Project Dissertation Report

PERFORMANCE ANALYSIS OF MUTUAL FUND

Submitted By

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2K19/DMBA/052

Under the Guidance of

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CERTIFICATE

This is to certify that the work entitled 'PERFORMANCE ANALYSIS OF MUTUAL FUND' as part of the final year Major Research Project submitted by MEHTA PRAKASHKUMAR UDAYKUMAR in the 4th Semester of MBA, Delhi School of Management, Delhi Technological University during January-May 2021 was done under my supervision & guidance.

This project report is submitted to 'Delhi School of Management', 'DTU' in partial fulfilment of the requirement for the award of the degree of "Master of Business Administration'.

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Dr. Saurabh Agrawal	Dr. Archana Singh
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DECLARATION

This is to declare that the work titled 'PERFORMANCE ANALYSIS OF MUTUAL FUND' as part of the final year Major Research Project submitted by Mehta Prakashkumar Udaykumar in the 4th Semester of MBA, Delhi School of Management, Delhi Technological University, during January-May 2020-2021 under the guidance of Dr. Saurabh Agrawal. It is my original work and has not been submitted anywhere else. The report has been written by me in my own words and not copied from elsewhere. Anything that appears in this report which is not my original work has been duly and appropriately referred/ cited/ acknowledged.

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ACKNOWLEDGEMENT

It is a great pleasure for me to acknowledge the kind of help and guidance received during the research work. I would like to thank my faculty advisor Dr. Saurabh Agrawal, who helped me to take up the topic 'PERFORMANCE ANALYSIS OF MUTUAL FUND' and guided me to complete this project properly. The study has given me golden opportunity in exploring the areas of mutual funds.

I am highly indebted to Delhi School of Management, Delhi Technological University for giving me a chance to figure on this project. Lastly, I would like to express my gratitude to all the honourable faculty members for sharing their experience and expertise on this Project.

I have tried my best to assure that the project work is completed in the best possible way and also ensured that the project report is free from any error.

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EXECUTIVE SUMMARY

So many investment instruments are available in today's financial market. Thus, investors are not sure which instrument provides best return. As per the financial rule of "Do not put all the eggs in one basket" investor needs a diversified portfolio, to minimize the risk.

Not every investor possesses the knowledge of getting maximum returns against minimum risk. Therefore, mutual funds are preferable for such investors. But mutual fund market offers number of schemes. Investors need to choose schemes based on their risk-taking capabilities. So, the problem arises that how does a investor find a scheme in the market that provides the best return among all the schemes available in the market.

To solve this there are certain model available like Jenson's model and Sharpe's model. These models help investor understand that which scheme is most suitable for them.

The present study analyses the equity mutual funds. Various asset management companies in India offer these equity mutual funds. Main focus of the present study is to understand the performance of selected equity fund schemes in terms of a risk and return. Analysing financial performance of the selected schemes is the objective of the study, for which various statistical parameters have been used. The conclusion from the is researcher that 10 mutual fund schemes out of 15 selected schemes performed well in a highly volatile market. Researcher recommends that considering risk factor of the mutual fund must be a priority of an investor before investing. The findings from the present study will surely prove to be helpful to investors for their investment decisions.

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1 INTRODUCTION

1.1 Mutual Fund

Mutual Fund is one of the ways of investment in which different investors come together to invest their fund in different securities like stocks, bonds, money market instruments and other assets. When different investors come together huge amount of money is collected. Mutual funds are managed by professionals, and they allocate the fund collected to make profit for the investors. Mutual fund is that financial vehicle which gives each type of investor access to professionally managed portfolios of bonds, equities, and other financial securities. One of the advantages of investing in mutual fund is that each shareholder gain or lose proportional amount of money. It is easy to track the performance of Mutual fund as it invests in large number of securities. Its performance can be easily tracked by aggregating the performance of its underlying investments.

Mutual fund provides different type of schemes to fulfil the need of diverse investors. After all the investors are investing in mutual fund to earn more than what they can get through the Savings account in a bank therefore it's become the primary purpose of mutual fund to assist investors in making wealth. India has been a saving economy for a very long time, and it is still considered to be a saving country therefore the role of mutual fund is very important.

According to the Investment Company Institute, the mutual fund assets were $41 trillion worldwide at the end of 2018 in which United State has the largest mutual fund industries of $21 trillion followed by Luxembourg, Ireland, Germany, and other countries.

1.2 Types of mutual funds

Mutual funds can be divided into several categories based on the types of safeguards which are present in their portfolios, and the expected returns. Almost every type of investor or speculation strategy has a reserve.

1. Equity Funds

The most important classification is equity funds. As the name implies, this type of fund invests mostly in equities. There are various sub-classes within this gathering. Some equity funds are labelled according to the size of the companies they invest in: small, mid, or large-cap.

2. Mutual funds with a fixed income component

The fixed income category is another large gathering. A fixed income group mutual fund invests in funds that pay a consistent rate of return, such as government bonds, corporate bonds, or other obligations Instruments.

3. Balanced funds

To reduce the risk of being introduced to an advantage class, balanced funds invest in both stocks and bonds. This type of mutual fund is also known as a "asset allocation fund." An investor may hope to find the distribution of these assets throughout resource classes to be fairly constant, although this will vary each asset. The goal of this fund is to be resourceful while reducing risk. Regardless, these assets pose a similar risk and are vulnerable to the same fluctuations as other asset groups.

4. Index funds

Another group, which has become extremely well-known in recent years, is referred to as "index funds." Their business strategy is based on the belief that consistently beating the market is difficult and often costly. As a result, the fund manager is able to purchase companies that are linked to a notable market list, such as the Sensex and Nifty 50. Because this approach necessitates less research from specialists and advisors, there are less costs to eat up profits before they are handed on to investors. Because of cost-conscious investors, these assets are routinely structured.

5. Money market funds

Safe (risk-free) transitory obligation instruments, like as government Treasury bills, make up the money market. This is a safe place to put your money. You won't make a lot of money, but you won't have to worry about losing your mind.

6. Income funds

Income funds are named by their goal: to provide current salary on a long-term basis. These assets are mostly invested in government and high-quality corporate obligations, with the intention of retaining these securities until maturity to provide interest streams. While subsidised real estate may appreciate in value, the primary goal of these assets is to provide consistent income flow to financial specialists. Overall, the market for these assets is dominated by preservationist financial specialists and retirees. Charge conscious speculators may want to stay away from these assets because they produce ordinary pay.

1.3 Mutual fund concepts

1. Net Asset Value

A mutual fund scheme's net asset value is the market value per unit of all securities acquired by the fund. It is evident that all mutual fund will always have holdings under the scheme since the revenue generated from investors is invested in instruments, and investors will hold a specific number of mutual fund units.

To calculate the Net Asset Value, we must first determine the market value of all securities, the scheme's liabilities, and then the number of units issued. The total asset minus entire liabilities will be the mutual fund's NAV. The NAV is calculated on a per-unit basis. As a result, the net value must be divided by the total number of units. This is the price per unit of a mutual fund.

Every day, the market value of the underlying assets or securities varies, and mutual fund NAVs follow suit. Depending on the type of mutual fund scheme, mutual fund houses are required to declare the Net Asset Value on a daily or weekly basis. The NAV must be disclosed on all working days for open-ended schemes, while the NAV must be disclosed on all working days for closed-ended schemes.

NAV Formula

To calculate Net Asset Value calculation, the formula is:

NAV = [Assets – (Liabilities + Expenses)] / (Number of units outstanding)

The value of securities and liquid cash are included in the assets. Equity, debentures, bonds, bills of exchange, and commercial paper are among the securities in which the plan has invested. It also includes any accumulated interest and dividends.

Money payable, interest payable, and fund management expenses are among the liabilities and expenses.

2. Expense Ratio

It is the ratio of a mutual fund's cost for managing a fund to the fund's net assets. The expense ratio is the percentage of the fund's assets that is used to cover operating expenses. It is a representation of a company's financial operating costs, which are deducted from the holdings and, as a result, diminish the shareholder's yield. Operational expenditures (custody charges, regulatory and audit fees, making and sales expenses, and other extra costs), and royalty paid to the wholesaler (generally 0.5 percent of the asset value) are all included in the expense ratio. The expense ratio is not the same as the load. The expense ratio refers to the cost of owning a fund, whereas the load refers to the cost of purchasing a fund. A load is paid directly to the fund by the investor at the time of purchase, whereas the expense ratio is calculated as a percentage of net assets and deducted annually from the investor's investments. A mutual fund house reports the expense ratio once every six months.

Securities funds can collect a maximum of 2.5 percent in value ratio, while convertible bonds can charge a total of 2.25 percent, as per SEBI Mutual Fund regulations. Managed funds, such as index funds, have a greater expense ratio versus passively managed funds. In general, index funds have always had an expense ratio of 1–1.5 percent, which is smaller than equity funds, that provide an expense ratio of 1.5 percent.

3. Entry Load

This is a fee or commission paid to the mutual fund company by the investor at the time of the initial investment purchase. Typically, the entry fee is subtracted from the investment amount, lowering the total amount invested. To compensate the company's distribution costs, an entry load is paid. The entry loads for various mutual funds varies from one another. In simple terms, investors would pay the net asset value (NAV) plus the entrance load for a mutual fund. Until 2009, an entry load of up to 2.25 percent of the investment value was imposed in India. This has been prohibited, which will have a severe influence on the mutual fund business.

4. Exit Load

In a mutual fund, an exit load is a fee paid to intermediaries for selling mutual fund shares for investors before a set deadline. The commission is a proportion of the sale price of the stock. Because the exit load is deducted from the NAV, the profit obtained on selling the investment is lowered. Varying systems have different exit loads. The exit load is kept by the asset management business and is not included in the scheme's earnings.

Another sort of exit load is the Contingent Deferred Sales Charge, or CDSC, which requires investors to pay exit fees dependent on the investment period. The exit load is reduced if you invest in a mutual fund scheme for a long period of time. However, if you wish to get out of a mutual fund investment early, you'll have to pay a significant exit cost.

The purpose of an exit load is to deter investors from prematurely exiting mutual funds.

5. Assets Under Management (AUM)

The mutual fund manager raises money by presenting a scheme or schemes, which are then invested in a variety of securities and assets. Assets under management refers to the market value of these assets. The Net Asset Value (NAV) of a scheme is multiplied by the number of units issued by that scheme to determine its AUM. The AUM of a mutual fund house is calculated by summing the AUMs of all schemes it offers, and the AUM of the mutual fund industry is calculated by adding the AUMs of all mutual fund houses. A change in AUM is caused by a change in market prices/NAV or redemptions.

6. Asset Management Company (AMC)

Asset management companies (AMCs) are enterprises that pool investments from a variety of individuals and institutions. The corporation invests in capital assets such

as stocks, real estate, bonds, and so on to manage the investment. Professionals known as fund managers work for asset management firms and decide where the pooled funds are put. Fund managers discover investment opportunities that are consistent with the investors' goals. Before making an investment decision that is in keeping with the investment goals, the fund manager considers several measures such as market and industry risks. To reduce risk, a debt fund, for example, invests primarily in bonds and government securities. An equity fund, on the other hand, is primarily concerned with equities of companies. The ultimate goal is to create lucrative investment selections that will provide maximum returns to investors.

1.4 Benefits of Mutual Funds

Individual securities can be purchased directly or indirectly through a financial intermediary. Mutual funds have established themselves as a popular investment option for regular investors around the world.

Professional Management

The common investor is unfamiliar with capital market processes and lacks the financial means to realise the benefits of investment. As a result, he requires professional assistance. It is not just costly to engage a "expert," but it is also more difficult to recognise a genuine expert. Professional managers who have the necessary abilities and experience to analyse mutual funds are in charge of them analyse the performance and prospects of companies. They enable an organised investing strategy, which is difficult for an individual investor to achieve.

Portfolio Diversification

When an investor puts all of his money into a single stock, he is taking a risk. Mutually beneficial Funds invest in a variety of businesses in a variety of industries and areas. The riskiness of the investments is reduced as a result of this diversification.

Transaction Costs

Transaction Costs are Reduced Investing through funds is less expensive than investing directly in the capital market because the benefits of economies of scale are passed on to the investors.

Availability of liquid assets

Investors frequently find it difficult to sell their securities, however with mutual funds, they may easily liquidate their investment by selling their units to the fund if it is an open-ended scheme or by selling them on a stock exchange if it is a closed-ended scheme.

Affordability

Investing in mutual funds eliminates paperwork, saves time, and simplifies the process of investing.

Adaptability

Mutual funds have a variety of schemes to choose from, and investors can transfer their holdings from one plan to the next.

Benefits from Taxes

Tax advantages are now available to mutual fund investors. Dividends earned from mutual funds' debt schemes are tax-free up to the $1,000,000 maximum set by section 80C of the Internal Revenue Code.

Transparency

Transparency is important. Every month, mutual funds make their portfolios public. As a result, an investor knows where his or her money is going and can withdraw at any time if they are unhappy with the portfolio.

The Stock Market's Stability

Mutual funds have a big pool of money, allowing them to take advantage of economies of scale and absorb stock market losses while continuing to invest. Mutual funds can help to boost liquidity in the money and capital markets.

Equity Analysis

Because mutual funds have a huge quantity of funds and equity research teams, they can afford the information and data needed for investments.

Investors' Interests are Safeguarded

Mutual funds are governed by SEBI and must follow tight regulations aimed to protect the interests of investors.

2 LITERATURE REVIEW

In their study of open-ended Pakistani mutual fund performance using quarterly data from 1996 to 2006, **Afza and Rauf** (2009) used quarterly data. The analysis uses the Sharpe ratio to quantify fund performance using pooled time-arrangement and cross-sectional data and is concentrated on several aspects such as fund size, expenditure, age, turnover, and so on. The findings revealed a significant impact on fund performance.

Garg (2011) examined the performance of the top 10 mutual funds based on their previous year's performance. Return, standard deviation, and beta, as well as Treynor, Jensen, and Sharpe indexes, were used to examine the performance. In addition, Carhart's four-factor model was used to analyse the performance. In the one-year class, the results revealed that Reliance Regular Saving Scheme Fund had achieved the highest final score and Canara Robeco Infra had achieved the lowest final score.

Mr. Balaji Reddy Mora and Laxmi Narayana Nadia (2018) conducted a close review of the mutual fund's scheme. The goal of the investigation is to determine the risk and return of close fund plans, as well as to distinguish between comparable and BSE-Sensex indexes. Examine whether the plans are outperforming or underperforming based on their performance differentiated and the market record to meet expectations to meet the benchmark and check the aspect of improvement of the chosen mutual funds scheme. As a result of the research, a few schemes may offer better returns while others may have more risk. Whatever the mix, investors are always looking for the best combination of high returns and low risk. Closely connected, examining the coefficient of confirmation of those plans is vital, and returns are far from the only aspect to consider at the time of venture, when the investor must analyse all of the aspects impacting the fund's performance in order to obtain better results.

According to **Sahri et al**. (2015), it is not sufficient to calculate mutual fund performance solely on the basis of the total return; risk variables must also be included. It has been argued that incorporating risk variables into the calculation of mutual fund performance will offer investors with more detailed information about mutual fund performance.

Nimalathasan et al. (2012) conducted a study to do financial performance analysis, a comparative study on equity diversified schemes and equity mid-cap, and the results found that among the open ended – Tax Saving schemes, the Canara Robeco Equity Diversified fund was preferred and ranked the top most, whereas among the open ended mid-cap schemes, HDFC Asset Management Company was preferred and ranked the top most.

2.1 Problem Statement and Importance of The Study

So many investment instruments are available in today's financial market. Thus, investors are not sure which instrument provides best return. As per the financial rule of "Do not put all the eggs in one basket" investor needs a diversified portfolio, to minimize the risk.

Not every investor possesses the knowledge of getting maximum returns against minimum risk. Therefore, mutual funds are preferable for such investors. But mutual fund market offers number of schemes. Investors need to choose schemes based on their risk-taking capabilities. So, the problem arises that how does a investor find a scheme in the market that provides the best return among all the schemes available in the market.

To solve this there are certain model available like Jenson's model and Sharpe's model. These models help investor understand that which scheme is most suitable for them.

Importance of the study is that it provides understanding of a mutual fund's performance, so the investor can evaluate according to their expectation. Investors can

explain their expectations with respect to certain indicators on what is possible to achieve or moderate this with comparable investment alternatives available in the market. These indicators of performance act against investors fund performance. It is particularly important to select the right benchmark to evaluate a fund's performance. So, the problem arises that in which scheme they should invest according to their preferences.

3 RESEARCH METHODOLOGY

3.1 OBJECTIVES OF THE STUDY

The primary objective of the present study is to know which mutual funds gave highest performance in a selected time period.

- To know about mutual funds in detail.
- To know, which schemes gives highest return within the selected time period.
- To compare the performance of selected mutual funds using investment measures.

3.2 Sources of data

The present study depends on secondary data which is gathered from different sources like factsheets of different asset management companies and historical NAV from official websites.

3.3 Scope of study

The present study comprises of 15 equity mutual fund schemes launched by different Asset Management Companies (AMC). The time period of this research work is from Jan 1st, 2015 to Dec 31st, 2019. The NAV of the selected mutual funds have been compared for five years and a yearly return.

3.4 Statistical tools

- **Jenson's Alpha**: Alpha is the difference between the earnings a financial advisor expects from a fund and the profits he expects from the fund. A positive alpha indicates that the fund outperformed its benchmark index. A negative alpha, on the other hand, indicates that the fund has underperformed. The higher the positive alpha, the better for the investment.

- **Beta:** Beta is a measure of a fund's unpredictability in contrast to the market, or the extent to which market conditions influence the fund's performance. A factual tool called regression analysis is used to determine beta.' The Sensex and Nifty market benchmark indexes have a beta of 1.0 by definition. Conservative investors should concentrate on low-beta mutual funds. For larger returns, aggressive financial professionals can choose to invest in mutual funds with a greater beta incentive.

- **Standard Deviation** is used to calculate a mutual fund's total risk (showcase, security-specific, and portfolio) (SD). The standard deviation in mutual funds tells us how far a fund's return deviates from expected earnings based on its previous performance. At the end of the day, it can be concluded that it evaluates the fund's volatility. The standard deviation of a fund calculates this risk by calculating how much the funds fluctuate in relation to the fund's normal return over time. As a result, it is a proportion of a mutual fund's return consistency. A greater SD figure indicates that the mutual fund's net asset value (NAV) is becoming increasingly unstable, making it less secure than a fund with a lower SD.

- **Sharpe Ratio (SR)**: The Sharpe Ratio (SR) is another important metric that evaluates a fund's return for the risk it has taken. SD has calculated the risk here. It's used for funds with a low correlation to their benchmark index. This ratio enables an investor to determine whether it is safe to put money into these funds while accepting a certain level of risk. The Sharpe ratio (SR) measures a fund's return on risk. The greater the SR, the better. In a sense, a mutual fund with a greater SR is preferable because it indicates that it has generated larger returns per unit of risk taken. Surprisingly, a negative Sharpe ratio indicates that a risk-free asset would outperform the reserve under investigation.

4 Data Analysis

4.1 NAV & RETURNS

Table 1 - LARGE CAP FUND NAV & RETURNS

Fund name	BNP PARIBAS Large Cap Fund	ICICI Prudential Blue chip Fund	Axis Blue chip Fund	SBI Blue chip Fund	NIPPON India Large Cap Fund
NAV for 2015(₹)	65.13	15.68	16.89	19.22	23.34
Return for 2015(%)	0.2	4.53	5.56	1.16	1.48
NAV for 2016(₹)	65.26	16.94	14.24	18.44	21.85
Return for 2016(%)	0.19	8.04	(-15.69)	(-4.06)	(-6.38)
NAV for 2017(₹)	81.48	19.52	15.54	21.54	26.71
Return for 2017(%)	25.1	24.49	(-8)	12.07	14.44
NAV for 2018(₹)	86.97	20.78	17.41	22.33	31.13
Return for 2018(%)	33.53	32.53	3.08	16.18	33.38
NAV for 2019(₹)	92.3	21.97	17.77	22.97	35.08
Return for 2019(%)	41.72	40.11	5.21	19.51	50.3

Table 2 - MID CAP FUND NAV & RETURNS

Fund name	Nippon India Growth Fund	Axis Midcap Fund	DSP Midcap Fund	BNP Paribhas Mid Cap Fund	Motilal Oswal Midcap 30 Fund
NAV for 2015(₹)	796.12	24.89	36.24	24.42	19.29
Return for 2015(%)	0.02	3.71	0.67	1.75	1.53
NAV for 2016(₹)	760.93	24.07	38.14	21.68	19.68
Return for 2016(%)	(-4.42)	(-3.29)	5.24	(-11.22)	2.02
NAV for 2017(₹)	917.71	26.49	48.26	32.18	23.59
Return for 2017(%)	15.27	6.43	33.17	31.78	22.29
NAV for 2018(₹)	1207.19	33.03	58.81	38.6	28.12
Return for 2018(%)	51.63	32.7	62.28	58.07	45.78
NAV for 2019(₹)	1050.59	36.35	53.64	31.36	25.22
Return for 2019(%)	31.96	46.04	48.01	28.42	30.74

Table 3 - SMALL CAP FUNDS NAV & RETURNS

Fund name	Axis Small cap Fund	Kotak Small cap fund	HDFC Small cap Fund	Nippon India Small cap Fund	DSP Small cap Fund
NAV for 2015(₹)	18.37	52.41	25.63	23.82	41.55
Return for 2015(%)	2.06	0.79	2.52	3.57	1.34
NAV for 2016(₹)	20.26	53.75	26.77	24.31	46.08
Return for 2016(%)	10.29	2.56	4.45	2.06	10.9
NAV for 2017(₹)	24.33	72.86	35.63	33.56	55.05
Return for 2017(%)	32.45	39.02	39.02	40.89	32.49
NAV for 2018(₹)	28.39	85.2	47.72	49.8	73.41
Return for 2018(%)	54.55	62.56	86.19	109.07	76.68
NAV for 2019(₹)	29.4	67.33	42.52	39.98	55.08
Return for 2019(%)	60.04	28.47	65.9	67.84	32.56

4.2 RISK RATIOS

Table 4 - LARGECAP FUND RISK RATIOS

NO.	FUND NAME	STANDARD DEVIATION	BETA	SHARPE RATIO	JENSON'S ALPHA
1	BNP PARIBHAS Large cap Fund	11.7	0.83	0.44	2.2
2	ICICI Prudential Bluechip Fund	11.73	0.87	0.21	(-0.63)
3	AXIS Bluechip Fund	11.36	0.77	0.96	8.23
4	SBI Bluechip Fund	12.67	0.94	0.14	(-0.69)
5	Nippon India Large Cap Fund	14.34	1.02	0.2	(-0.73)

Table 5 - MIDCAP FUND RISK RATIOS

NO.	FUND NAME	STANDARD DEVIATION	BETA	SHARPE RATIO	JENSON'S ALPHA
1	Nippon India Growth Fund	14.84	0.95	0.24	1.13
2	Axis Midcap Fund	13.14	0.64	0.78	12.1
3	DSP Midcap Fund	14.74	0.75	0.25	5.81
4	BNP Paribhas Midcap Fund	16	0.81	0.13	4.41
5	Motilal Oswal Midcap 30 Fund	15.99	0.74	0.11	3.88

Table 6 - SMALLCAP FUND RISK RATIOS

NO.	FUND NAME	STANDARD DEVIATION	BETA	SHARPE RATIO	JENSON'S ALPHA
1	Axis Small Cap Fund	13.83	0.53	0.66	13.44
2	Kotak Small cap Fund	16.61	0.68	0.06	6.38
3	HDFC Small cap Fund	16.78	0.69	0.11	7.33
4	Nippon India Small cap Fund	18.7	1.16	0.15	(-0.13)
5	DSP Small cap Fund	18.37	0.9	(-0.15)	0.02

4.3 Findings

Large cap fund

At the end of the year 2015 NAV & TOTAL RETURN for selected schemes (BNP Paribhas Large cap Fund 65.13 & 0.2%, ICICI Prudential Blue-chip Fund 15.68 & 4.53%, Axis Blue-chip Fund 16.89 & 5.56%, SBI Blue-chip Fund 19.22 & 1.16%, NIPPON India Large cap Fund 23.34 & 1.48%).

At the end of the year 2016 NAV & TOTAL RETURN for selected schemes (BNP Paribhas Large cap Fund 65.26 & 0.19%, ICICI Prudential Blue-chip Fund 16.94 & 8.04%, Axis Blue-chip Fund 14.24 & (-15.69%), SBI Blue-chip Fund 18.44 & (-4.06%), NIPPON India Large cap Fund 21.85 & (-6.38%)).

At the end of the year 2017 NAV & TOTAL RETURN for selected schemes (BNP Paribhas Large cap Fund 81.48 & 25.10%, ICICI Prudential Blue-chip Fund 19.52 & 24.49%, Axis Blue-chip Fund 15.54 & (-8%), SBI Blue-chip Fund 21.54 & 12.07%, NIPPON India Large cap Fund 26.71 & 14.44%).

At the end of the year 2018 NAV & TOTAL RETURN for selected schemes (BNP Paribhas Large cap Fund 86.97 & 33.53%, ICICI Prudential Blue-chip Fund 20.78 & 32.53%, Axis Blue-chip Fund 17.41 & 3.08%, SBI Blue-chip Fund 22.33 & 16.18%, NIPPON India Large cap Fund 31.13 & 33.38%).

At the end of the year 2019 NAV & TOTAL RETURN for selected schemes (BNP Paribhas Large cap Fund 92.30 & 41.72%, ICICI Prudential Blue-chip Fund 21.97 & 40.11%, Axis Blue-chip Fund 17.77 & 5.21%, SBI Blue-chip Fund 22.97 & 19.51%, NIPPON India Large cap Fund 35.08 & 50.30%).

Mid cap fund

At the end of the year 2015 NAV & TOTAL RETURN for selected schemes (Nippon India Growth Fund 796.12 & 0.02%, Axis Midcap Fund 24.89 & 3.71%, DSP Midcap Fund 36.24 & 0.67%, BNP Paribhas Midcap Fund 24.42 & 1.75%, Motilal Oswal Midcap 30 Fund 19.29 & 1.53).

At the end of the year 2016 NAV & TOTAL RETURN for selected schemes (Nippon India Growth Fund 760.93 & (-4.42%), Axis Midcap Fund 24.07 & (-3.29%), DSP Midcap Fund 38.14 & 5.24%, BNP Paribhas Midcap Fund 21.68 & (-11.22%), Motilal Oswal Midcap 30 Fund 19.68 & 2.02).

At the end of the year 2017 NAV & TOTAL RETURN for selected schemes (Nippon India Growth Fund 917.71 & 15.27%, Axis Midcap Fund 26.49 & 6.43%, DSP Midcap Fund 48.26 & 33.17%, BNP Paribhas Midcap Fund 32.18 & 31.78%, Motilal Oswal Midcap 30 Fund 23.59 & 22.29).

At the end of the year 2018 NAV & TOTAL RETURN for selected schemes (Nippon India Growth Fund 1207.19 & 51.63%, Axis Midcap Fund 33.03 & 32.70%, DSP Midcap Fund 58.81 & 62.28%, BNP Paribhas Midcap Fund 38.60 & 58.07%, Motilal Oswal Midcap 30 Fund 28.12 & 45.78).

At the end of the year 2019 NAV & TOTAL RETURN for selected schemes (Nippon India Growth Fund 1050.59 & 31.96%, Axis Midcap Fund 36.35 & 46.04%, DSP Midcap Fund 53.64 & 48.01%, BNP Paribhas Midcap Fund 31.36 & 28.42%, Motilal Oswal Midcap 30 Fund 25.22 & 30.74).

Small cap fund

At the end of the year 2015 NAV & TOTAL RETURN for selected schemes (Axis Small cap Fund 18.37 & 2.06%, Kotak Small cap Fund 52.41 & 0.79%, HDFC Small cap Fund 25.63 & 2.52%, Nippon India Small cap Fund 23.82 & 3.57%, DSP Small cap Fund 41.55 & 1.34).

At the end of the year 2016 NAV & TOTAL RETURN for selected schemes (Axis Small cap Fund 20.26 & 10.29%, Kotak Small cap Fund 53.75 & 2.56%, HDFC Small cap Fund 26.77 & 4.45%, Nippon India Small cap Fund 24.31 & 2.06%, DSP Small cap Fund 46.08 & 10.90).

At the end of the year 2017 NAV & TOTAL RETURN for selected schemes (Axis Small cap Fund 24.33 & 32.45%, Kotak Small cap Fund 72.86 & 39.02%, HDFC Small cap Fund 35.63 & 39.02%, Nippon India Small cap Fund 33.56 & 40.89%, DSP Small cap Fund 55.05 & 32.49).

At the end of the year 2018 NAV & TOTAL RETURN for selected schemes (Axis Small cap Fund 28.39 & 54.55%, Kotak Small cap Fund 85.20 & 62.56%, HDFC Small cap Fund 47.72 & 86.19%, Nippon India Small cap Fund 49.80 & 109.07%, DSP Small cap Fund 73.41 & 76.68).

At the end of the year 2019 NAV & TOTAL RETURN for selected schemes (Axis Small cap Fund 29.40 & 60.04%, Kotak Small cap Fund 67.33 & 28.47%, HDFC Small cap Fund 42.52 & 65.90%, Nippon India Small cap Fund 39.98 & 67.84%, DSP Small cap Fund 55.08 & 32.56).

4.4 Interpretation

Largecap fund

BNP PARIBAS Large Cap Fund (Growth) has a standard deviation of 11.7 and a beta of 0.83, indicating that the fund is low volatile. It also has Sharpe's Ratio of 0.44 and Jenson's Alpha of 2.2, indicating that the fund is a better risk-adjusted return to benchmark indices and has performed well by providing a better return to investors.

ICICI Prudential Blue-chip Fund (Dividend) has a standard deviation of 11.73 and a beta value of 0.87, indicating that the fund is very low volatile. It also has Sharpe's Ratio of 0.21 and Jenson's Alpha of (-0.63), indicating that the fund is a better risk-adjusted return to benchmark indices and that it has performed well by providing a better return to the inflows.

AXIS Blue-chip Fund (Dividend) has a standard deviation of 11.36 and a beta of 0.77, indicating that the fund is very low volatile. It also has Sharpe's Ratio of 0.96 and Jenson's Alpha of 8.23, indicating that the fund is a better risk-adjusted return to benchmark indices and has performed well by providing a better return to investors.

SBI Blue-chip Fund (Dividend) has a standard deviation of 12.67 and a beta value of 0.94, indicating that the fund is extremely volatile. It also has Sharpe's Ratio of 0.14 and Jenson's Alpha of (-0.69), indicating that the fund is a very poor risk-adjusted return to benchmark indices and has not performed well by providing a poor return to investors.

Nippon India Large Cap Fund (Growth) has a standard deviation of 14.34 and a beta value of 1.02, indicating that the fund is extremely volatile. It also has Sharpe's Ratio of 0.2 and Jenson's Alpha of (-0.73), indicating that the fund is a very poor risk-adjusted return to benchmark indices and has not performed well by providing a poor return to the inflows.

Midcap fund

Nippon India Growth Fund (Growth) has a standard deviation of 14.84 and a beta value of 0.95, indicating that the fund is extremely volatile. It also has Sharpe's Ratio of 0.24 and Jenson's Alpha of 1.13, indicating that the fund is a very poor risk-adjusted return to benchmark indices and has not performed well by providing a poor return to investors.

Axis Midcap Fund (Growth) has a standard deviation of 13.14 and a beta of 0.64, indicating that the fund is low volatile. It also has Sharpe's Ratio of 0.78 and Jenson's Alpha of 12.1, indicating that the fund is a very better risk-adjusted return to benchmark indices and has performed well by providing a better return to investors.

DSP Midcap Fund (Growth) has a standard deviation of 14.74 and a beta of 0.75, indicating that the fund is highly volatile. It also has Sharpe's Ratio of 0.25 and Jenson's Alpha of 5.81, indicating that the fund is a very better risk-adjusted return to benchmark indices and has performed well by providing a better return to investors.

BNP Paribas Midcap Fund (Growth) has a standard deviation of 16 and a beta of 0.81, indicating that the fund is highly volatile. It also has Sharpe's Ratio of 0.13 and Jenson's Alpha of 4.41, indicating that the fund is a very better risk-adjusted return to benchmark indices and has performed well by providing a better return to investors.

Motilal Oswal Midcap 30 Fund (Growth) has a standard deviation of 15.99 and a beta value of 0.74, indicating that the fund is highly volatile. It also has Sharpe's Ratio of 0.2 and Jenson's Alpha of 3.88, indicating that the fund is a very better risk-adjusted return to benchmark indices and has performed well by providing a better return to investors.

Small cap fund

Axis Small cap Fund (Growth) has a standard deviation of 13.83 and a beta value of 0.53, indicating that the fund is highly volatile. It also has Sharpe's Ratio of 0.66 and Jenson's Alpha of 13.44, indicating that the fund is a very better risk-adjusted return to benchmark indices and has performed well by providing a better return to investors.

The Kotak small cap fund's standard deviation is 16.61, and its beta is 0.68, indicating that it is highly volatile. Its Sharpe's Ratio is 0.06, and its Jenson's Alpha is 6.38, indicating that the fund is a very better risk-adjusted return to benchmark indices and that it has performed well by providing a better return to investors.

HDFC Small cap Fund (Growth) has a standard deviation of 16.78 and a beta value of 0.69, indicating that the fund is highly volatile. It also has Sharpe's Ratio of 0.11 and Jenson's Alpha of 7.33, indicating that the fund is a very better risk-adjusted return to benchmark indices and that it has performed well by providing a better return to investors.

Nippon India Small Cap Fund (Growth) has a standard deviation of 18.7 and a beta value of 1.16, indicating that the fund is highly volatile, and it has Sharpe's Ratio of 0.15 and Jenson's Alpha of (-0.13), indicating that the fund has provided a poor risk-adjusted return to benchmark indices and has not performed well by providing a poor return to investors.

DSP Small cap Fund (Growth) has a standard deviation of 18.37 and a beta value of 0.9, indicating that the fund is highly volatile. It also has Sharpe's Ratio of (-0.15) and Jenson's Alpha of 0.02, indicating that the fund has provided a poor risk-adjusted return to benchmark indices and has not performed well by providing a poor return to investors.

4.5 CONCLUSION

According to the results of the previous performance analysis of the selected fifteen equity funds, ten funds performed well, and five funds did not perform well during the study period. The steep drop in the NIFTY index in 2019 has had an influence on the performance of all of the funds. In the end, all of the funds, with the exception of SBI Blue-chip Fund, Nippon India Largecap Fund, Nippon India Growth Fund, Nippon India Small cap Fund, and DSP Smallcap Fund, did well in the extremely volatile market movement. To maintain consistent mutual fund performance, investors must examine statistical factors such as Jenson's alpha, beta, standard deviation, and Sharpe Ratios in addition to NAV and Total Return while investing in mutual funds.

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