An Analytical Study of Performance Evaluation of Mutual Funds

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Abstract
Mutual fund defined as mechanism of trust that pools the hard earn money of people in variety of schemes in accordance with specific objective. The industry of mutual fund witnessed an exceptional growth in 21st century. There is number of scheme enhanced the mobilization of fund that provides boost to the industry. The contribution of mutual funds ensures growth in the global financial market. The mutual fund industry achieves major growth in emerging economies like India by incurring huge investments from investors. The ecosystem of AMCs generates opportunities for investors in terms of being safe and arbitration with limited risk. The research paper is an attempt to rank the selected mutual fund on the basis of performance evaluation. The researcher used method/tool such as sharpe ratio, treynor ratio, Jensen ratio and m squared ratio for performance evaluation and ranking selected mutual fund.

***Keywords*: Mutual Fund, Global Financial Market, AMCs**

1. Introduction

1.1. Mutual funds

Mutual funds are typically classified according to the investments they make in the primary, such as a money market fund, bond or fixed-income fund, a stock or stock-equity fund, hybrid fund, or others. An AMC, because it pools money from many smaller investors, may be able to make investment in specific instrument or to have good positions than ever could be held by one smaller investor. A unit investment trust, which has one investment portfolio and an investment advisor who has a single investment portfolio, may provide investors with more than one class of unit investment trust shares. Mutual funds are professionally managed portfolios that typically provide broader diversification, seeking to spread risk over a wider variety of securities, various asset classes, sectors, industries, and investment styles.

Investors in a mutual fund do not directly own any shares in the companies that the fund purchases, but rather they equally share the profits or losses from the funds overall holdings--hence, the mutual in mutual funds. Asset-allocation funds are also indirectly exposed to expenses for the fund holdings, as well as those for the portfolio, and this kind of investment can have higher costs than mutual funds that only invest in stocks or bonds. While choosing a mutual fund, we should keep in mind that our broker fees for selling shares in one class over another. The $100-$200 that a single investor may be able to afford is generally not enough to purchase an entire stock round, but it would purchase a large number of mutual fund shares. For most equity funds, the required minimum starting investment might be significantly less than you would need to invest to create a diversified individual equity portfolio. Also, the minimums are often waived or reduced if investors purchase a fund inside of a retirement account, or if they take advantage of certain brokerage features such as automated investing, which invests regularly for a preset time frame.

1.2. History of Mutual Funds in India

The AMC industry was introduced in 1963, through the formation of the UUTI, on an initiative by the govt. and RBI. One of the earliest mutual fund schemes launched by the UTI was a unit trust in 1964. Between the two distinct entities, the first was UTI Mutual Funds (SBI, PNB, LIC & BOB), which was supervised by SEBIs Regulation & Management and Mutual Funds. After seeing the rise in the mutual funds, the government of India opened up a new mutual funds sector to the private sector in 1993, and introduced the Mutual Funds Rules and Regulations System in 1996, in which each mutual fund company, apart from Unit Trust of India, registered with SEBI (Securities Exchange Board of India).

SEBI had formulated the mutual funds regulations in 1996, which, for the first time, established an integrated regulatory framework for the industry. From prescribed rules for how securities should be valued (to ensure mutual fund schemes reflect the real value of the underlying securities; 2000), detailed risk management and investment of foreign securities systems (both 2002), the implementation of a cut-off date for determining what days NAV the investor receives when he buys and sells a mutual fund unit (2004), mutual funds have emerged as the most transparent saving instrument.

The private sector in India provides investors with more choice of investments, thereby leading to increased competition against existing government-run mutual funds. Before allowing, all the fund houses were sponsored by government-owned companies, with The Unit Trust of India being an overwhelming market leader. SBI Mutual Fund was the first Mutual Fund from Unit Trust of India. In November 1987, the first asset management fund not under the UTI was established by State Bank of India. The early stage was a cooperative effort by RBI and Government of

India, which was quickly disconnected from day-to-day operations of Unit Trust of India. Soon, between 1987 and 1993, the banks, LIC, and GIC set up eight funds.

1.3. Types of mutual fund schemes

Different types of AMC categories are designed so that shareholders can select the schemes according to their desired risks, investment amounts, goals, investment terms, and so forth. A large-cap mutual fund is an open-end stock plan that invests most of its capital in stocks from large-cap companies. Long-term mutual funds are open-end schemes with a primary investment in debt instruments of duration greater than seven years.

Long duration funds are hybrids that invest the bulk of corpus in equities over a longer period. As is obvious by its name, this kind of scheme is a mix of both, with some funds investing in equity markets while others investing simultaneously in fixed-income securities. The combined funds are used to invest in other mutual fund schemes instead of assets such as stocks or bonds.

Hybrid mutual funds invest across asset classes such as equities, debt securities, and gold. Debt mutual funds are a relatively stable avenue of investing which can help in building the wealth of investors compared with the high-risk, high-return stock funds. Liquid schemes, overnight funds, and money market mutual funds are investment options for investors seeking liquidity and protection of principal, along with corresponding returns. New Mutual Fund Scheme An open-ended fund which would invest primarily in the stocks of health care and pharmaceutical companies, as well as their associated securities.

1.4. Legal and Regulatory Framework for Mutual Funds in India

Presently, sponsored AMC are admirably regulated by SEBI, RBI, CA, etc. This regulatory and legislative framework for mutual funds has evolved in India with time. Since SEBI has taken over capital markets regulations, the Reserve Bank of India is involved in the Indian Mutual Funds industry, but to a limited extent. Alongside SEBI, sponsored mutual funds are regulated under several acts like Companies Act 2013, Finance Ministry, Indian Trusts Act.

At present, the matrix related to the Indian mutual funds industry is controlled by multiple bodies including the Securities Exchange Board of India, Ministry of Finance, Reserve Bank of India, Mutual Funds Association of India, Association of Investors, and Income Taxation. The regulation of mutual fund schemes by the Securities Exchange Board of India and other regulatory bodies helps in not only promoting transparency and privacy, but also, pave the way to industrialization and provide for stable money flows. SEBI has also amended its regulations in 2006 to enable mutual funds to invest in gold as well as in gold-related instruments, introducing gold exchange traded funds (GETF) schemes, subject to few restrictions on investments.

In addition, because of measures taken and guidelines issued by SEBI, mutual funds are allowed to invest in government securities and also in foreign debt securities in other countries having fully convertible currencies. After SEBIs Mutual Funds regulations, mutual fund companies expanded and increased exponentially. In recent years, even major international private equity investors who would traditionally invest through master funds based offshore through foreign direct investment routes, have gotten familiar and comfortable with AIF regulations and started setting up pools in India. SEBI also handles the other components of a fund like the AMCs, trustees, custodians, etc. The Reserve Bank of India Capital Adequacy (RBI), the financial regulator in India, is also a regulatory body for the banking system. The Finance ministry acts as a regulator for the RBI and SEBI, as well as an appeals body for the rules regulated by SEBI. The MF regulations are amended from time to time by SEBI in order to improve transparency and communication, address emerging issues, protect investor's interests, and enhance MFs regulatory structure.

1.5. Market of Mutual Funds in India

The last couple of years have seen significant evolution of India's mutual fund sector. Individual investors have grown at a remarkable rate and now account for almost 58% of AUM. The Indian mutual fund industry has witnessed an exponential growth in its retail base, with over four crore new accounts added by the industry, while AUM has more than doubled from about Rs11 to more than Rs25 trillion. Today, 44 Asset Management Companies (AMCs) offer more than 2500 mutual fund schemes catering to the diverse goals and risk appetites of investors across India.

Similar to their American mutual funds in India, Indian mutual funds pool together investments from a number of shareholders and invest in various securities depending on the funds objective. Some equity mutual funds are designed to deliver long-term capital appreciation via a growth or value investment strategy, such as the Birla SL Frontline Equity Fund, while others are focused on providing dividend yields for shareholders. As per the regulatory guidelines, Equity Mutual Fund schemes are categorized broadly according to market cap of companies that are considered for investment.

A Mutual Fund comprises pooled funds collected by investors for investing in securities such as Equity, Bonds, Money Market Instruments, etc. These funds are managed by expert fund managers who are registered with the Market Regulator, Securities and Exchange Board of India (SEBI). Using volatility in our favour would require us to adhere to disciplined investment practices, says Sahil Kapoor, Head-Products and Market Strategist, DSP Mutual Fund. These mutual fund managers feel investors should not be focused on short-term returns and volatility. Most categories of Equity mutual funds have delivered negative returns for one day because of falling. Analysts feel the domestic equity markets and rupee are facing challenges because of sharp increase in U.S. inflation, hence worries about aggressive interest rate increases and heavy outflows. A small cap fund has a higher risk compared with the large cap funds since large cap funds mainly invest in big companies which are the market leaders and have a strong financial position. Just as in the US, Indian markets offer mutual funds which specialise in specific sectors, invest exclusively in government debt or debt backed by inflation, track a particular index, or are designed for maximum tax-efficiency.

SIP continues to be a preferred avenue for retail investors to invest in mutual funds, since it helps them to mitigate the risks of market timing, and SIPs can have an investment amount as low as Rs500 a month. Mutual fund SIPs were growing at a new peak due to large numbers of first-time investors entering the market and ease of enrolling in an SIP via an online Fintech portal. The number of SIPs and monthly deposits were increasing, however, the average ticket value for each SIP was decreasing.

2. Literature Review

John G. McDonald (1974) analyzed the flow of 123 mutual funds which are associated with the objective of respective funds. The study exhibits a positive relationship between the risks involved and returns. Risk associated with mutual funds which have aggressive targets to achieve. Garg (2011) examines the routine performance of top category mutual funds. The selection criteria considered as previous year return. The study exhibits that the Reliance Regular Saving Scheme fund performed better than others and achieved the best final score. Deepak Agarwal (2011) enlightens the importance of mutual funds in capital formation in emerging economies. The contribution of mutual funds ensures growth in the global financial market. The study further exhibits that the mutual fund industry achieves extraordinary growth in emerging economies like India by incurring huge investments from investors. The ecosystem of AMCs generates opportunities for investors in terms of being safe and arbitration with limited risk. R. Anitha, et. al. (2011) evaluated the mutual fund of both public and private sector. The study considers performances of various mutual funds within the period of the year 2005-2007. The researcher finds it complicated to first-rate any because of constant vitality. Dr. P.Kanchana Devi (Jan 2017) evaluated the performance of HDFC mutual fund with five various open-ended schemes. The study suggests that the company should give more emphasis on floating rate income funds. Alka Solanki (May 2016) considered an open-ended scheme of reliance and analyzed performance thereafter. The researcher considered 10 specific schemes associated with reliance mutual funds. The time duration for the study is 10 years starting from the 1st April 2007. The study exhibits higher return in all the mutual fund schemes while comparing it with market return.

3. Performance Evaluation of Selected Mutual Funds

3.1. Selected mutual funds

3.1.1. Axis Bluechip Fund

It is a Large-Cap fund and this fund has 87.26% in domestic equities in which, 74.67% is in Large-Cap stocks, 2.48% is in Mid Cap stocks. The fund has 0.09% funding in Debt, of which 0.09% in Government securities. It is suitable for those investors who are trying to make investments cash for at least three-four years and searching for excessive returns. At the same time, those traders must additionally be prepared for the opportunity of mild losses of their investments. Fund CRISIL rank changed into up to date from three to two with inside the preceding quarter.

3.1.2. Mirae Asset Large Cap Fund

It is a Large-Cap fund and this fund has 98.5% domestic equities of which, 65.01% in Large-Cap stocks, 11.40%in Mid-Cap stocks, 3.9% in Small-Cap stocks. It is good for those who're trying to make investments cash for at least three-four years and searching out excessive returns. At the same time, those traders must additionally be prepared for the opportunity of mild losses of their investments.

3.1.3. Axis Midcap Fund

It is a Mid-Cap fund and this fund has 69.5% domestic equities of which 24.52% in Large-Cap stocks, 88.82% in Mid-Cap stocks, 25.96% Small-Cap stocks. It is good for those who're trying to invest money for three-four years and searching for excessive returns. At the equal time, those traders must additionally be prepared for the opportunity of mild losses of their investments.

3.1.4. Parag Parikh Flexi Cap Fund

It is a Flexi-Cap Fund and this fund has 66.86% domestic equities of which, 52.34% in Large-Cap stocks, 2.92% in Mid-Cap stocks, 10.74% in Small-Cap stocks. It is good for those who're trying to make investments cash for three-four years and searching out excessive returns. At the same time, those traders must additionally be prepared for the opportunity of mild losses of their investments.

3.1.5. Kotak Emerging Equity Fund

It is a Mid-Cap Fund and this fund has 96.17% domestic equities of which, 5.66%in Large-Cap stocks, 54.17% in Mid-Cap stocks, 24.55% in Small-Cap stocks. It is good for those who're trying to make investments cash for three-four years and searching out excessive returns. At the equal time, those traders must additionally be prepared for opportunity of mild losses of their investments.Fund CRISIL rank changed into up to date from four to a few withinside the preceding quarter.

3.2: Data analysis of selected mutual funds

Fund	Benchmark	$E(r_p)$	$E(r_b)$	σ_p	σ_b	β_p	S_p	T_p	α_p	M_p^2	r_f

Axis Bluechip Fund	S&P BSE 100	9.21	11.84	18.38	21.84	0.80	**0.17**	**3.86**	**-1.49**	**9.21**	6.12
Mirae Asset Large Cap Fund	S&P BSE 100	10.85	11.84	21.3	21.84	0.97	**0.23**	**4.88**	**-0.82**	**10.85**	6.12
Axis Midcap Fund	S&P BSE Midcap	19.09	14.96	19.09	24.64	0.76	**0.68**	**17.07**	**6.25**	**19.09**	6.12
Parag Parikh Flexi Cap	S&P BSE 500	20.39	13.18	19.27	22.34	0.78	**0.74**	**18.29**	**8.76**	**20.39**	6.12
Kotak Emerging Equity Scheme	S&P BSE Midcap	18.89	14.96	24.54	24.64	0.98	**0.52**	**13.03**	**4.11**	**18.89**	6.12

= Expected return of portfolio
= Expected return of benchmark
= Standard Deviation of portfolio
= Standard Deviation of benchmark
= Beta value of portfolio
= Sharpe ratio of portfolio
= Treynor ratio of portfolio
= Jensen ratio of portfolio
= Modigliani-Modigliani ratio of portfolio
= Risk free returns (RBI 364-Day Treasury Bill)

3.2.1. Axis Bluechip Fund

From the above table data, sharpe ratio of Axis Bluechip fund is 0.17 which is positive but still lowest as compared to other mutual fund schemes. Higher sharpe ratio means better risk adjusted scheme. So, according to sharpe ratio of Axis Bluechip fund, this is poor risk adjusted returns.Treynor ratio of Axis Bluechip fund is 3.86 which is positive but still lowest as compared to other mutual fund schemes. Higher Treynor ratio means a better risk adjusted scheme. So, according to treynor ratio, this scheme is poor risk adjusted returns scheme. Jensen's ratio of Axis Bluechip fund is -1.49, that is negative and also, lowest as compared to other mutual fund schemes. Higher Jensen's ratio means better risk adjusted scheme. So, according to Jensen's ratio, this scheme is poor risk adjusted return scheme. ratio of Axis bluechip fund is 9.21 which is lowest as compared to other schemes. Higher ratio means better risk adjusted scheme. So, according to ratio, this scheme is poor risk adjusted scheme. This scheme can not attain the benchmark return. This scheme is overall poor risk adjusted scheme.

3.2.2. Mirae Asset Large Cap Fund

From the above table data, the sharpe ratio of Mirae Asset Large Cap fund is 0.23 which is positive but still low as compared to other mutual fund schemes but higher than Axis Blue chip fund. Higher sharpe ratio means better risk adjusted scheme. So, according to the sharpe ratio of Mirae Asset Large Cap fund, this is better risk adjusted returns with the benchmark but poor as compared to other fund schemes except Axis Bluechip fund. The Treynor ratio of Mirae Asset Large Cap fund is 4.88 which is positive but still low as compared to other mutual fund schemes except Axis Bluechip fund. Higher Treynor ratio means a better risk adjusted scheme. So, according to the treynor ratio, this scheme is a better risk adjusted returns scheme to its category but poor as compared to other schemes. Jensen's ratio of Mirae Asset Large Cap fund is -0.82, that is negative and also low as compared to other mutual fund schemes. Higher Jensen's ratio means a better risk adjusted scheme. So, according to Jensen's ratio, this scheme is a poor risk adjusted return scheme. The ratio of Axis bluechip fund is 10.85 which is low as compared to other schemes. Higher ratio means a better risk adjusted scheme. So, according to the ratio, this scheme is a poor risk adjusted scheme. This scheme is overall a poor risk adjusted scheme. This scheme can not attain the benchmark return.

3.2.3. Axis Midcap Fund

From the above table data, the sharpe ratio of Axis Midcap fund is 0.68 which is good as compared to other mutual fund schemes. Higher sharpe ratio means better risk adjusted scheme. So, according to the sharpe ratio of Axis Midcap fund, this is better risk adjusted returns. The Treynor ratio of Axis Midcap fund is 17.07 which is high as compared to other mutual fund schemes except Parag Parikh Flexi Cap. Higher Treynor ratio means a

better risk adjusted scheme. So, according to the treynor ratio, this scheme is a better risk adjusted returns scheme. Jensen's ratio of Axis Midcap fund is 6.25, that is high as compared to other mutual fund schemes except Parag Parikh Flexi Cap. Higher Jensen's ratio means a better risk adjusted scheme. So, according to Jensen's ratio, this scheme is a better risk adjusted return scheme. The ratio of Axis Midcap funds is 19.09 which is high as compared to other schemes. Higher ratio means a better risk adjusted scheme. So, according to the ratio, this scheme is a better risk adjusted scheme. This scheme is outperforming. This scheme is overall a better risk adjusted scheme.

3.2.4. Parag Parikh Flexi Cap

From the above table data, sharpe ratio of Parag Parikh Flexi Cap is 0.74 which is highest as compared to other mutual fund schemes. Higher sharpe ratio means better risk adjusted scheme. So, according to sharpe ratio of Parag Parikh Flexi Cap fund, this is better risk adjusted returns. Treynor ratio of Parag Parikh Flexi Cap fund is 18.29 which is highest as compared to other mutual fund schemes. Higher Treynor ratio means better risk adjusted scheme. So, according to treynor ratio, this scheme is better risk adjusted returns scheme. Jensen's ratio of Parag Parikh Flexi Cap fund is 8.76, that is highest as compared to other mutual fund schemes. Higher Jensen's ratio means better risk adjusted scheme. So, according to Jensen's ratio, this scheme is a better risk adjusted return scheme. The ratio of Parag Parikh Flexi Cap Fund is 20.39 which is highest as compared to other schemes. Higher ratio means better risk adjusted scheme. So, according to ratio, this scheme is better risk adjusted scheme. This scheme is outperforming as compared to benchmark. This scheme is less volatile. This scheme is overall a better risk adjusted scheme.

3.2.5. Kotak Emerging Equity Scheme

From the above table data, the Sharpe ratio of Kotak Emerging Equity Scheme is 0.52 which is good as compared to other mutual fund schemes. Higher sharpe ratio means better risk adjusted scheme. So, according to the Sharpe ratio of Kotak Emerging Equity Scheme, this is a better risk adjusted return scheme. The Treynor ratio of Kotak Emerging Equity Scheme is 13.03 which is good as compared to other mutual fund schemes. Higher Treynor ratio means a better risk adjusted scheme. So, according to the treynor ratio, this scheme is a better risk adjusted returns scheme. Jensen's ratio of Axis Midcap fund is 4.11, that is good as compared to other mutual fund schemes. Higher Jensen's ratio means a better risk adjusted scheme. So, according to Jensen's ratio, this scheme is a better risk adjusted return scheme. The ratio of Axis Midcap funds is 18.89 which is high as compared to other schemes. Higher ratio means a better risk adjusted scheme. So, according to the ratio, this scheme is a better risk adjusted scheme. This scheme is outperforming. This scheme is overall a better risk adjusted scheme.

4. Ranking

From the above data analysis and interpretation, the rank of all 5 selected mutual funds will be as given below. Ranking is on the basis of sharpe ratio, treynor ratio, Jensen ratio and m squared ratio. Higher value of these ratio means better risk adjusted return and lower value of these ratio means poor risk adjusted return. Higher value means less volatile as compared to benchmark and its own category.Rank 1 means investors who are looking to invest and looking for high returns will be the top choice. Rank 5 means highly volatile and poor risk adjusted return. In these 5 selected mutual funds, Parag Parikh Flexi cap will be the top choice of the investors and so on.

Fund	Rank
Parag Parikh Flexi Cap	**1**
Axis Midcap Fund	**2**
Kotak Emerging Equity Scheme	**3**
Mirae Asset Large Cap Fund	**4**
Axis Bluechip Fund	**5**

5. Conclusion

A mutual fund aimed at long-term growth might be invested exclusively in stocks and high-yield bonds. The investment in a mutual fund rather than stocks diversifies and spreads out risk, will also keep your portfolio safe. Diversification is usually built into mutual funds, meaning by investing in one, you spread out risk over a range of companies or industries. The risks inherent to invest in AMC could be managed by diversifying investments according to financial goals, time horizon, and tolerance for risk.This is false because mutual funds can provide you inflation-beating returns as long as you know your investments and invest according to your financial goals and risk profile. The dual benefit of inflation-beating returns,

coupled with tax-efficient returns, makes mutual funds a preferred investment choice for experienced investors. All you need to do is simply put your money into the mutual fund schemes according to risk you can bear and time you can spend.

One of the appealing things about mutual funds is that, once you have met a minimum investment amount, you often get to pick and choose how much you want to invest. Buying and selling mutual funds for the sake of trade is an investment error, and investors should avoid it if at all possible. Some investors think it is easier to purchase some shares in an AMC that is up to their expectation, rather than analyzing the company's fundamentals,& whether it's a good or bad investment. Many new investors are so attracted to high current returns on short-term investments that they take their perceptions about stock investments and bring them over to mutual funds. While there is no guarantee of course that your investments will appreciate in value over time, investing in a mutual fund is a great way of avoiding some of the difficult decisions involved with investing in stocks. Chasing is risky for fund investors looking for a fund after reading about how well it performed last year. One popular example is a target-date fund, which automatically selects and re-allocates assets to safer investments when you are approaching retirement. You have a variety of options, from equity funds to balanced funds that invest across multiple asset classes.

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