STUDY ON INVESTOR'S PERCEPTION AND SCHEME PREFERENCE BASED ON COMPARATIVE PERFORMANCE ANALYSIS OF MUTUAL FUND SCHEMES IN COIMBATORE CITY

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ABSTRACT

In India, the stock market offers a wide variety of investment options for investors, to help them invest in different sectors and to focus on ensuring a profitable return. Amongst all financial products, mutual fund ensures maximum returns for investors with its associated risks. Growth and expansion of various mutual fund products in Indian markets has clearly demonstrated as one of the key catalytic instruments for generating significant growth in capital market investment. In this perspective, close monitoring as well as evaluation of these mutual fund schemes have become important. And hence, deciding profitable mutual funds to invest seems to be a challenging task. This research is basically dealt with three major categories of mutual funds offered for the investment by most of the fund houses across India, namely large, mid and small cap funds. The key objective of this paper is to evaluate the performance of selected mutual fund schemes by means of statistical parameters such as standard deviation, alpha, beta and Sharpe ratio using secondary data. The results obtained from this study will aid investors in their further investment decisions.

KEYWORDS: *Mutual fund, performance evaluation, statistical parameters*

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INTRODUCTION

Mutual fund is a trust that collects fund from people who share common financial goal. It pools the collected money and invests them in stock market or bonds or debentures or any other financial assets for future returns. Mutual funds are managed by fund manager. Investments are done wide across many secured industries along with various sectors. Thus mutual funds bring about reduced risk. Fund manager fetch some percentage of money from investor for his duty. The commission charge will be around 1- 3% from the investing amount which is termed as 'expense ratio'. Investors in mutual funds are generally referred as unit holders. While an investor is investing his/her money under any scheme in any Asset Management Company, he/ she being allocated with certain units. The rate of every single unit is called NAV (Net Asset Value). NAV depicts the present market value of single unit.

Over the last decade, mutual funds have progressively become the investor's preferred platform for long-term investments. The most critical thing to be explored is indeed the performance of mutual funds. This will allow mutual

fund firms, investors, analysts and policy experts to gain insight into Indian mutual fund's performance.

OBJECTIVE OF THE STUDY

To compare and analyse the performance of mutual fund schemes in Coimbatore city.

METHODOLOGY

The secondary data used for this study were collected from various websites namely AMFIIndia (AUM, Fund categories, Historical NAV), Money Control (Returns) and Value Research (Risk Ratios). Top 5 Asset Management companies are selected based on Average Asset Under Management (AAUM) in which three equity fund categories namely large, mid and small cap funds are selected. Average returns and risk ratios namely Standard Deviation, Jensen's Alpha, Beta and Sharpe Ratio are tools used for the analysis as follows

i. Average Returns of Fund

Average Returns is used to measure the returns obtained over some period of time in a single number from a series of periodic returns (Prajapati and Patel, 2012).

$$\text{AverageReturns of Fund} = \frac{(\sum_{i=1}^n r_i)}{n}$$

r_i = Return of the period

n = Number of period

ii. Standard Deviation

Standard Deviation depicts the performance of a fund in respect to the mean (Rani and Hooda, 2017). This will reflect the stability of mutual funds. High standard deviation would not really mean that it is poor since it will typically be higher in the case of equities and lower in the case of stable investments such as debt funds.

$$\text{Standard Deviation} = \sqrt{\frac{(\sum_{i=1}^n (r_i - \bar{r})^2)}{n - 1}}$$

$\bar{r}$ = Average Return

r_i = Return of the period

n = Number of period

iii. Beta

Beta evaluates the response of the fund to market fluctuations or volatility. The base value of beta is 1. If beta value is 1, the fund reacts similarly to market fluctuations, i.e. the price change is identical to the market movements. By default, Sensex and Nifty's market benchmark index has a beta value of 1.0. Conservative investors could concentrate on low-beta mutual fund schemes (Narayanasamy and Rathnamani, 2013). Aggressive investors can prefer to invest in the mutual fund schemes that have higher beta value with higher returns, bearing more risk.

$$\beta_f = \frac{\sum_{i=1}^n (r_i - \bar{r})(m_i - \bar{m})}{\sum_{i=1}^n (m_i - \bar{m})^2}$$

β_f = Beta of the fund

r_i = Fund Returns for the period i

m_i = Market Returns for the period i

iv. Jensen's Alpha

Alpha represents the performance of the asset manager in managing the portfolio to yield profits in accordance to the beta value. The base value for alpha in the Mutual Funds is 0. In the case of alpha, the value of 0 indicates the performance graph of the fund manager to be exactly in line with the respective benchmark index. Any values in negatives would indicate the performance of the asset manager as underwhelming (Tripathi and Japee, 2020). In addition, alpha in mutual funds above 0 indicates the achievement of fund manager as outperforming compared to the benchmark index. Higher the value of alpha, higher will be the fund's return.

$$\alpha_p = R_p - [R_f + \beta_p (R_m - R_f)]$$

α_p = Alpha of the fund

R_p = Return of the fund

R_f = Risk Free Rate of Return (ex. Government bonds, T- bills, etc.)

β_p = Beta of the fund

v. Sharpe Ratio

The Sharpe Ratio (SR) is another essential indicator that shows the return generated by the fund in accordance to the risk taken. According to Roy and Ghosh (2012) ratio is used for the funds which have low correlation with the benchmark index. It allows an investor to understand if it is a good choice to invest in this fund by taking the associated risk. The higher the Sharpe Ratio, the higher the fund's return of investment compared to amount of the risk taken.

$$S_p = \frac{R_p - R_f}{\sigma_p}$$

S_p = Sharpe ratio

R_p = Average Return of the Fund

R_f = Risk Free Rate of Return

σ_p = Standard Deviation of the Fund

Table 1: Average Assets under Management (AAUM) for each quarter of 2020 (Rs in Lakhs)

S. No	Mutual fund name	Jan- Mar	Apr- Jun	Jul- Sep	Average
1	SBI Mutual Fund	37353 660.81	36436298.36	42136373.90	38642111.0
2	HDFC Mutual Fund	36978279.64	35618341.70	37551641.14	36716087.5
3	ICICI Prudential Mutual Fund	35074348.87	32629118.05	36004860.10	34569442.3
4	Aditya Birla Sun Life Mutual Fund	24752167.98	21459195.96	23867383.17	23359582.4
5	Nippon India Mutual Fund	20488371.72	18006069.87	20003043.85	19499161.8

(Source- Amfiindia)

RESULTS

Returns

Table 2: Large Cap Funds

Fund name	2016			2017			2018			2019			2020			Average Returns (%)
	NAV (₹)	Return (%)		NAV (₹)	Return (%)		NAV (₹)	Return (%)		NAV (₹)	Return (%)		NAV (₹)	Return (%)		
		Fund	Bench mark		Fund	Bench mark		Fund	Bench mark		Fund	Bench mark		Fund	Bench mark	
SBI Bluechip Fund (BSE 100 TRI*)	10.96	5.77	3.39	39.68	31.17	30.90	38.63	-2.98	1.83	44.02	12.67	9.25	47.63	9.14	-4.09	11.23
HDFC Top 100 Fund (Nifty 100 TRI*)	362.73	8.99	3.34	478.56	32.92	29.90	470.38	1.34	1.95	524.59	7.99	10.04	511.98	-1.54	8.53	9.94
ICICI Prudential Bluechip Fund (Nifty 100 TRI*)	31.74	8.4	3.34	41.81	32.92	29.90	41.88	0.78	1.95	46.71	10.83	10.04	49.57	5.3	8.53	11.84
Aditya Birla Sun Life Frontline Equity Fund (Nifty 50 TRI*)	175.7	8.03	2.72	228.27	32.04	27.58	232.6	-1.38	4.09	245.98	8.66	11.33	261.68	6.42	8.46	10.75
Nippon India Large Cap Fund (BSE 100 TRI*)	24.846	2.93	2.72	34.02	39.91	27.58	34.37	1.37	1.83	37.71	7.82	9.25	36.39	-3.11	-4.09	9.78

(NAV as on 25 Nov 2020, Returns of 2020 up to III quarter, *TRI- Total Return Index)

(Source- Amfiindia, Moneycontrol)

(NAV as on 25 Nov 2020, Returns of 2020 up to III quarter, *TRI- Total Return Index)

(Source- Amfiindia, Moneycontrol)

Table 3: Mid Cap Funds

(Benchmark- NIFTY Mid Cap 100 TRI*)

Fund name	2016			2017			2018			2019			2020			Average Returns (%)
	NAV (₹)	Return (%)		NAV (₹)	Return (%)		NAV (₹)	Return (%)		NAV (₹)	Return (%)		NAV (₹)	Return (%)		
		Fund	Bench mark		Fund	Bench mark		Fund	Bench mark		Fund	Bench mark		Fund	Bench Mark	
SBI Magnum Midcap Fund	68.69	5.98	6.96	85.77	35.02	45.75	73.26	-17.1	-15.32	75.28	0.35	-4.42	89.29	21.87	15.00	9.224
HDFC Mid Cap Opportunities Fund	44.19	11.66	6.96	60.12	43.06	45.75	54.10	-10.17	-15.32	56.31	0.62	-4.42	64.50	16.49	15.00	12.332
ICICI Prudential Midcap Fund	75.98	5.04	6.96	106.41	44.48	45.75	96.9	-9.76	-15.32	101.24	0.26	-4.42	110.33	12.79	15.00	10.562
Aditya Birla Sun Life Mid Cap Fund	247.63	5.82	6.96	337.47	46.25	45.75	290.71	-15.01	-15.32	288.53	-3.16	-4.42	309.91	9.44	15.00	8.668
Nippon India Growth Fund (BSE Mid Cap TRI*)	863.68	3.87	7.88	1201.27	45.32	47.02	1078.75	-10.63	-13.44	1180.47	6.81	-2.97	1351.97	15.83	-0.27	12.24

(NAV as on 25 Nov 2020, Returns of 2020 up to III quarter, *TRI- Total Return Index)

(Source- Amfiindia, Moneycontrol)

Table 4: Small Cap Funds

(Benchmark- NIFTY Small Cap 100 TRI*)

Fund name	2016			2017			2018			2019			2020			Average Returns (%)
	NAV (₹)	Return (%)		NAV (₹)	Return (%)		NAV (₹)	Return (%)		NAV (₹)	Return (%)		NAV (₹)	Return (%)		
		Fund	Bench mark		Fund	Bench mark		Fund	Bench mark		Fund	Bench mark		Fund	Bench mark	
SBI Small Cap Fund (BSE Small Cap TRI*)	37.30	0.39	2.09	61.08	78.66	58.16	52.36	-19.66	-23.72	58.23	6.06	-7.23	71.28	24.97	7.22	18.084
HDFC Small Cap Fund	30.11	6.06	2.94	45.51	62.65	55.97	44.37	-7	-29.74	41.51	-9.05	-9.91	45.34	10.84	11.86	12.7
ICICI Prudential Small Cap Fund	21.63	6.58	2.94	30.15	43.34	55.97	23.71	-21.81	-29.74	26.34	10.62	-9.91	30.43	14.92	11.86	10.73
Aditya Birla Sun Life Small Cap Fund	29.86	9.68	2.94	44.82	58.51	55.97	35.24	-21.79	-29.74	32.59	-11.03	-9.91	36.15	13.46	11.86	9.766
Nippon India Small Cap Fund	29.88	5.77	2.94	45.93	64.94	55.97	41.64	-15.73	-29.74	40.93	-1.97	-9.91	48.82	20.67	11.86	14.736

(NAV as on 25 Nov 2020, Returns of 2020 up to III quarter, *TRI- Total Return Index)

(Source- Amfiindia, Moneycontrol)

Figure 1: Large Cap Funds

Figure 2. Mid Cap Funds

Figure 3. Small Cap Funds

Figure 4: Average

Table 5.Risk Ratios

Large Cap Funds				
Fund name	Standard Deviation	Jenson's Alpha	Beta	Sharpe Ratio
SBI Bluechip Fund	20.70	-1.46	0.97	-0.05
HDFC Top 100 Fund	21.40	-5.27	0.99	-0.18
ICICI Prudential Bluechip Fund	19.75	-1.66	0.93	-0.02
Aditya Birla Sun Life Frontline Equity Fund	20.82	-2.81	0.99	-0.07
Nippon India Large Cap Fund	23.12	-4.41	1.06	-0.13
Category Average	20.09	-0.93	0.93	-0.01
Benchmark (BSE 100 TRI)	20.90	0.97	0.81	0.03
Mid Cap Funds				
Fund name	Standard Deviation	Jenson's Alpha	Beta	Sharpe Ratio
SBI Magnum Midcap Fund	26.43	-1.64	0.96	0.03
HDFC Mid Cap Opportunities Fund	25.89	-0.42	0.95	0.08
ICICI Prudential Midcap Fund	25.71	-1.56	0.93	0.03
Aditya Birla Sun Life Mid Cap Fund	25.44	-5.81	0.93	-0.13
Nippon India Growth Fund	25.33	1.30	0.92	0.14
Category Average	20.09	-0.93	0.93	0.01
Benchmark (BSE 100 TRI)	20.90	0.97	0.81	0.03
Small Cap Funds				
Fund name	Standard Deviation	Jenson's Alpha	Beta	Sharpe Ratio
SBI Small Cap Fund (BSE Small Cap TRI*)	26.48	5.80	0.83	0.16
HDFC Small Cap Fund	27.54	0.93	0.87	-0.03
ICICI Prudential Small Cap Fund	29.08	1.66	0.92	-0.03
Aditya Birla Sun Life Small Cap Fund	29.26	-2.00	0.93	-0.22
Nippon India Small Cap Fund	28.82	3.47	0.96	0.06
Category Average	27.99	1.12	0.91	-0.04
Benchmark (BSE 250 Small cap TRI)	29.67	-6.03	0.81	-0.09

(Calculated as on Oct 31, 2020 for last 3 years)

(Source- Value research)

INTERPRETATION

I.Returns of Funds

i) Large Cap Funds

NAV

ICICI Prudential Bluechip Fund's NAV increased from Rs. 31.74 to Rs. 49.57 which shows highest growth percentage of 56.17%. For HDFC Top 100 fund NAV increased from Rs. 362.73 to Rs. 511.98 which shows lowest growth percentage of 41.14%. On a whole, NAV of large cap funds has increased around 40- 50% in the span of 5 years.

Returns

In 2016 and 2018, HDFC Top 100 Fund performed the best with the returns of 8.59% and 1.54%. In 2019 and 2020, SBI Bluechip Fund performed the best with the returns of 12.67% and 9.14% and least percentage of returns with 31.17% and -2.58% during 2017 and 2018 respectively. In 2017, Nippon India Large Cap Fund performed the best with the returns of 39.91% and lowest returns percentage of 2.95%, 7.82% and -3.11% during 2016, 2019 and 2020 respectively. In an average ICICI Prudential Bluechip Fund performed the best with the returns of 11.84% and Nippon India Large Cap Fund being the least performance with 9.78% returns. Among these selected large cap funds, ICICI Prudential Bluechip Fund has stable performance in the span of 5 years.

ii) Mid Cap Funds

NAV

For Nippon India Growth Fund NAV increased from Rs. 863.68 to Rs. 1351.97 which shows highest growth percentage of 56.53%. For Aditya Birla Sun Life Mid Cap Fund NAV increased from Rs. 247.63 to Rs. 309.91 which shows lowest growth percentage of 25.15%. On a whole, NAV of mid cap funds has increased around 25- 57% in the span of 5 years.

Returns

In 2016, HDFC Mid Cap Opportunities Fund performed the best with the returns of 11.66%. In 2017, Aditya Birla Sun Life Mid Cap Fund performed the best with the returns of 46.25% and lowest returns percentage of -3.61% and 9.44% during 2019 and 2020 respectively. In 2018, ICICI Prudential Midcap Fund performed better compared to other funds with the returns of -9.76%. In 2019, Nippon India Growth Fund performed the best with the returns of 6.81% and least percentage of returns with 3.87% during 2016. In 2020, SBI Magnum Midcap Fund performed the best with the returns of 21.87% and lowest returns percentage of 35.02% and -17.1% during 2017 and 2018 respectively. In an average HDFC Mid Cap Opportunities Fund performed the best with the returns of 12.33% and Aditya Birla Sun Life Mid Cap Fund being the least performance with 8.66% returns. Among these selected mid cap funds, HDFC Mid Cap Opportunities Fund has stable performance in the span of 5 years.

iii) Small Cap Funds

NAV

For Aditya Birla Sun Life Small Cap Fund NAV increased from Rs. 29.86 to Rs. 36.15 which shows highest growth percentage of 21.06%. SBI Small Cap Fund NAV has increased from Rs. 37.30 to Rs. 71.28 which shows lowest growth percentage is 91.09%. On a whole, NAV of small cap funds has increased around 25- 57% in the span of 5 years.

Returns

In 2016, Aditya Birla Sun Life Small Cap Fund performed the best with the returns of 9.68% and lowest returns percentage of -11.03% during 2019. In 2017 and 2020, SBI Small Cap Fund performed the best with the returns of 78.66% and 24.97% along with least percentage of returns with 0.39% during 2016. In 2018, HDFC Small Cap Fund performed better compared to other funds with the returns of -7% and comparatively underperformed than funds during 2020 with 10.84% returns. In 2019, ICICI Prudential Small Cap Fund performed better with the returns of 10.62% and with least performance of 43.34% and -21.81% returns during 2017 and 2018 respectively. In an average SBI Small Cap Fund performed the best with the returns of 18.08% and Aditya Birla Sun Life Small Cap Fund being the least performance with 9.76% returns. Among these selected small cap funds, SBI Small Cap Fund has stable performance in the span of 5 years.

II. Risk Ratios

i) Large Cap Funds

Nippon India Large Cap Fund has higher beta value than other large cap funds. But when average returns, alpha and beta are taken into account together, SBI Bluechip Fund produces higher average returns (11.23%) with better alpha (-1.46) and beta (0.97) values. ICICI Prudential Bluechip Fund has comparatively higher average returns of 11.84% with lower standard deviation (19.75) and higher Sharpe ratio (-0.02) which depicts that among the selected large cap funds, this particular fund is less volatile to market fluctuations and takes lesser risk compared to other large cap funds. Therefore, SBI Bluechip Fund and ICICI Prudential Bluechip Fund have performed well with lower risk in this category.

ii) Mid Cap Funds

SBI Magnum Midcap Fund has higher beta value than other mid cap funds. But when average returns, alpha and beta are taken into account together, HDFC Mid Cap Opportunities Fund and Nippon India Growth Fund produces higher average returns (12.33, 12.24) with better alpha (-0.42, 1.30) and beta (0.95, 0.92) values and lower standard deviation (25.89, 25.33) and higher Sharpe ratio (0.08, 0.14) which depicts that among the selected mid cap funds, these particular fund are less volatile to market fluctuations and takes lesser risk compared to other mid cap funds. Therefore, HDFC Mid Cap Opportunities Fund and Nippon India Growth Fund have performed well in this category.

iii) Small Cap Funds

When average returns, alpha and beta are taken into account together, SBI Small Cap Fund and Nippon India Small Cap Fund produces higher average returns (18.08, 14.73) with better alpha (5.80, 3.47) and beta (0.83, 0.96) values and lower standard deviation (26.48, 28.82) and higher Sharpe ratio (0.16, 0.06) which depicts that among the selected small cap funds, these particular fund are comparatively less volatile to market fluctuations and takes lesser risk compared to other small cap funds. Therefore, SBI Small Cap Fund and Nippon India Small Cap Fund have performed well.

CONCLUSIONS

From the following performance evaluation of the chosen five large, mid and small cap funds, it is apparent that all funds performed good during the study period of 5 years (2016- 2020), with 2018 being an exception due to market or technical corrections. It is therefore important for investors to understand statistical parameters in order to make sure the stable fund performance.

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