Risk - Return Analysis of Selected Mutual Fund Companies listed in NSE

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Abstract. Since the liberalization process began in 1992, Mutual Funds, which are a component of the Indian Financial Sector, have risen significantly in the economic hierarchy. The capital market reforms and economic expansion that permitted the mutual fund industry's fast rise also provide a clear path for this sector's future development. Only a small portion of savings are now making their way to the stock markets via mutual funds. They are relatively simple, cost-effective, and don't require an investor to choose which securities to buy. Because only 2 to 3 percent of all Indians invest in mutual funds for a variety of reasons, familiarity with the companies that offer these plans is now required. This study will help identify the risk and return of the mutual fund companies that are listed on the National Stock Exchange (NSE).

Keyword : Mutual Funds, Capital Market, Risk and Return, National Stock Exchange (NSE)

1. Introduction

Prologue and Problem

Savings being "financialized" is an important macroeconomic trend India is currently experiencing. The three main goals of investing are income production, value increase, and financial security. The most secure investment choices, like bank deposits, postal deposits, National Savings Certificates, and government bonds, are accessible to average investors. From somewhat riskier options such as equity shares, debentures, corporate bonds, and other instruments offered by the capital market to the Public Provident Fund, etc. Other investment choices for those with significant investable surpluses include real estate and gold. Each option has a different risk-return profile, which an investor should research before making a purchase. The current generation is clearly moving away from tangible assets like gold and real estate and toward financial ones like deposits, mutual funds, stocks, and insurance. Among them, mutual funds are promoted as a desirable investment tool that can produce strong returns that outperform inflation while posing a low level of risk. One of the financial sector's most competitive and rapidly expanding categories is the mutual fund market in India. Since its inception in 1963, through the founding of UTI, the mutual fund industry in India has experienced fast change. The Securities and Exchange Board of India, the industry's regulating authority, has a thorough structure for this investment option. Mutual fund investors need to be aware of how the amended criteria may affect their investments, even if they apply to all stakeholders in the sector.

Indian financial services have seen revolutionary changes throughout the years and have advanced in sophistication in response to the various demands of the economy. Investor interest in equity was sparked and increased by the process of financial sector reforms, economic liberalisation, and globalisation of the Indian capital market. However, due to a lack of professional competence and limited capital market understanding, average investors are still unwilling to put their hard-earned money into corporate securities. The development of mutual funds has significantly contributed to the accumulation of investible wealth among this group of investors. Mutual funds are managed by trained professionals, so investors don't have to deal with the emotional stress that comes with buying and selling stocks.

During the 1980s, while the primary and secondary divisions of the Indian capital market continued to have some fundamental shortcomings, there were some notable changes. In order to draw in individual investors, many unhealthy practices were prevalent in the primary market. Many investors have been discouraged from investing in the stock market and have expressed reluctance due to the high price of new issues; challenges in

appraising a company's prospects; and the undervaluation of shares on the market after listing. For small investors, the secondary market has grown more technical and erratic. Equity shares, real estate, derivatives, and other asset markets have all become quite active. The securities market has undergone significant changes as a result of unprecedented national and international occurrences. The capital market should expand in a healthy way to continue pumping in money since it is the main source of company financing. When investing in corporate securities, investors need to understand how the market works, keep an eye on market trends, and make smart investment decisions.

Economic policy liberalisation and transformational changes in the Indian financial system have increased household savings as a percentage of GDP and altered investment attitudes and choices. Household financial and physical savings are anticipated to be in the range of 11.3% to 11.4% and 12.9% to 13%, respectively, from 2007-08 to 2011-2012. Household financial savings are forecast to be in the range of 10 to 24.4 %. The rate of household savings is rising and is anticipated to quicken as the favourable demographic dynamics, financial sector deregulation, and rising human development index are reinforced. It is crucial to guide individual investors in the proper direction because it is anticipated that the household sector will account for a larger portion of the nation's savings in financial assets. The need and potential for mutual fund operations have grown and are anticipated to grow significantly in the coming years, thanks in large part to the focus on increasing domestic savings and improving the deployment of investible funds into the market. Mutual funds aim to help those who want to invest but don't have the knowledge, resources, or motivation to spread their money across a variety of industries. Even if the mutual fund business is expanding, much work remains.

In rural areas, the penetration level is not particularly high. The funds have increased considerably as a result of the shifting demographics. More investors, especially young people with more disposable means, choose mutual funds to enter the securities market indirectly. Indian investors lack the knowledge necessary to make wise investment choices. Such a lack of knowledge creates the perfect environment for misdirection, and the investor is likely to be persuaded by the agents to choose a specific scheme without doing a thorough investigation. Perhaps a significant factor in the Indian mutual fund industry's failure to catch up to its counterparts in the United States, the United Kingdom, and other developed nations is the knowledge gap on mutual fund performance in India. The typical investor gets their financial advice and information from sources like business periodicals and websites. However, not all investors have easy access to information on the performance of mutual funds over time. Through a risk-return analysis of select mutual fund companies listed in the NSE, the current work aims to close the gap and assist investors in making worthwhile investments.

To analyse the risk and return of companies using the measures of Modem Portfolio Theory and Post Modem Portfolio Theory.

2. Literature Samples

Ghosh and Das (2018) conducted a performance comparison analysis on a few Indian equity mutual fund FMD schemes. The performance of selected mutual fund schemes was assessed in terms of risk and return using Standard Deviation, R-Squared, Beta, Sharpe Ratio, and Treynor Ratio to measure the return earned by mutual fund equity schemes and compare them to benchmark returns to identify performers from underperformers. To determine the best mutual fund option for investors, Soni et al. (2015) analysed and contrasted the performance of various mutual fund schemes offered by Kotak Mutual Fund and HDFC Mutual Funds based on returns, standard deviation, beta, R2, and alpha. It was found that both businesses offered similar programmes for different industries and took on similar levels of risk, so their profits were similar and didn't change much.

Using simple statistical tools like average returns and rate of returns, Annapoorna and Pradeep (20I5) assessed the performance of mutual fund schemes ranked 1 by CRISIL for a period of 5 years from 2008 to 2013 and compared the results with the SBI domestic term deposit rate. According to the study, the mean return of equity fund schemes was higher than the mean return of other mutual fund schemes and lower than the SBI domestic term deposit rate, whilst the mean return of debt fund schemes was lower.

Harshad Patel and Vijay Pithadia, (2013) the study is to certain the role of value added services to satisfy and retain customer loyal. Some of these value added services Automated Teller Machines cards (ATM), Credit card, Debit card, Internet banking, Tele banking, Mobile banking, Home Banking and so on.

Keating and Shadwick (2002) described the benefits of the new measure Omega compared to conventional risk return measurements. In its most basic form, omega was defined as a measure that took into account the probability weighted ratio of returns above and below a return threshold after dividing returns into loss and

gamma above and below a return threshold, respectively.

3. Research Methodology

The study is based on secondary data, and the sample companies are picked based on their NSE listing from 2011-2012 to 2020-2021, using a purposive or judgement sampling method. Axis Mutual Fund, Bank of India Axa Mutual Fund, Birla Sun Life Mutual Fund, HDFC Mutual Fund, ICICI Prudential Mutual Fund, L& T Mutual Fund, Reliance Mutual Fund, Religare Invesco Mutual Fund, State Bank of India Mutual Fund, and Tata Mutual Fund have been picked in this respect. The returns and risk of selected companies are evaluated using the measures of Modern Portfolio Theory and Post Modern Portfolio Theory based on the quarterly net asset values of the funds of the companies chosen.

Analysis and Discussion

Sharpe Ratio

Sharpe ratio takes in consideration the total risk and calculates excess returns per unit of total risk which is measured by standard deviation of the fund.

Table 1: Sharpe Ratio

Companies	Sharpe ratio	Rank
Axis Mutual Fund	0.437	9
Bank of India Axa Mutual Fund	0.506	6
Birla Sun life Mutual Fund	0.521	4
HDFC Mutual Fund	0.523	3
ICICI Prudential Mutual Fund	0.596	2
L& T Mutual Fund	0.621	1
Reliance mutual fund	0.461	7
Religare Invesco Mutual Fund	0.389	10
State Bank of India Mutual Fund	0.451	8
Tata Mutual Fund	0.508	5

The table 1 presents the Sharpe ratio of the companies chosen for the study and it infers that L&T Mutual Fund has the highest Sharpe Ratio is 0.621 that means it has undertaken the lowest total risk to generate returns as compared to all the other companies under study and hence it ranks first followed by ICICI Prudential Mutual Fund, HDFC Mutual Fund, Birla Sun life Mutual Fund, Tata Mutual Fund, Bank of India Axa Mutual Fund, Reliance mutual fund, State Bank of India Mutual Fund, Axis Mutual Fund and Religare Invesco Mutual Fund at the last rank that has taken the highest risk to generate returns than other companies chosen for the study.

Treynor Ratio

Treynor ratio takes in consideration the systematic risk as compared to total risk in Sharpe ratio and calculates excess returns per unit of systematic risk as calculated by beta.

Table 2: Treynor Ratio

Companies	Treynor ratio	Rank
Axis Mutual Fund	0.030	9

Bank of India Axa Mutual Fund	0.062	6
Birla Sun life Mutual Fund	0.069	5
HDFC Mutual Fund	0.082	2
ICICI Prudential Mutual Fund	0.078	3
L& T Mutual Fund	0.086	1
Reliance mutual fund	0.043	7
Religare Invesco Mutual Fund	0.029	10
State Bank of India Mutual Fund	0.031	8
Tata Mutual Fund	0.074	4

The table 2 presents the Treynor ratio of the companies chosen for the study and it infers that L&T Mutual Fund has the highest ratio is 0.086 that means it has undertaken the lowest systematic risk as compared to all the other companies under study and hence it ranks first followed by HDFC Mutual Fund, ICICI Prudential Mutual Fund, Tata Mutual Fund, Birla Sun life Mutual Fund, Bank of India Axa Mutual Fund, Reliance mutual fund, State Bank of India Mutual Fund, Axis Mutual Fund and Religare Invesco Mutual Fund at the last rank that has taken the highest systematic risk than other companies chosen for the study.

Sortino Ratio

Sortino ratio takes in consideration the downside deviation as a measure of risk as compared to total deviation as in Modem Portfolio Theory Measures namely Sharpe and Treynor ratios and calculates excess returns per unit of downside deviation of the fund.

Table 3: Sortino Ratio

Companies	**Sortino ratio**	**Rank**
Axis Mutual Fund	0.198	9
Bank of India Axa Mutual Fund	0.537	6
Birla Sun life Mutual Fund	0.650	5
HDFC Mutual Fund	0.845	3
ICICI Prudential Mutual Fund	1.082	1
L& T Mutual Fund	0.962	2
Reliance mutual fund	0.406	7
Religare Invesco Mutual Fund	0.009	10
State Bank of India Mutual Fund	0.219	8
Tata Mutual Fund	0.822	4

The table 3 presents the Sortino ratio of the companies chosen for the study and it infers that ICICI Prudential

Mutual Fund has the highest ratio is 1.082 that means it has undertaken the lowest downside risk as compared to all the other companies under study and hence it ranks first followed by L&T Mutual Fund, HDFC Mutual Fund, Tata Mutual Fund, Birla Sun life Mutual Fund, Bank of India Axa Mutual Fund, Reliance mutual fund, State Bank of India Mutual Fund, Axis Mutual Fund and Religare Invesco Mutual Fund at the last rank that has taken the highest downside risk than other companies chosen for the study.

Omega Ratio

Omega ratio takes into consideration the Skewness and Kurtosis and measures the probability weighted ratio of gains versus losses for threshold return.

Table 4: Omega Ratio

Companies	Omega ratio	Rank
Axis Mutual Fund	1.69	9
Bank of India Axa Mutual Fund	1.79	6
Birla Sun life Mutual Fund	1.88	4
HDFC Mutual Fund	1.96	3
ICICI Prudential Mutual Fund	2.02	2
L& T Mutual Fund	2.08	1
Reliance mutual fund	1.77	7
Religare Invesco Mutual Fund	1.66	10
State Bank of India Mutual Fund	1.72	8
Tata Mutual Fund	1.83	5

The table 4 presents the Omega ratio of the companies chosen for the study and it infers that L&T Mutual Fund has the highest ratio is 2.08 that means it has highest probability of gains over losses at the decided level of risk free rate of return as compared to all the other companies under study and hence it ranks first followed by ICICI Prudential Mutual Fund, HDFC Mutual Fund, Birla Sun life Mutual Fund, Tata Mutual Fund, Bank of India Axa Mutual Fund, Reliance mutual fund, State Bank of India Mutual Fund, Axis Mutual Fund and Religare Invesco Mutual Fund at the last rank that has the lowest probability of gains over losses at the determined level of risk free rate of return than other companies chosen for the study.

4. Conclusion

Mutual funds play an important part in the economic growth of the countries in which they operate. Mutual funds' active role in economic development may be observed in their dominance in the world's money and capital markets. Their existence is, however, more pronounced in economically advanced countries. The importance of mutual funds in financial intermediation, resource mobilization, resource allocation, capital market development, and corporate sector growth is extremely noticeable. Mutual funds are also very important to the stock market because they provide stability by providing large amounts of money and by consistently buying up floating stocks.

The study examines companies and their funds using the Sharpe ratio and Treynor ratio, which are Modern Portfolio Theory measurements; and the Sortino and Omega measures, which are Post-Modern Portfolio Theory measurements. All companies have positive ratios, indicating that they can generate higher returns than the risk-free rate of return. Furthermore, larger ratio values imply that funds have generated higher risk-adjusted returns when total risk, systematic risk, or downside risk are all taken into account. The Sharpe and Treynor ratios are higher than the Sortino and Omega ratios. It means that big positive returns are more common than big negative returns. This means that investing in funds with big positive returns is more likely to pay off for investors.

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