Performance of Diversified Equity Funds in India: A Study of Select Schemes of HDFC Asset Management Company

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Abstract: Mutual fund is a vehicle through which the funds of different investors are pooled and invested in different debt and equity instruments. It throws a challenge to the manager of the specific fund to invest the fund in a manner to bring out the best of returns for the investors. A lot of research regarding market and allied aspects and a sustained active fund management results in realization of returns for the unit-holders. From its inception in the early 1960s with a single player Unit Trust of India, the mutual fund industry, over the years, has become very competitive with the presence of a number of Fund Houses who offer a variety of funds to cater to the myriad investment objectives of investors. The funds are tailored to meet the risk appetite of various investors. SEBI with its various investor-friendly measures has instilled credibility of the above investment institution in the minds of general investors. The performance analysis of fund houses in general, and categories of funds cutting across fund houses in particular, are going on continuously in an endeavour to find out the more efficient funds and fund houses, so that investors can park their savings. In this paper, an attempt has been made to analyze the performance of a few funds belonging to HDFC fund house.

Key-words: Mutual fund, fund management, fund house, assets under management, performance analysis.

1. Introduction

A Mutual Fund is a trust that pools together the resources of investors and invests the same in securities in accordance with the objectives disclosed in the offer document. The investment in securities is spread across a wide cross-section of industries which help in reduction of risk. An investor, by investing in the units of any mutual fund, becomes the part owner of the assets of the fund. Investors in mutual funds are known as unit holders. Any mutual fund has to get it registered before it can collect funds from public. When the value of the Mutual Fund's investments goes up, the return of the investor goes up and vice versa. The funds are managed by the professionals trained in security analysis. Fund houses offer a wide variety of mutual fund schemes to suit the investors' risk appetite, return expectations, age etc. Open-ended funds have perpetual existence and a flexible corpus which is ever changing. Investors are free to buy and redeem any number of units of such funds at any point of time at the prevailing Net Asset Value (NAV). Therefore, there is always the possibility of withdrawals or redemptions. As a result, management of such funds has become one of the very challenging tasks. Equity Funds are those funds which invest predominantly in equity and equity related instruments. A mutual fund, in order to be classified as equity fund, must invest at least 65% in domestic (Indian) equity. Diversified equity funds invest in the stocks of companies across different sectors and industries. No single stock or sector dominates the portfolio. These funds are less risky because of adequate diversification. Some funds may invest entirely in large-cap stocks as a result of which liquidity increases and risk reduces further. Some funds may prefer to invest in large-cap as well as in mid-cap stocks, while some may take more risk by investing the major portion in mid-cap and small-cap stocks.

Worldwide, mutual fund has a long and successful history. The popularity of mutual fund in developed financial markets across the globe has increased manifold over the years. In India, the journey of mutual fund started in the year 1963 with the setting up of Unit Trust of India (UTI). Riding on favourable economic and demographic factors and investor-friendly regulatory environment, the mutual fund industry of India has witnessed phenomenal quantitative growth in terms of Assets under Management (AUM) which is depicted in Table 1 below.

Table 1: Growth in AUM over the Years

Month and Year	AUM (INR crore)	Month and Year	AUM (INR crore)
March, 1965	25	March, 2006	231862
March, 1987	4564	March, 2007	326388
March, 1993	47000	March, 2008	505152
February, 2003	87190	March, 2009	417300
March, 2003	79464	March, 2010	613979
March, 2004	139616	March, 2011	592250
March, 2005	149554	March, 2012	587217

Source: AMFI

AMCs that were able to maintain their bottom line green in the Financial Year 2011 have been shown in Table 2.

Table 2: Profit-making AMCs

AMC	AUM as on Dec 2011	Net Profit (INR crore) in FY2011	Net Profit (INR crore) in FY2010	Net Profit (INR crore) in FY2005	Accumulated Loss as on FY 2011 (INR crore)
Reliance	84300	261.27	195.13	132.95	-
HDFC	88737	242.18	208.37	129.11	-
UTI	57817	137.50	170.27	114.96	-
BSL	60406	84.54	48.45	9.27	-
SBI	42108	78.85	75.87	68.95	-
ICICI Prudential	69472	71.83	128.03	0.71	-
DSPBR	30565	46.90	51.26	40.78	-
Tata	21473	17.14	32.44	26.87	-
Sundaram	14775	13.36	20.84	10.68	-
Deutsche	13314	11.44	49.67	16.36	-
Kotak	30203	10.62	65.51	10.33	-
Canara Robeco	7356	6.11	6.29	-17.18	-
Quantum	179	4.94	3.47	0.17	-
Goldman Sachs	4349	2.11	-3.51	1.53	-
Taurus	4600	0.04	2.11	-9.91	-1.17
Franklin Templeton	37312	-	96.95	58.72	-

Source: Mutual Fund Insight, Feb 15-Mar 14, 2012, p22

Other AMCs were in the red so far as net profit for the Financial Year 2011 is concerned.

2. Review of literature

Several studies were conducted over the years on different aspects of mutual funds by academicians, researchers, regulators and committees. Moreover, many scholarly books and articles have been published over the years on different dimensions of mutual funds. The existing literature can be reviewed under two groups: (a) Review of Indian Literature; and (b) Review of Foreign Literature.

(a) Review of Indian Literature: Numerous works have been done in the area of performance evaluation of mutual funds in India. The study of Barua et al (1991) on performance evaluation of "Master Share" scheme of UTI was really a pioneering attempt in the field of research on the evaluation of performance of mutual funds in India. The period of study was from 1987 to 1991. The findings of the study revealed that "Master Share" scheme performed better in terms of systematic risk, but not in terms of total risk. Batra and Bhatia (1992) tried to analyze the performance of mutual funds on the basis of return and funds mobilized. The performances of Canbank MF, Indian Bank MF and PNB MF were appreciated by the authors. Kaura and Jayadev (1995), while examining the performance of growth-oriented schemes using Jensen, Treynor and Sharpe measures; found that these schemes have not performed well at all. Yadav and Mishra (1996) evaluated the performance of 14 close-ended schemes against the benchmark of BSE National Index. Their study period was from April, 1992 to March, 1995. The authors concluded that these schemes performed well so far as diversification and total risk were concerned, but they failed to provide adequate risk-premium per unit of systematic risk. While examining the performance of two schemes (Mastergain 1991 of UTI and'Magnum Express of SBI Mutual Fund), Jayadev (1996) found unsatisfactory diversification and insignificant selectivity and timing skills of the schemes. Chander (2000) studied the performance of 34 mutual fund schemes from January, 1994 to December, 1997 and observed that open-ended schemes outperformed close-ended schemes in terms of returns; growth and balanced funds were outsmarted by income funds; and fund managers had poor market timing abilities. Rao and Ravindran (2003) have found that most of the mutual fund schemes were able to satisfy investor's expectations by giving excess returns over expected returns based on both premium for systematic risk and total risk. Sharath (2004) examined the performance of 58 mutual fund schemes during the bear period (September, 1998 to April, 2002). Risk-return parameters indicated high total risk but low unsystematic risk. Elango (2004) made a comprehensive study on public sector and private sector mutual funds. Analytical results indicated that public sector funds showed low volatility than private sector funds. In terms of innovative schemes, private players were ahead of public sector ones. Muthappan and Damodharan (2006) evaluated the performance of 40 mutual fund schemes during the period from April, 1995 to March, 2000. It was revealed that most of the chosen schemes were able to outperform the market in terms of returns but they lagged behind the returns generated by 91-day treasury bills. The average risk of the schemes was also higher than the market. Rustagi (2007) found that mutual funds have the potential to beat inflation on a consistent basis. However, Chander (2005) and Sehgal and Jhanwar (2008) have noticed significant evidence of stock picking abilities of Indian fund managers. Tripathy (2008) used Jensen and Mazuy model and Henriksson and Merton model

in evaluating the market timing abilities of Indian mutual fund managers. The findings of the study revealed that the fund managers were not able to generate returns in excess of the market, and in some cases, their market timing was in the wrong direction. Shitole and Thyagarajan (2012) have also evaluated the performance of the schemes of three AMCs, namely, ICICI Prudential AMC, HDFC AMC, and Franklin Templeton AMC. On the whole, the authors are of the opinion that most funds were able to provide market related returns, and many schemes outperformed their respective benchmark indices.

(b) Review of Foreign Literature: Sharpe (1966), on the basis of his famous reward-to-variability ratio (popularly known as Sharpe ratio), evaluated the performance of 34 open-ended mutual funds and his study period was from 1944 to 1963. He concluded that the performance of mutual funds, on an average, was inferior to an investment in the Dow Jones Industrial Average (DJIA). He also observed that good performance of the funds was very much associated with low expense ratio. But no significant relationship was found between the fund size and its performance. Treynor and Mazuy (1966), while examining the performance of 57 mutual funds, did not find any statistical evidence that fund managers were able to anticipate the market movements in advance and opined that it was the ability of fund managers to identify under-priced stocks which could improve the rate of return of the funds. Jensen (1968) examined the performance of 115 mutual funds and concluded that there were no statistical evidences which can prove that the fund managers were able to forecast the prices of securities well enough to recover fees and research expenses. Friend and Vickers (1970) evaluated the performance of mutual funds against randomly constructed portfolios. The authors found that mutual funds, on the whole, have not showed any superior performance than the random portfolios. Friend et al (1970) studied the performance of 86 mutual funds and found no correlation between fund size and performance and that's why they concluded that the fund size has no impact on the performance of the funds. Kon (1983), while evaluating the performance of 37 funds during the period from January, 1960 to June, 1976, came up with the findings that collectively mutual funds failed to perform satisfactorily though individually a few funds showed timing skills and positive selectivity. Ippolito (1989), after analyzing the performance of 143 mutual funds during the period between 1965 and 1984, opined that the superior performance of the mutual funds was offset by expenses and loads associated with mutual funds, in the presence of costly information. Cai and Yamada (1997) conducted a study on 1151 open-ended mutual funds during the period from 1981 to 1992 and opined that most of these funds underperformed their respective benchmarks by 3.6% to 10.8% per year. Statman (2000) examined carefully the performance of socially responsible stocks and funds over the period between 1990 and 1998 and both groups of mutual funds (socially responsible funds as well as traditional funds) trailed the S&P 500 Index. Dahlquist et al (2000), in their study on 210 mutual funds during the period between

1992 and 1997, found that small equity funds, low fee funds, and in some cases, fund with good past performance managed to show good performance. Barras et al (2008) found that during the period between 1975 and 2006, 26.6% of equity funds showed negative alpha (net of expenses and trading costs) whereas only 0.6% of the funds exhibited positive alpha. One of the important conclusions that can be inferred from their study is that the proportion of truly skilled funds was very low in spite of tremendous growth in the number of actively managed funds.

To sum up, literature review of other countries in the area of evaluation of performance has revealed that market timing abilities and stock selection capabilities of mutual fund managers, on an average, are really poor and funds are not able to outperform the broader market on the whole in the long-term. The bottom line is that the markets are reasonably efficient.

Research Gap

It may be observed from the above review of literature that no study has been found to be made on the performance of the diversified equity funds of HDFC Fund House though it has the highest amount of assets under its management (AUM) as on 31.03.2012. Therefore, the present study has made an attempt to focus on this important aspect.

3. Objective of the Study

The main objective of the study is to analyze the performance of the select open-ended diversified equity schemes of HDFC Asset Management Company (AMC) in the line of risk-return parameters.

4. Data and Methodology

Many fund houses operate in the mutual fund industry in India and of them HDFC has the highest amount of Asset Under its Management (AUM) as on 31st March, 2012. The retail scheme of each of the four funds from the HDFC Fund House- HDFC CAPITAL BUILDER, HDFC TOP 200, HDFC GROWTH and HDFC EQUITY, which are in the market for more than ten years, has been selected for the study. The effect of 'Entry Load' has not been taken into consideration. The period of study is a five-year time frame starting from April 2007 to March 2012. The month end NAVs, under Growth option, of each Fund have been obtained from the official website of the fund house. The month end closing values of the respective benchmark of the funds (fixed by the fund house for each fund) have been obtained from the official website of Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). The monthly returns of the four funds and their benchmarks over the period of study have been computed with the help of MS Excel. The weighted average 91-day T-Bill rates (obtained from the official website of the Reserve Bank of India) for each year under study has been averaged to arrive at the Risk Free Rate of Return. The risk free rates, annualized return of the funds and their benchmarks have been used in many measures, through which the performances of the funds have been evaluated and compared.

5. Analysis of Performance of the Selected Schemes

Before analyzing the performance of the chosen schemes, it is worthwhile to look into some key portfolio statistics of the schemes (Table 3).

Table 3: Portfolio Snapshot

Fund/Scheme	AUM (INR crore) *	Launch Date	Expense Ratio	Equity (%)	Debt (%)	Cash (%)
HDFC Capital Builder	481	01/1994	2.23	98	0.2	1.8
HDFC Equity	9916	12/1994	1.78	98.9	0.5	0.7
HDFC Growth	1262	08/2000	1.98	95.9	2	2.1
HDFC Top 200	11381	09/1996	1.77	98.3	1.3	0.4

Source: Mutual Fund Insight, April 15-May 14, 2012

*AUM as on 31/03/2012

It is interesting to note that there exists inverse relationship between the fund size and its expense ratio. Further, all the schemes are tilted heavily towards equity having more than 95% equity component. Debt and cash components are very much negligible.

Annual returns generated by the schemes and their respective benchmarks are shown in Table 4.

Table 4: Annual Returns of the Schemes and Benchmarks

Scheme & Benchmark	Return in 2008 (%)	Return in 2009(%)	Return in 2010 (%)	Return in 2011 (%)
HDFC Capital Builder	(54.89)	92.91	28.44	(23.64)
S&P CNX 500	(57.13)	88.57	14.13	(27.19)
HDFC Equity	(49.68)	105.57	29.22	(26.72)
S&P CNX 500	(57.13)	88.57	14.13	(27.19)
HDFC Growth	(48.31)	75.26	27.71	(21.24)
Sensex	(52.45)	81.03	17.43	(24.64)
HDFC Top 200	(45.35)	94.46	25.05	(24.30)
BSE Top 200	(56.46)	88.51	16.22	(26.95)

Note: Calculated from year-end values, bold figures indicate schemes, figures in the parentheses indicate negative return

Three schemes (HDFC Capital Builder, HDFC Equity, and HDFC Top 200) outperformed their respective benchmarks in terms of annual returns for all the years from 2008 to 2011. The other scheme (HDFC Growth) managed to outperform its benchmark in 3 out of 4 years (2008, 2010, and 2011).

Table 5: Return and Volatility Measures

Measures	HDFC Capital Builder		HDFC Equity		HDFC Growth		HDFC Top 200	
	5-yr	3-yr	5-yr	3-yr	5-yr	3-yr	5-yr	3-yr
Portfolio Return (Rp) (%)	11.20	27.25	12.14	29.24	12.62	26.38	13.12	25.91
Standard Deviation of Portfolio Returns (SDp)	28.67	22.02	30.29	25.37	27.36	22.57	28.34	24.10
Return of the Benchmark Market Index (Rm) (%)	5.89	20.32	5.89	20.32	5.72	19.46	6.53	21.26
Standard Deviation of the Benchmark Market Index (SDm)	32.71	26.25	32.71	26.25	29.82	25.20	32.25	25.98
Beta(slope)	0.86	0.81	0.91	0.94	0.89	0.87	0.87	0.92
Sharpe Ratio(Portfolio)	0.12	0.88	0.14	0.84	0.17	0.82	0.18	0.75
Treynor Ratio	3.86	23.79	4.69	22.61	5.32	21.28	6.00	19.64
Jensen Alpha	5.02	9.25	6.06	9.61	6.65	8.44	6.41	5.76
Sharpe Ratio(Benchmark)	-0.06	0.47	-0.06	0.47	-0.07	0.46	-0.04	0.51
Fama	5.06	8.94	6.11	9.33	6.72	8.13	6.42	5.63
R-Squared	0.95	0.94	0.96	0.95	0.94	0.94	0.98	0.98
Adjusted R-Squared	0.95	0.94	0.95	0.95	0.94	0.94	0.98	0.98

Note: Calculation done by the authors

Table 5 shows that HDFC Equity has the best 3-year annualized portfolio return figure while Benchmark Market Index 'BSE 200' has performed the best among other similar market indices during the same period. HDFC Top 200 has the highest portfolio return (annualized return for 5 years) while the 'BSE 200' continues to be the best performer, among the benchmark market indices, in the 5 year time frame also. R-squared values of all the funds are close to 1 which signifies that the beta of the funds can be relied upon. All the funds have beta less than one indicating that they are defensive in nature and imitate the variance of the market returns to a great extent. While measuring the reward to total variability, Sharpe Ratio of the different funds show that HDFC Capital Builder (in the 3-year time frame) and HDFC Top 200 (in the 5 year time frame) have performed better than the rest while the benchmark market index of the funds have returned negative values for the same ratio in the 5-year time frame. HDFC Top 200 has the highest Rp and Sharpe Index in the 5-year time frame which is a win-win situation. The fund has the best reward to variability trade off. Treynor Index measures the ratio of risk premium to the portfolio beta. Here again HDFC Top 200 has the best result in the five year time frame. HDFC Capital Builder as a fund performed very well between April 2007 and March 2010 but somehow lost its way in the later two years. Ranking of the portfolios under both Sharpe and Treynor Measure are the same in the 3-year and 5-year time frame which means that the funds have more or less same degrees of diversification. The positive values of Jensen Alpha of the different funds show that the fund managers are efficient in selecting undervalued assets. Fama's measure of net or pure selectivity of portfolio (Khan & Jain, 2006) returns positive values for all the funds which means that the risk-return trade-off of the funds are well balanced and the fund managers have proper asset selection skills.

There are four possibilities as shown in Table 6.

Table 6: Risk-Return Possibilities

Possibility	Rp, Rm	SDp, SDm	Risk	Return	Situation
1	Rp>Rm	SDp>SDm	High	High	Aggressive
2	Rp>Rm	SDp<SDm	Low	High	Best/Most desirable
3	Rp<Rm	SDp<SDm	Low	Low	Conservative
4	Rp<Rm	SDp>SDm	High	Low	Worst

All the schemes under study satisfy the best possible criterion (Low Risk-High return).

The annualized 'SIP' returns of the funds are presented in Table 7.

Table 7: Annualized Return from Systematic Investment Plan (SIP)

Fund/Scheme	3-year SIP Return (%)	5-year SIP Return (%)
HDFC Capital Builder	7.25	10.98
HDFC Equity	7.14	12.96
HDFC Growth	8.36	11.16
HDFC Top 200	6.19	11.88

Note: Calculation done by the authors assuming investment of INR 1000 in each month on closing NAV for 36 months and 60 months respectively.

If we compare the SIP return figures with those of average annualized returns, it is seen that the former outperformed the latter in case of one scheme (HDFC Equity) in terms of 5-year returns. Further, though 5-year SIP returns from the other three schemes (HDFC Capital Builder, HDFC Growth and HDFC Top 200) are less than those of average annualized returns, the difference in return is not very high. But, so far as 3-year returns are concerned, SIP returns lagged way behind its counterpart. However, 5-year SIP returns of all the funds are more than 5-year annualized risk-free return (7.896%). But in 3-year period, only HDFC Growth has been able to generate more SIP return than 3-year annualized risk-free rate (7.89%).

6. Limitations of the Study

- The study involves analysis of funds from only one Asset Management Company, i.e., HDFC Asset Management Company. The mutual fund industry has many of such AMCs who keep the market competitive.
- The study involves only four funds while the industry has hundreds of such funds managed by different AMCs.
- The period of study involves a three year and a five year time frame ending on March 2012 while the funds are in existence for much more than the chosen time frame.
- The study has considered few measures to evaluate the performance of the chosen mutual funds. There are many more measures with their specific interpretations to evaluate the performance of mutual funds.

7. Significance of the Study

The findings of the study are expected to provide a basis for understanding the performance of open-ended diversified equity funds chosen for the purpose of study and it is expected to assist and encourage researchers and organizations to undertake similar study for the benefit of the investors in general and retail investors in particular.

8. Conclusion

Investment in securities like shares or debentures always involves risk. Overall economic scenario, performance of the company or industry, political environment, efficiency of capital market, regulatory mechanisms etc. are the different influencing factors in this respect. Mutual funds too invest in the securities and thus face market risks. It is true that risk cannot be eliminated but it can be reduced with the help of diversification and professional management. The mutual funds under study are the examples of investment products that reduce risk by building a basket of well diversified securities, which may be considered as suitable for the common man.

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