

A Comparative Analysis on Various Mutual Fund Schemes of HDFC And SBI As An Investment Option For Retail Investors In India

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Abstract: Financial planning and investment is a crucial decision in today's world, considering the various economic, political and social conditions in the world around us. Various factors like inflation, risk, income, purchasing power, age play a major role in investment decisions of an individual, considering an expectation of steady income post retirement. One of the most popular modes of investment is in the form of Mutual Fund, which is a trust that pools the savings of a number of investors, who share a common financial goal. Mutual fund industry in India is still in its nascent stages, there isn't enough awareness about it as compared to its counterparts like fixed deposits, PPF's, NSC's, insurance policies, shares & bonds, etc. This research intends to understand and evaluate investment performance of selected mutual funds in terms of risk and return, using the various statistical tools and parameters. The research has been confined to the various mutual fund schemes of SBI and HDFC and investment options and returns available to Indian investors.

Keywords: Investment, Financial Planning, Mutual Fund, SIP, Risk & Return

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I. INTRODUCTION

Investment, in the general sense, refers to an item or asset, which is purchased with a hope of generating future income or appreciation in future. In finance, investment is a monetary asset purchased with an idea that the asset will provide income in the future or will be sold at a higher price for a profit. The mutual fund industry in India started in the year 1963, with the formation of the Unit Trust of India (UTI), at the initiative of the Government of India and Reserve Bank of India. Unit Trust of India (UTI) was established on 1963 by an Act of Parliament. It was set up by the Reserve Bank of India and functioned under the Regulatory and administrative control of the Reserve Bank of India. In 1978 UTI was de-linked from the RBI and the Industrial Development Bank of India (IDBI) took over the regulatory and administrative control in place of RBI. The first scheme launched by UTI was Unit Scheme 1964. At the end of 1988 UTI had Rs.6,700 crores of assets under management. The year 1987 marked the entry of non- UTI, public sector mutual funds set up by public sector banks and Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC). SBI Mutual Fund was the first non- UTI Mutual Fund established in June 1987. At the end of 1993, the mutual fund industry had assets under management of Rs.47,004 crores. With the entry of private sector funds in 1993, a new era started in the Indian mutual fund industry, giving the Indian investors a wider choice of fund families. Also, 1993 was the year in which the first Mutual Fund Regulations came into being, under which all mutual funds, except UTI were to be registered and governed. The 1993 SEBI (Mutual Fund) Regulations were substituted by a more comprehensive and revised Mutual Fund Regulations in 1996. The industry now functions under the SEBI (Mutual Fund) Regulations 1996.

Mutual funds involve pooling of large sums of money of a large number of investors, by a mutual fund company and investment of the same in diversified portfolios, so as to gain maximum and safe returns from the investment made. A mutual fund is set up in the form of a trust, which has sponsor, trustees, Asset Management Company (AMC) and custodian. The trust is established by a sponsor or more than one sponsor who is like the promoter of a company. The trustees of the mutual fund hold its property for the benefit of the unit holders. Asset Management Company (AMC) approved by SEBI manages the funds by making investments in various types of securities. Custodian, who is registered with SEBI, holds the securities of various schemes of the fund in its custody. The trustees are vested with the general power of superintendence and direction over AMC. They monitor the performance and compliance of SEBI Regulations by the mutual fund. SEBI Regulations require that at least two thirds of the directors of trustee company or board of trustees must be independent i.e. they should not be associated with the sponsors. Also, 50% of the directors of AMC must be independent. All mutual

funds are required to be registered with SEBI before they launch any scheme. Mutual funds can be actively or passively managed.

Mutual funds offer various investment options like growth option, dividend pay-out option, dividend reinvestment option, systematic investment plan (SIP), systematic withdrawal plan (SWP), equity oriented fund, debt fund, index fund, etc. Though mutual fund investment provides a wide range of benefits in terms of professional management, diversified portfolio, tax savings, liquidity, certain risks too are associated with the same. These include risk-return trade off, market risk, political risk, inflation risk, credit risk, interest rate risk and liquidity risk. A careful and thorough knowledge about this form of investment can provide maximum returns on investment to the investors.

II. RESEARCH METHODOLOGY

Objectives of the study:

- To evaluate investment performance of selected mutual funds in terms of risk and return, using the various statistical tools and parameters.
- To compare and evaluate the performance of various schemes of mutual funds of different asset management companies on the basis of risk, return and volatility.
- To analyze which of the selected mutual funds provides better return.

Scope of the study:

The Schemes of mutual funds of the two companies have been categorized and selected for evaluating their performance and relative risk. The scope of the study is mainly concentrated on the different categories of the mutual funds such as equity schemes, debt funds, balanced funds and liquid fund and other thematic and sector specific funds of the two asset management companies namely HDFC Asset Management Company Ltd. and SBI Funds Management Ltd.

Statistical Tools used:

Statistical tools used include CAGR (Capitalized annual growth rate), Alpha, Beta, Standard deviation and Sharpe's Ratio.

Data collection method:

Secondary data has been used for the research, collected from various publications and reports of the apex bodies, publications of asset management companies, technical and trade journals, books, magazines and reports of various associations connected to the industry.

Sampling technique and size:

The sample required for the study has been selected through random sampling method from the available list of funds of the two asset management companies. A sample of six mutual fund schemes have been chosen that includes equity, debt, balanced, thematic and sector specific funds.

Plan of study:

The data has been collected from years 2005 to 2014, from the above mentioned secondary sources. These have been analyzed in order to conduct a comparative study on the better investment option available to the Indian investors among HDFC and SBI mutual fund schemes. Wherever possible, facts and graphical diagrams have been used. Such data has then been interpreted and recommendations have been developed.

III. Data Analysis and Interpretation

1. Comparison of Equity schemes of HDFC and SBI mutual funds.

	HDFC	SBI
Name of the scheme	HDFC- Capital Builder	SBI Magnum Multiplier Plus
Type of structure	Open ended	Open ended
Type of investment	Equity	Equity
Capitalization type	Large cap and Mid cap	Large cap and mid cap
Benchmark	CNX Nifty	CNX nifty
NAV	<input type="checkbox"/> 201.71	<input type="checkbox"/> 144.4265
Total Number of Stocks	46	52

Annual returns trend of Equity schemes (large cap) from 2005 to 2014:

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
HDFC	47.60	21.58	68.65	-54.89	92.91	28.44	-23.64	28.42	10.37	51.95
SBI	70.17	49.83	64.89	-55.19	87.53	19.30	-25.75	32.47	10.54	48.26
CNX Nifty	36.34	39.38	54.77	-51.79	75.76	17.95	-24.62	27.7	6.76	31.39

Analysis: From the above table we can analyze that both the funds have performed extremely well compared to the benchmark except in the years 2008 and 2011 when they incurred negative returns. HDFC and SBI had the highest return of 92.91% and 87.53% in the year 2009 respectively.

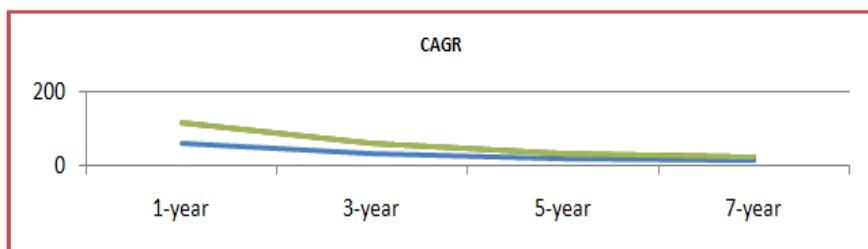
Interpretation: The fund managers have been able to adopt good strategies thereby enabling them to outperform the Index. SBI fund has sustained more losses in 2008 and 2011 as it has higher exposure to equity nearly 97% when compared to HDFC which has 95% exposure to equity.

CAGR trend of Equity (large cap) schemes:

	1-year	3- year	5-year	7-year	10-year
HDFC	58.65	28.27	16.31	10.63	19.58
SBI	56.12	28.80	14.43	9.15	22.47

III. ANALYSIS

HDFC has consistently outperformed SBI in terms of trailing returns of the fund except for the 3-year and 10-year investment period. The lowest returns gained have been for a 7-year investment period which is 10.63% and 9.15% and the highest returns gained are for a 1-year investment horizon with 58.65% and 56.12% by HDFC and SBI respectively

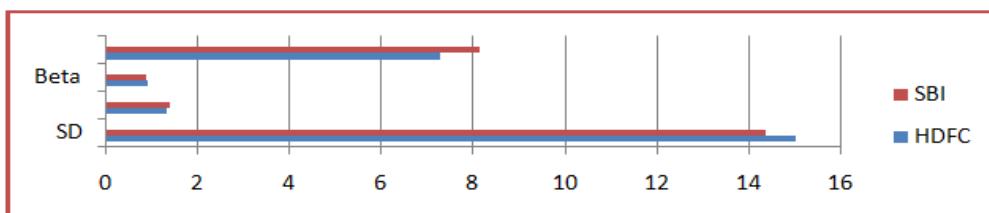


Interpretation: Both the funds have given higher returns when compared to traditional investment options like Fixed Deposits, PPFs which give 8.5%-9.5%. The investors should hence invest at for a period of 1 year to get the maximum benefit.

Risk analysis of Equity (large cap) schemes:

	Standard deviation	Sharpe's Ratio	Beta	Alpha
HDFC	15.00	1.34	0.92	7.28
SBI	14.36	1.41	0.88	8.14

Analysis: HDFC and SBI have nearly the same level of standard deviation and Beta values approximating to 15 and 0.92 respectively. HDFC and SBI both have a positive Sharpe's ratio and both the funds have Alpha values of greater than 1.

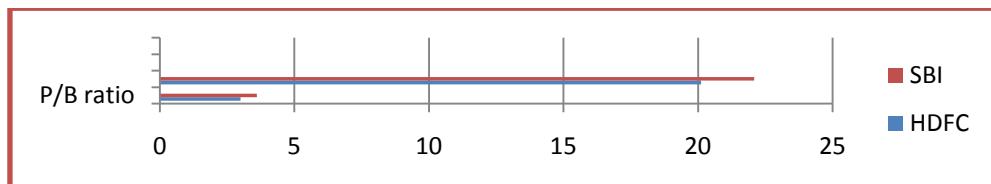


Interpretation: Both the funds have high standard deviations indicating considerable amount of risk. SBI has a lower Beta value of 0.88 than HDFC which has a Beta value of 0.92 which means that SBI will perform better than HDFC in a bear market. The Sharpe's Ratio of HDFC is lower than SBI value, which means that it would be better for an investor to invest in a riskless asset instead. Hence in terms of risk, SBI Magnum Multiplier Plus is a better performer.

Portfolio Valuation of Equity (large cap) schemes

	HDFC	SBI
P/B Ratio	3.00	3.60
P/E Ratio	20.11	22.09

Analysis: SBI has higher P/E and P/B ratios of Rs.22.02 and Rs.3.60 against HDFC which has P/E and P/B ratios of Rs.20.11 and Rs.3.00 respectively.



Interpretation: The P/E ratio indicates that an investor would have to pay Rs.22.09 and Rs.20.11 per rupee of earnings for SBI and HDFC respectively; hence an investor would have to shell out more for a rupee of earning in case of SBI. Also P/B ratio specifies if the fund is undervalued or overvalued, SBI has a higher ratio than HDFC. These two figures indicate that SBI is following a more aggressive growth strategy when compared to HDFC.

Portfolio Expense of Equity (large cap) schemes:

	HDFC	SBI
Expense ratio	2.76	2.59

Analysis: SBI has a lower expense ratio of 2.59% when compared to 2.76% of HDFC.

Interpretation: The expense ratio represents the operating expenses incurred by the fund. According to the chart above we can notice that HDFC Capital Builder has higher expense ratio indicating that an investor would have to pay 2.76% of the value he invested to cover the operating expenses apart from the sales load and brokerage. Thus it is cheaper for an investor if he invests in SBI Magnum Multiplier Plus.

2. Comparison of Debt schemes of HDFC and SBI mutual funds.

	HDFC	SBI
Name of the scheme	HDFC cash management savings	SBI Magnum Insta Cash
Type of structure	Open ended	Open ended
Type of investment	Debt : Liquid	Debt : Liquid
Benchmark	NSE Treasury Bill	CRISIL Liquid
NAV	₹ 28.70	₹ 30.39
Total Number of Securities	65	28

Return Analysis of Debt Schemes:

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
HDFC	5.41	6.71	8.20	8.99	5.5	5.41	8.85	9.73	9.21	9.07
SBI	5.33	6.4	7.67	8.86	4.82	5.43	8.73	9.35	9.33	9.03
NSE Treasury Bill	5.78	6.14	7.87	7.73	6.08	4.47	7.33	8.52	8.29	8.78

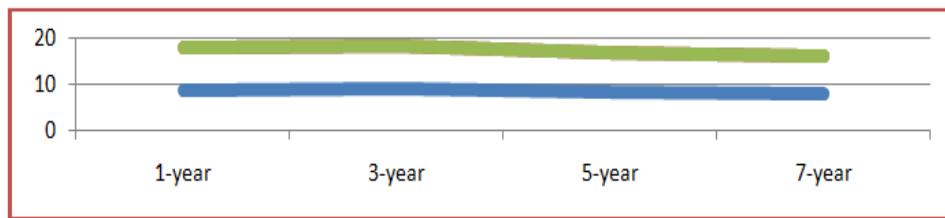
Analysis: Both the funds have outperformed the benchmark on a consistent basis except in the year 2009. The highest annual return generated by HDFC and SBI was 9.73% and 9.35% respectively in the year 2012.

Interpretation: HDFC has consistently given better returns than SBI except in 2010, 2011 and 2013; this can be attributed to the higher exposure given to commercial paper by HDFC. The graph clearly shows that the debt funds have performed well in the years 2008, 2011, 2012 and 2013 when the stock market wasn't performing well due to the financial crisis. Hence we can say debt funds can reduce the downside potential of an investor's portfolio when the market is down.

CAGR trend of Debt schemes:

	1-year	3- year	5-year	7-year
HDFC	9.05	9.30	8.49	8.09
SBI	9.00	9.21	8.41	7.92

Analysis: Both the funds have given greater than 9% returns consistently for a 3-year investment horizon. Over a 7-year investment period both the funds have given less returns; HDFC and SBI have given 8.09% and 7.92% returns during that period.

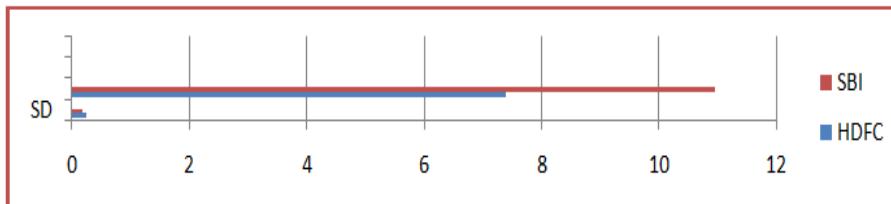


Interpretation: Both HDFC and SBI have given nearly the same level of returns. It is advisable for an investor to invest for a 3-year period when the fund is giving better returns than Fixed deposits because over the 5-year period the fund performance is going down to approximately 8.49% and hence it is better to invest in fixed deposits in case of longer investment period.

Risk analysis of Debt schemes:

	Standard deviation	Sharpe's Ratio
HDFC	0.25	7.39
SBI	0.18	10.95

Analysis: HDFC and SBI have very low standard deviations of 0.25 and 0.18 respectively and high Sharpe's ratios of 7.39 and 10.95 respective.



Interpretation: SBI has a lower level of risk when compared to HDFC. Also SBI has a much higher Sharpe ratio of 10.95 compared to 7.39 of HDFC, thus SBI has given a better risk-adjusted return and it is ideal for a risk-averse investor to invest in SBI.

Expense Ratio of Debt schemes:

	HDFC	SBI
Expense ratio	0.21	0.19

Analysis: HDFC and SBI have an expense ratio of 0.21% and 0.19% respectively.

Interpretation: When compared to equity mutual funds the expense ratio of these debt funds are lower. Among the two debt funds SBI has a lower expense ratio of 0.19% compared to approximately 0.21% of HDFC, which means that it would be cheaper for an investor to invest in SBI Magnum Insta cash and will incur lower operating expenses.

Comparison of Balanced schemes of HDFC and SBI mutual funds.

	HDFC	SBI
Name of the scheme	HDFC Balanced	SBI Magnum Balanced
Type of structure	Open ended	Open ended
Type of investment	Hybrid: Equity oriented	Hybrid : Equity oriented
Benchmark	VR Balanced	VR Balanced
NAV	₹ 107.73	₹ 93.67
Total Number of Securities:		
Stocks	49	42
Bonds	27	16

Annual Return Analysis of Balanced Schemes:

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
HDFC	27.85	26.40	27.73	-36.5	73.42	25.49	-10.57	26.56	8.78	51.47
SBI	47.62	33.93	48.37	-44.66	64.36	12.51	-22.23	35.03	11.86	43.24
VR Balanced	24.73	30.65	42.86	-39.76	49.3	14.54	-18.12	22.54	6.379	25.95

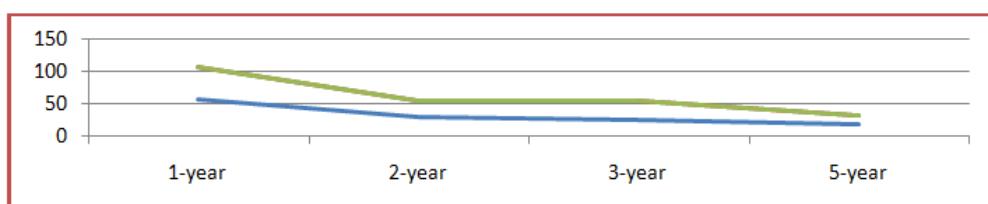
Analysis: SBI has consistently performed better than the index. In the years 2008 and 2011 HDFC sustained lower losses of -36.5 and -10.57 compared to the index which had negative returns of -39.76 and -18.12 respectively.

Interpretation: SBI has given higher negative returns than HDFC and the Benchmark in the years 2008 and 2011 in spite of having higher debt content of 35.87% vis-à-vis 27.69% of HDFC, this shows that SBI fund managers have invested in more aggressive and volatile stocks and due to this high volatility it has been able to beat the index during the rest of the years.

CAGR analysis of Balanced schemes:

	1-year	2-year	3- year	5-year	7-year	10-year
HDFC	56.47	28.63	26.23	18.49	15.22	18.86
SBI	50.36	27.13	28.17	14.04	9.73	18.47

Analysis: Both SBI and HDFC have given the highest returns of 56.47% and 50.36% over a 1-year investment period.

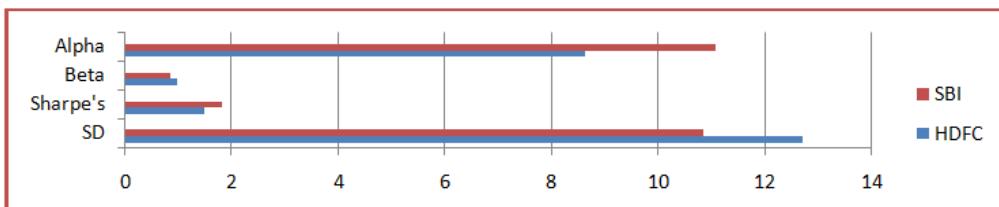


Interpretation: Both the funds have given exceptional returns over a short term investment period. HDFC has given higher 1-year returns when compared to SBI. By this we can interpret that an investor should expect higher and less volatile returns from HDFC when compared to SBI over a short term perspective.

Risk analysis of Balanced schemes:

	Standard deviation	Sharpe's Ratio	Beta	Alpha
HDFC	12.70	1.47	0.96	8.61
SBI	10.84	1.82	0.83	11.08

Analysis: HDFC and SBI have standard deviation of 12.70 and 10.84, and Beta values of 0.96 and 0.83 respectively. SBI has a higher Alpha value of 11.08 compared to 8.61 of HDFC. Also, SBI has higher Sharpe ratio of 1.82 when compared to HDFC.

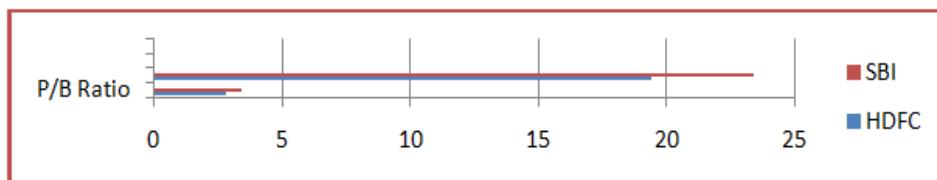


Interpretation: SBI has both lower risk and volatility when compared to HDFC which can be seen through the higher standard deviation and Beta values sustained by it, which means that SBI would perform better in a bear market. Thus, it can be interpreted that an investor who is willing to take higher risk should go for HDFC which is more aggressive in terms of its strategy, otherwise SBI would be a better investment option for less risk taking investors .

Portfolio Valuation of Balanced schemes:

	HDFC	SBI
P/B Ratio	2.83	19.45
P/E Ratio	3.47	23.44

Analysis: HDFC has lower P/E and P/B ratios of Rs.19.45 and Rs.2.83 respectively when compared to SBI which has P/E and P/B ratios of Rs.23.44 and Rs.3.47 respectively.



Interpretation: It can be interpreted that an investor needs to shell out more per rupee of earnings in case of SBI which has a higher P/E ratio. Also, both have P/B ratio of more than Rs.3 which indicates that these funds have been invested in growth stocks. Hence it is advisable for an investor to choose HDFC as it seems to have more value for the money invested.

Expense Ratio of Balanced schemes:

	HDFC	SBI
Expense ratio	2.18	2.77

Analysis: The expense ratios of HDFC and SBI are 2.18% and 2.77% respectively.

Interpretation: An investor would incur lower operating expenses, which does not include loads and brokerage charges if he opts for HDFC, since it has an expense ratio of 2.18% compared to SBI which has a higher expense ratio of 2.77%. Thus, HDFC Balanced fund would give the investor higher net returns.

3. Comparison of Mid cap schemes of HDFC and SBI mutual funds

	HDFC	SBI
Name of the scheme	HDFC Mid cap Opportunities	SBI Magnum Mid cap
Type of structure	Open ended	Open ended
Type of investment	Equity : Mid and small cap	Equity : Mid and small cap
Benchmark	CNX Nifty	CNX Nifty
NAV	₹ 36.93	₹ 54.83
Total Number of Stocks	67	56

Annual Return Analysis of Mid-cap Schemes:

	2007	2008	2009	2010	2011	2012	2013	2014
HDFC	80.54	-51.51	94.4	32.13	-18.31	39.62	9.64	76.63
SBI	70.69	-71.74	104.11	14.7	-25.79	47.98	13.57	71.94
CNX Nifty	54.77	-51.79	75.76	17.95	24.62	27.2	6.76	31.39

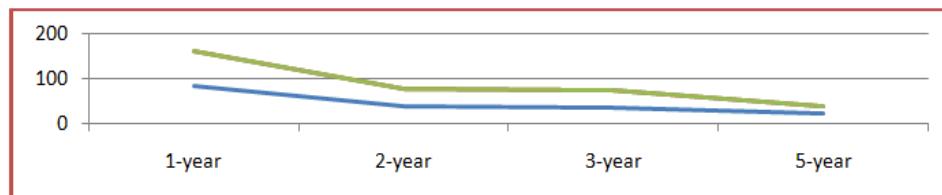
Analysis: The highest returns generated by the two funds are 94.4% and 104.11% in the year 2009. SBI has incurred more negative returns of -71.74% and -25.79% as against the benchmark in 2008 and 2011 respectively. HDFC on the other hand has shown lower downside potential and incurred lower negative returns of -51.51% and 18.31% in 2008 and 2011.

Interpretation: It can be interpreted that SBI has consistently given higher returns when compared to HDFC. Another point to note is that, in the years 2008, SBI had the worst performance in comparison to the benchmark and its competitor HDFC. Thus it can be deduced that SBI must have invested more in small cap and tiny stocks compared to HDFC. It can be thus said that SBI is a more aggressive fund.

CAGR analysis of Mid cap schemes:

	1-year	2-year	3- year	5-year	7-year
HDFC	84.92	39.73	36.90	23.44	16.76
SBI	77.98	40.98	40.50	17.87	6.97

Analysis: HDFC and SBI have given the highest CAGR over a period of 1-years which are 84.92% and 77.98% respectively. SBI and HDFC have consistently given lower CAGR after the 1-year investment horizon.

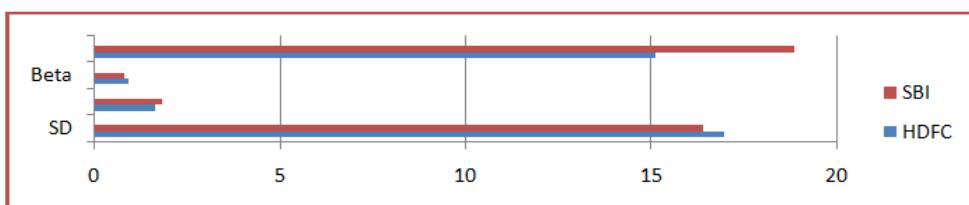


Interpretation: From the above chart it is clear that SBI mid cap fund and HDFC mid cap fund have given lower returns after the 1-year return and both the funds can be seen as volatile.

Risk analysis of Mid cap schemes:

	Standard deviation	Sharpe's Ratio	Beta	Alpha
HDFC	17.00	1.66	0.94	15.12
SBI	16.43	1.85	0.83	18.86

Analysis: In terms of standard deviation HDFC and SBI have very high values of 17.00 and 16.43 respectively. The beta values of the both the funds are nearly the same. SBI has a higher alpha and Sharpe ratio values compared to HDFC which are 18.86 and 1.85 respectively.

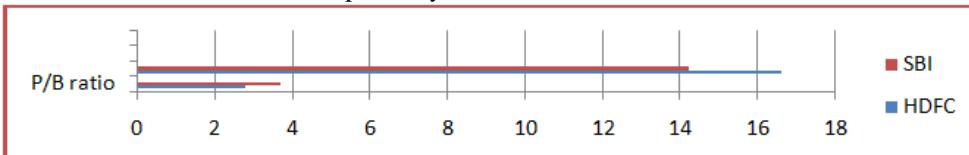


Interpretation: HDFC is portraying high deviation of returns and low Sharpe ratio as against SBI, which means that it is having higher risk and low risk adjusted returns. Also the Alpha value of SBI and HDFC is lower than 1%, signifying that it does not give more excess returns than the index. Thus an investor with a high risk appetite should go for HDFC which has a better risk-return trade-off.

Portfolio Valuation of Mid cap schemes:

	HDFC	SBI
P/B Ratio	2.81	3.70
P/E Ratio	16.61	14.23

Analysis: SBI has higher P/B ratio of Rs.3.70 and lower P/E ratio Rs.14.23 respectively as against HDFC which has Rs.2.81 and Rs.16.61 respectively.



Interpretation: It can be interpreted that an investor will have to pay Rs.16.61 per rupee of earnings in case of HDFC which is much higher than Rs.14.23 per rupee of earning in case of SBI. Also the P/B ratio of SBI is very high indicating that the manager is following a very aggressive growth strategy or that he has invested in overvalued stocks. Hence an investor who is willing to pay a higher price for good returns will only invest in the SBI mid-cap fund.

Expense Ratio of Mid cap schemes:

	HDFC	SBI
Expense ratio	2.32	2.70

Analysis: The expense ratio of HDFC and SBI are 2.32% and 2.70% respectively.

Interpretation: In terms of expense ratio, SBI has got an exorbitantly high ratio of 2.70% as against HDFC with mere 2.32%, which means that an investor investing in SBI will have to pay a high charge for fund operating expenses which would diminish the net returns. Thus it can be inferred that investing in HDFC will be a more viable option.

Comparison of Nifty Index funds of HDFC and SBI mutual funds

	HDFC	SBI
Name of the scheme	HDFC Index Nifty	SBI Magnum Nifty Index
Type of structure	Open ended	Open ended
Type of investment	Equity : Large cap	Equity : Large cap
Benchmark	CNX Nifty	CNX Nifty
NAV	₹ 74.70	₹ 52.39
Total Number of Stocks	50	50

Annual Return Analysis of Nifty Index Schemes:

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
HDFC	36.52	37.12	49.05	- 53.46	70.43	16.87	-24.84	27.59	7.44	32.18
SBI	33.82	42.05	49.46	- 53.27	74.74	17.99	-24.61	28.36	6.19	30.48
CNX Nifty	36.34	39.83	54.77	- 51.79	75.76	17.95	-24.62	27.7	6.76	31.39

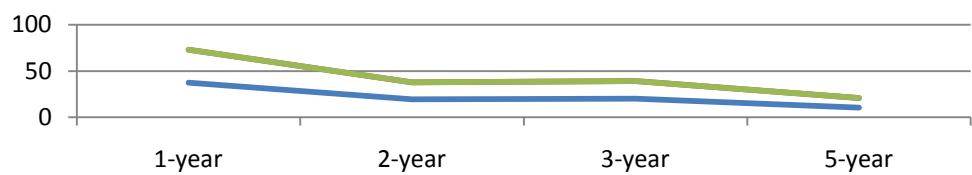
Analysis: The returns of both the funds are approximately the same as the benchmark index. Also the highest return earned by HDFC and SBI is 70.43% and 74.74% respectively which is a little less than the index.

Interpretation: We can deduce that both the funds have underperformed the index except for a few years; this can be attributed to the tracking error made by the fund managers. Thus the fund managers need to be more vigilant in terms of allocation of weights.

CAGR analysis of Nifty Index schemes:

	1-year	2-year	3- year	5-year	7-year	10-year
HDFC	37.35	19.45	19.88	10.34	5.03	14.61
SBI	35.57	17.98	19.12	10.19	5.30	15.11

Analysis: HDFC and SBI have gained the highest returns for a 1-year investment horizon. Also, HDFC and SBI have constantly given lower returns after a 1-year investment period, compared to the 1-year returns.

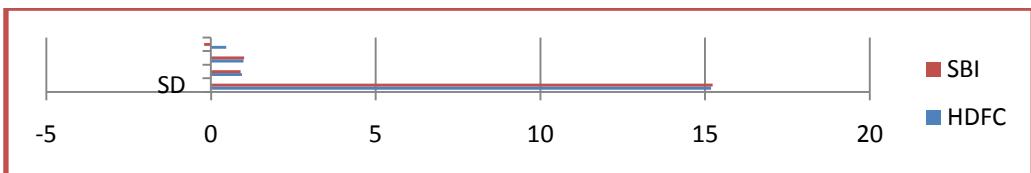


Interpretation: It is better to invest for a 1-year as it gives the highest return. Both the funds have performed equally well in terms of their CAGR.

Risk analysis of Nifty Index schemes:

	Standard deviation	Sharpe's Ratio	Beta	Alpha
HDFC	15.18	0.94	0.99	0.46
SBI	15.23	0.90	1	-0.21

Analysis: Both the funds have moderate level of standard deviation of approximately 15 and they have their beta values as 0.99 and 1. The Sharpe ratio values of HDFC and SBI are 0.94 and 0.90 respectively and the alpha values are 0.46 and -0.21 respectively.

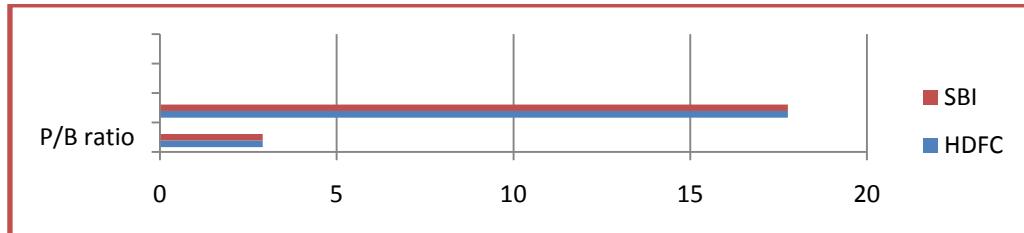


Interpretation: SBI has a higher standard deviation of 15.23 and a Sharpe ratio of 0.90, while HDFC has a standard deviation of 15.18 and a Sharpe Ratio of 0.94. Both have a beta value of nearly 1 since they are tracking the index and hence their performance and volatility will commensurate with the index. The alpha value of HDFC is 0.46 compared to SBI, which has a negative value of -0.21, which means that it has given zero excess returns. In terms of the risk analysis, HDFC seems to be a better fund to invest in.

Portfolio Valuation of Nifty Index schemes:

	HDFC	SBI
P/B Ratio	2.91	2.91
P/E Ratio	17.76	17.76

Analysis: Both the funds have the same P/E and P/B ratios of nearly Rs.17.76 and Rs.2.91 respectively.



Interpretation: According to the above table it can be understood that an investor will have to pay Rs.17.76 per rupee of earning which very high compared to other mutual fund categories. Also, a P/B ratio of Rs.2.91 means that the funds are overvalued when compared to their book values.

Expense Ratio of Nifty Index schemes:

	HDFC	SBI
Expense ratio	0.50	2.34

Analysis: The expense ratio of HDFC and SBI are 0.50% and 2.34% respectively.

Interpretation: HDFC has a lower expense ratio of 0.50% when compared to 2.34% of SBI, which means that an investor would get higher net returns after deducting the operating expenses in case of HDFC. And hence an investor would benefit by investing in HDFC.

Comparison of Sector Specific (Infrastructure) of HDFC and SBI mutual funds

	HDFC	SBI
Name of the scheme	HDFC Infrastructure	SBI Infrastructure
Type of structure	Open ended	Open ended
Type of investment	Equity : Infrastructure	Equity : Infrastructure
Benchmark	CNX Nifty	CNX Nifty
NAV	₹ 6.76	₹ 11.28
Total Number of Stocks	28	29

Annual Return Analysis of Sector Specific (Infrastructure) Schemes:

	2009	2010	2011	2012	2013	2014
HDFC	95.63	15.22	-36.17	35.42	-14.43	73.90
SBI	75.3	1.83	-33.08	18.7	-11.87	48.06
CNX Nifty	75.76	17.95	-24.62	27.7	6.76	31.39

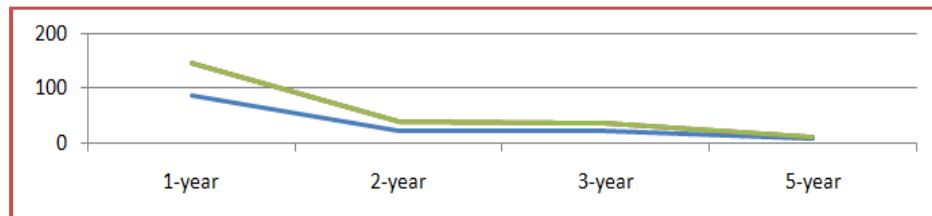
Analysis: Both HDFC and SBI presented highest returns in the year 2009, with 95.63% and 75.3% respectively. SBI has consistently underperformed the index till 2013.

Interpretation: HDFC is seen to be more volatile when compared to SBI since it has given higher returns than the index in 2 years but at the same time sustained more losses than the index in 2008, 2011 and 2013. These infrastructure sector specific bonds portray a very high level of volatility and risk. Hence only an investor with a very high risk appetite should opt for this class of funds. And among the two HDFC seems to have fared better.

CAGR analysis of Sector Specific (Infrastructure) schemes:

	1-year	2-year	3- year	5-year
HDFC	87.38	22.40	21.80	8.24
SBI	60.54	15.33	13.87	1.28

Analysis: HDFC and SBI have both consistently shown positive returns for over all the 5-year investment period. The only period where they have performed well is over a 1-year investment horizon when they had 87.38% and 60.54% of returns respectively.

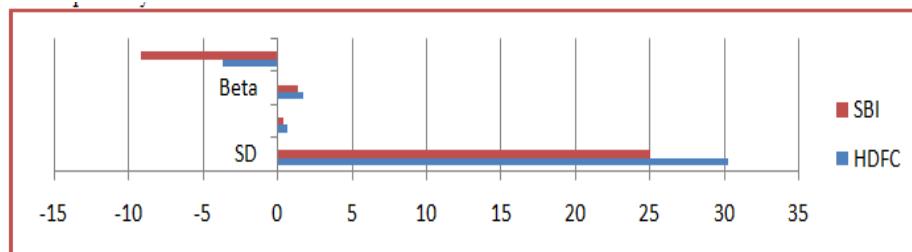


Interpretation: It is clear that this class of funds is highly volatile and risky, also for an investor to make positive returns he has to invest for a minimum of 5 years. Although in the 5th year both the funds recorded their first positive return, it is better for an investor to invest in fixed deposits than SBI infrastructure fund as this is fetching only 5.22% vis-à-vis 9% in case of the latter. Thus clearly HDFC is a better fund in this category.

Risk analysis of Sector Specific (Infrastructure) schemes:

	Standard deviation	Sharpe's Ratio	Beta	Alpha
HDFC	30.33	0.70	1.78	-3.67
SBI	25.11	0.43	1.44	-9.17

Analysis: Both the funds have presented very high standard deviation compared to the other classes of funds with greater than 20. Also they have negative Alpha values. HDFC and SBI have Beta values of 1.78 and 1.44 respectively.



Interpretation: HDFC has higher risk with a standard deviation of 30.33 as against SBI which has 25.11. HDFC has a higher Beta than SBI with a value of 1.78 hence the fund will perform better than the index in bullish market and also incur more losses than the index in a bear market. The Alpha values of the two funds are also negative indicating zero excess returns and a positive Sharpe ratio of 0.70 and 0.43.

Portfolio Valuation of Sector Specific (Infrastructure) schemes:

	HDFC	SBI
P/B Ratio	1.76	2.19
P/E Ratio	16.84	24.23

Analysis: The P/E ratio of HDFC and SBI are Rs.16.84 and Rs.24.23 respectively and the P/B ratios are Rs.1.76 and Rs.2.19 respectively.



Interpretation: An investor would benefit if he invests in HDFC as it has lower P/E ratio which means that he would have to pay Rs.16.84 for every rupee of earning when compared to SBI which has a P/E ratio of Rs.24.23 also the P/B ratios of both the funds are less than 3 which means that the managers of both the funds are investing in value stocks which are undervalued.

Expense Ratio of Sector Specific (Infrastructure) schemes:

	HDFC	SBI
Expense ratio	2.40	2.64

Analysis: The expense ratios of HDFC and SBI are 2.40% and 2.64% respectively.

Interpretation: We can infer that an investor would have to pay more for operating expenses in case of SBI, hence his net earnings after deducting the expenses would be lesser when compared to HDFC. Thus in terms of expense ratio, HDFC seems to be giving higher net returns.

IV. RECOMMENDATIONS

- In terms of investment period, investors who want to park their funds for a longer term they should invest in equity oriented funds which provide good returns over 5-years. But in case of short term needs, it is better to invest in Debt funds.
- Returns are not the only criteria to be looked at while selecting an appropriate fund; they don't showcase the overall performance. Hence an investor should look at the various statistical tools like standard deviation, Sharpe ratio, beta and alpha values.
- Investors should avoid funds displaying negative Sharpe ratio and alpha values. They can instead park their capital in other categories of funds with better ratios or risk-free assets.
- An investor should avoid investing the entire amount in one type of mutual fund. They can further diversify their portfolio by investing in different categories of mutual funds.
- For an investor with very high risk appetite, sector specific funds seem appropriate, for moderate and high risk takers Equity Large-Cap funds and Equity Mid-Cap are suggested respectively. For investors who are old and want steady income and safety of investment, debt funds are the most appropriate choice.
- The general perception of the stock market is such that investors liquidate their holding in times of market turmoil, but the beneficial strategy to be followed is to invest when the markets are down so that when it bounces back, the investors are left with very high returns.
- It is very important to invest when the NAV values are low, since it would give more no. of units to the investors and thus the dividend will also be more. Or the next best option is to take the SIP (Systematic Investment Plan) route which equalizes the volatility of the market to a certain extent.
- Apart from risk and return, it is necessary to look at the expense ratio charged by the funds. Investors should make sure that in case of debt funds the expense ratios are less than 1% and in case of equity they should avoid funds which charge extremely high as it will reduce their net earnings.
- Also they should look at the P/E ratios, if it well above that of the benchmark then it faces greater possible losses in a correction or bear market.
- It is imperative that the investors look at the break-up of the holdings of a fund in terms of sector and capitalization. This would give them a picture about how aggressive a fund's strategy is; one should look out for funds with high P/B ratios.
- Finally, an investor should not choose a fund based on the AMC but rather on the past performance and the credibility of the fund manager. It is the fund managers who run the funds not the AMC.

V. CONCLUSION

The findings show that mutual funds as an investment option have displayed tremendous growth potential when the markets are optimistic and when wise choices are made. They have performed much better than traditional investment options in the long term and thus help investor beat inflation to some extent. It is of paramount importance that investors do not make a rash decision simply by looking at the return figures generated by an individual fund, they should compare funds based on the risk and return analysis and find out which fund is giving better returns commensurate to the risk taken. Statistical analysis helps investors make a wise decision looking at facts based on numbers instead of just going by their gut feeling. Also compared to the traditional options, mutual funds provide a more professional approach towards investment and some amount of diversification. The mutual fund industry in India is still in its nascent stages when compared to its American and European counterparts, which means that there is still a huge untapped market and potential for good returns. A thorough analysis clubbed with timely investments might prove Mutual Funds to be an excellent form of investment.

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