Mutual Fund has been set up as a trust sponsored by IDBI Bank Ltd. (liability restricted to Rs.10 lakhs) with IDBI MF Trustee Company Ltd. as the Trustee (Trustee under the Indian Trusts Act, 1882) and with IDBI Asset Management Ltd. as the Investment Manager. The Corpus of IDBI Mutual Fund as at 30th September, 2012 was 5,412.82 crores. As one of

India's largest banks, IDBI has played a major role in the country's industrial & economic progress for over 40 years, first as a development financial institution & later as a full-fledged Commercial Bank.

4.6.IDBI Nifty Index Fund

4.6.1.Type Of The Scheme

An open-ended passively managed equity scheme tracking the S & P CNX Nifty Index

4.6.2.Investment Objective Of The Scheme

The investment objective of the scheme is to invest only in and all the stocks comprising the S&P CNX Nifty Index in the same weights of these stocks as in the Index with the objective to replicate the performance of the Total Returns Index of S&P CNX Nifty index. The scheme may also invest in derivatives instruments such as Futures and Options linked to stocks comprising the Index or linked to the S&P CNX Nifty index. The scheme will adopt a passive investment strategy and will seek to achieve the investment objective by minimizing the tracking error between the S&P CNX Nifty index (Total Returns Index) and the Scheme.

The asset allocation pattern for the scheme is detailed in the table below:

Instrument	Indicative allocation (% of total assets)		Risk Profile
	Minimum	Maximum	
Stocks in the S&P CNX Nifty Index and derivative instruments linked to the S&P CNX Nifty Index	95%	100%	Medium to High
Cash and Money Market Instruments including money at call but excluding Subscription and Redemption Cash Flow	0%	5%	Low to Medium

Table 2: Asset Allocation Pattern

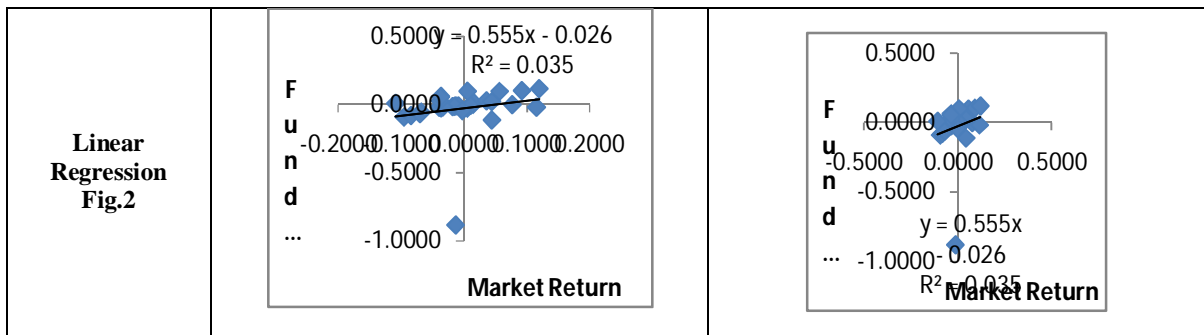
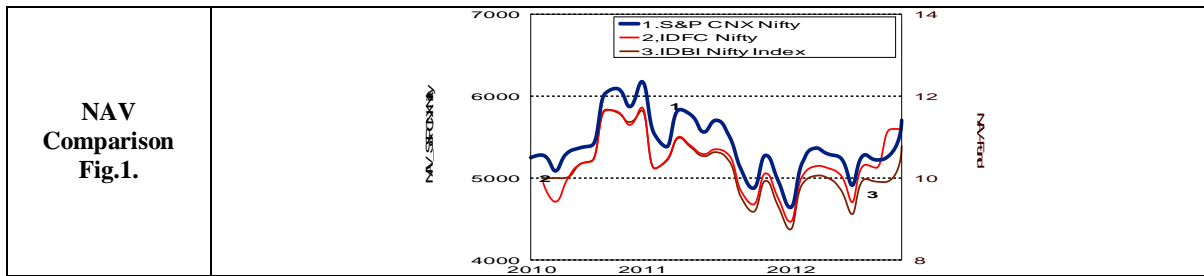
Subscription Cash Flow is the subscription money in transit before deployment and Redemption Cash Flow is the money kept aside for meeting redemptions. Subscription

monies will be treated as cash-in-transit until realized and transferred to the operative account of the Scheme. Similarly redemption proceeds will be treated as cash-in-transit out of the operative account of the Scheme. The above procedure is adopted to track the Index more efficiently and reduce the tracking error in the Scheme. The scheme does not intend to invest in ADRs/GDRs or foreign securities or securitized debt. Investments in Derivative instruments linked to the S&P CNX Nifty Index will be permitted subject to a maximum limit of 50% of the net assets of the scheme. The gross investment in securities under the scheme, which includes equities and equity linked instruments, debt securities, money market instruments and gross exposure to derivatives will not exceed 100% of the net assets of the scheme. Pending deployment of funds as per the investment objective of the Scheme, the funds may be parked in short term deposits of the Scheduled Commercial Banks, subject to guidelines and limits specified by SEBI. In the event the S&P CNX Nifty is dissolved or is withdrawn by IISL or is not published due to any reason whatsoever, the Trustee reserves the right to modify the Scheme so as to track a different suitable index and/or to suspend tracking the Nifty Index and appropriate intimation of the same will be sent to the Unit holders of the Scheme. In such a case, the investment pattern will be suitably modified to bring it in line with the composition of the securities that are included in the new index to be tracked and the performance of the scheme will be subject to tracking errors during the intervening period. Provided further and subject to the above, any change in the asset allocation affecting the investment profile of the Scheme shall be effected only in accordance with the provisions of sub regulation (15A) of Regulation 18 of the Regulations. Subject to the Regulations, the asset allocation pattern indicated above may change from time to time, keeping in view market conditions, market opportunities, applicable regulations and political and economic factors. It must be clearly understood that the percentages stated above are only indicative and not absolute and that they can vary substantially depending upon the perception of the AMC, the intention being at all times to seek to protect the interests of the Unit holders. Such changes in the asset allocation pattern will be for short term and defensive considerations.

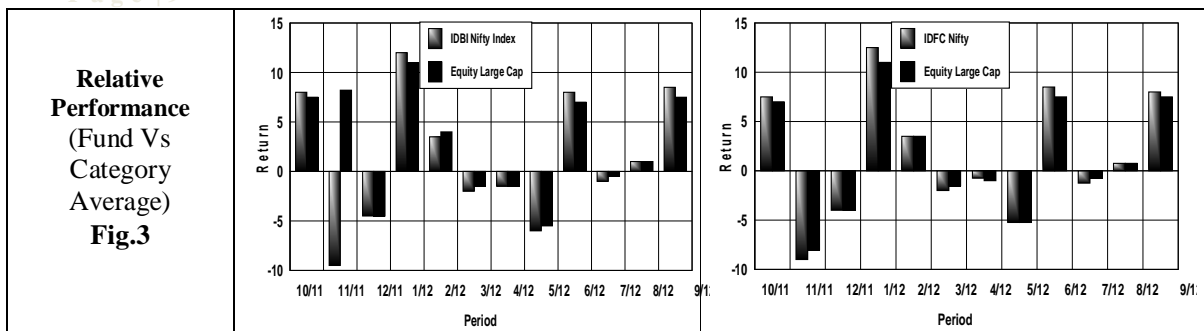
4.7. Comparison of IDBI Nifty Index and IDFC Nifty (Growth Option)

		IDBI Nifty Index	IDFC Nifty
Fund class		Index	Index
Fund type		Open ended	Open ended
Ranking		2	4
Scheme asset (₹, cr)		152.27 Sep-30-2012	2.02 Sep-30-2012
Inception Date		May 31, 2010	Apr 23, 2010
Benchmark		S&P CNX Nifty	S&P CNX Nifty
Minimum Investment (₹)		5000	500
AMC/Fund Family		IDBI Asset Management Ltd.	IDFC Asset Management Company Private Limited
AMC Asset (₹, cr)		5,412.82 Sep-30-2012	28,004.19 Sep-30-2012
NAV	Latest	10.568 (Oct-30-2012)	10.95980 (Oct-30-2012)
	52 weeks	high	10.933 (Oct 04, 12)
		low	8.705 (Dec 19, 11)
Risk & Return Grade		Not rated	Not rated
Investment Valuation		Stock Portfolio	
Portfolio P/B Ratio		4.71	4.73
Portfolio P/E Ratio		20.32	20.30
Best period	Month	13.44(16/01/2012-15/02/2012)	13.55(16/01/2012- 15/02/2012)
	Quarter	17.33(07/07/2010-06/10/2010)	17.76(07/07/2010- 06/10/2010)
	Year	15.98(07/10/2011-08/10/2012)	17.90(07/10/2011- 08/10/2012)
Worst Period	Month	-14.32(27/07/2011- 6/08/2011)	-13.95(27/07/2011- 26/08/2011)
	Quarter	-16.56(10/11/2010- 9/02/2011)	-16.82(10/11/2010- 9/02/2011)
	Year	-24.71(31/12/2010- 2/01/2012)	-23.56(31/12/2010- 02/01/2012)
Entry Load		Nil	Nil
Exit Load		1% for redemption within 1 yr	1% for redemption within 1 yr

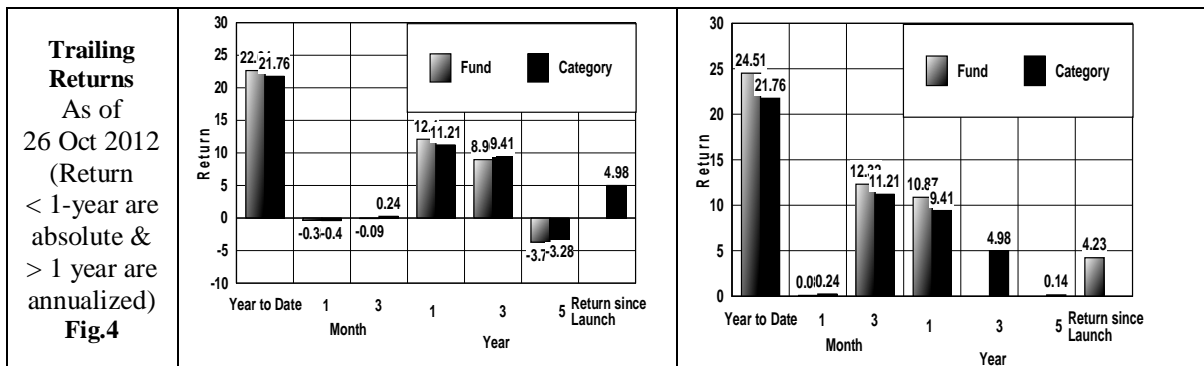
Table 3: Current statistics and Profile

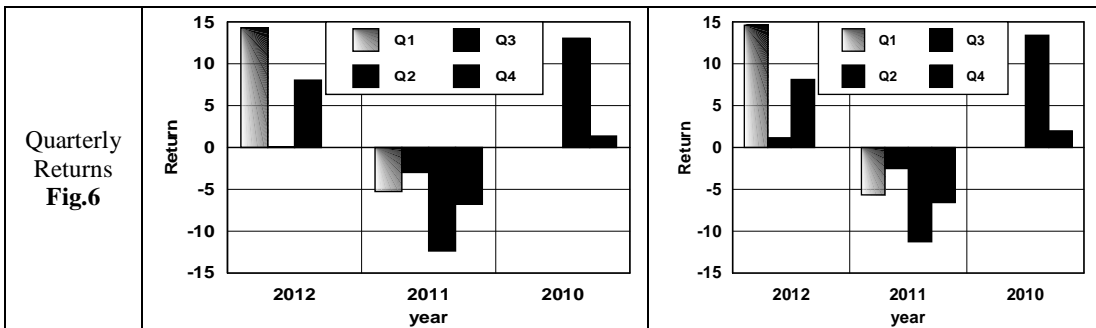
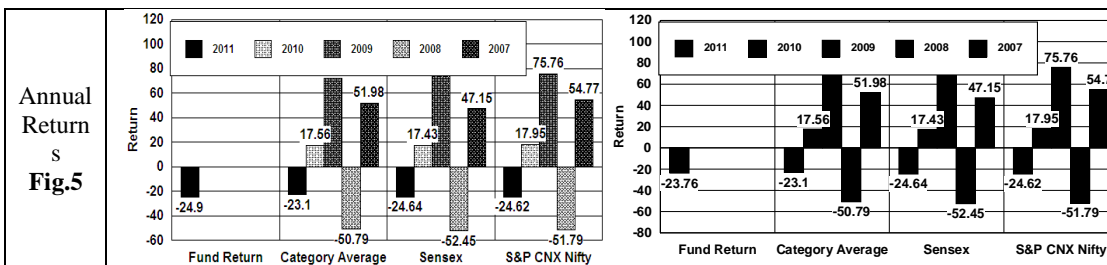


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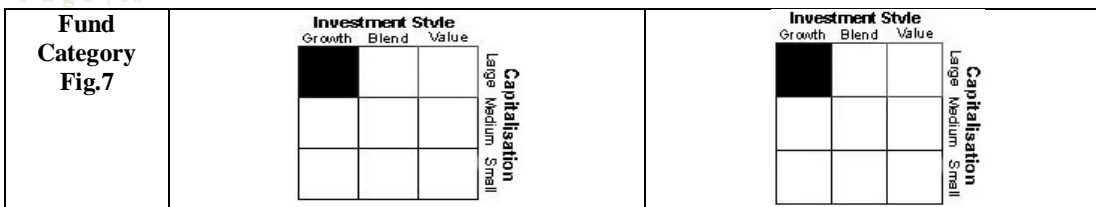


5. Performance

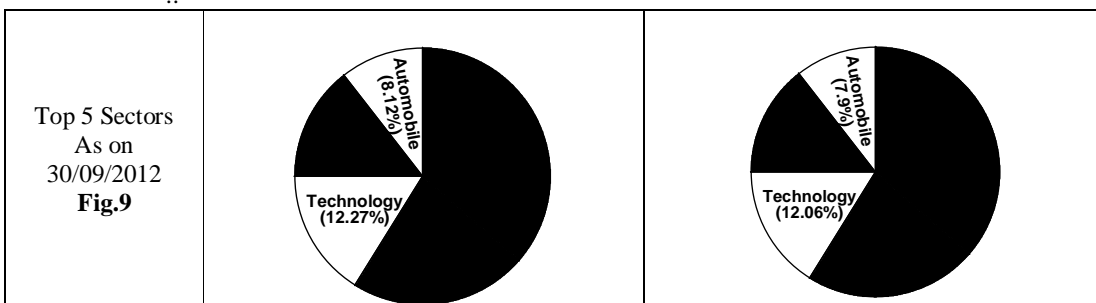
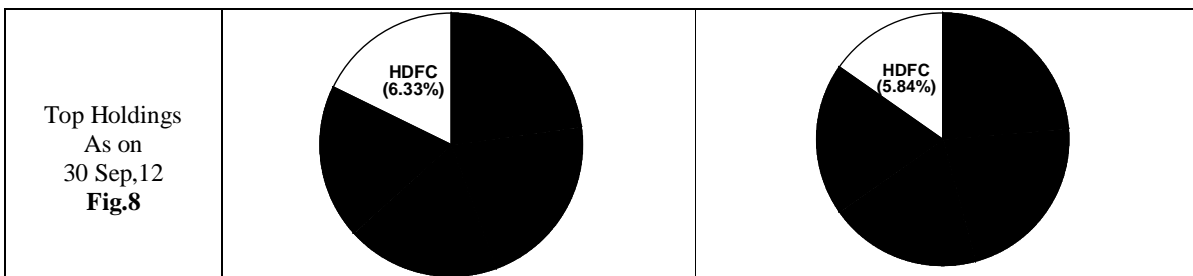


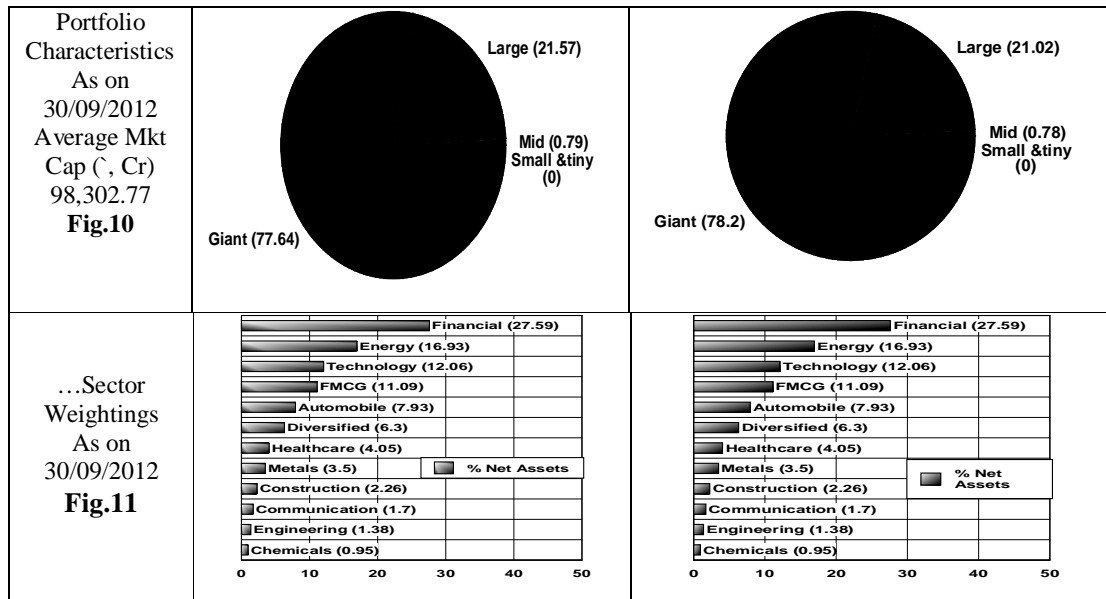


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6.Portfolio





7.Methodological Limitations Of The Study

- The NAV values used in the study are obtained from AMFI’s website, which in turn is supplied by the members. Members in turn have not followed any uniform rule in its computation due to the flexibilities offered under SEBI regulations.
- Initially all mutual fund schemes were directly linked to stock market. In the recent 2 years numerous schemes which are independent of stock market (debt & money market funds) are introduced and such schemes’ returns need not have correlation with index, and the index is not adjusted for dividends.
- Banks are free to accept deposits at any interest within the ceilings fixed by Reserve Bank of India and interest rates can vary from client to client. Hence, there can be an inaccuracy in the risk-free rates.
- The study revolves around open ended Growth schemes.
- The analysis is not free from the limitations of non-identical time periods and unequal sample observations.
- The study excludes the effect of entry and exit loads of the mutual funds.

8.Result

The results of the Portfolio Return (R_p), Market Return (R_M), Standard Deviation (σ) and correlation coefficient are included in Table 4

	IDBI Nifty Index		IDFC Nifty		S&P CNX Nifty	
	R _P	σ	R _P	σ	R _M	σ
2012-13*	0.0154	0.0523	0.001479	0.0457	0.0049	0.0490
2011-12	-0.0092	0.0605	-0.16777	-0.1674	-1.2000	0.06663
2010-11	-0.00114	0.0501	0.005100	0.2619	0.5800	0.06025
Overall	0.0017	0.0543	-0.0537	0.0467	-0.2050	0.0586
(Corr) _{R_P,R_M}	0.5971		0.3367			

Table 4

* First half of the FY 2012-13

Correlation between the fund and the market is below average for both the funds. The IDBI Nifty has a better correlation than the other fund. The standard deviation is very low in all the cases, indicating the steady state performance.

9. Statistical Evaluation

The data relating to the returns are subjected to statistical evaluation. The results are indicated in Table 5

Fund→	IDBI Nifty Index					IDFC Nifty				
	S _h	T _h	α_J	F _P	M ²	S _h	T _h	α_J	F _P	M ²
2012-13*	-6.02	-0.4094	0.0802	0.0324	0.7004	-7.18	-0.5043	0.1182	-0.0250	0.6886
2011-12	-5.61	-0.3391	-1.2005	1.0501	1.8265	-1.90	-8.2467	0.2376	5.5161	0.8602
2010-11	-5.85	1.1801	0.2205	-0.5328	0.0678	-4.97	0.8723	0.1973	-0.5629	0.1454
Overall	-5.82	0.1439	-0.2999	0.1832	0.8649	-3.05	-2.9077	0.2507	0.7143	0.5198

Table 2: Statistical Evaluation Parameters

10. Discussion

A cursory glance at the evaluation parameters will tell whether the funds have fared well in terms of the performance. Not all the years are productive. The overall negative Sharpe value resonates about the funds performance over the years. The basic premise of Sharpe index is whether the performance is due to smart decision of the fund manager or due to additional risks. The Treynor index for the both the funds selected have thrown negative values in 2011-12 and first half of 2012-13, which is indicative of the fact, the funds have not tried to catch up with the market returns. IDFC Nifty fund exhibited positive alpha for the entire period of study whereas IDBI Nifty index has shown

negative sign in the year 2011-12 which brought the overall performance to a negative track. The positive value of Fama's during the years 2011-12 for both the funds tempts and helps the investor to judge the skills of the fund manager.

IDBI Nifty Index Fund has shown highest M^2 value in the year 2011-12.

11. Conclusion

Evidently, one cannot go blindly as per the statistical results, the investor should bear in mind the risk bearing capacity at different time intervals and should be vigilant, not to get deceived by the funky name tags attached to the funds. Above all, these funds come with a statutory warning "Past performance might not be sustained in future and Investments in mutual funds are subject to market risks, and one should read the offer document carefully before making any investment decision"- A common caveat.

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