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An Analytical Review of Investment Strategies and Market Dynamics in Select Mutual Fund Schemes

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Abstract

Investing is crucial for individuals seeking to grow their income or wealth using extra funds. When determining where to invest, it's vital to consider factors such as risk, tax benefits, and liquidity. Managed by professionals and pooling investments from multiple individuals, mutual funds offer diversification by investing in a range of securities like stocks, bonds, and money market instruments. The performance of mutual funds is affected by both local and global economic conditions. A recent analysis assessed the performance of 12 Indian mutual fund schemes from September 1, 2018, to August 30, 2023. This evaluation used risk-adjusted metrics such as the Sharpe ratio, Treynor ratio, Alpha, Beta, and Standard deviation. The findings revealed varying performance levels among the analyzed schemes. While some funds like Canara Robeco Blue Chip Fund and UTI Flexi Cap Fund showed consistent performance, others like SBI Small Cap and Axis Small Cap Funds demonstrated strong overall performance. Despite fluctuations, the selected mutual fund schemes generally yielded positive results, underscoring the importance of diversification in risk management.

***Keywords*:** Mutual funds, Risk-return, open- ended, Sharpe measure, Treynor measure.

Introduction

A mutual fund, an investment vehicle managed by a trust or investment entity, pools funds from numerous investors to invest in various securities, aiming to maximize returns. India's mutual fund industry has seen several developmental phases, providing investors with the means to diversify their risk across different assets with relatively low levels of risk. These funds act as a financial intermediary, gathering resources from individuals who may lack the expertise, time, or resources to navigate complex investment markets. Unit Trust of India (UTI) held a dominant position as India's exclusive mutual fund provider from 1964 to 1987, while close-ended mutual funds were already operational in the United States by the 1930s. A mutual fund operates as a trust that consolidates the

savings of multiple investors with similar financial objectives. These pooled funds are then used to invest in various securities like shares and debentures from the capital market. Each investor earns returns based on their ownership of units in the fund. Investors prefer mutual funds because they provide access to a professionally managed, diversified portfolio at a reasonable cost.

Regardless of an investor's size or risk tolerance, mutual funds are seen as the most convenient investment option. Their consistent growth since inception indicates a promising future with expected significant expansion. Investors closely monitor this trend due to perceived benefits such as liquidity, safety, and returns. However, the mutual fund industry encounters the challenge of educating investors about prudent investing and the advantages of long-term equity investments. The main obstacle is effectively reaching and persuading investors to adopt these principles.

Types of mutual fund:-

Equity or Growth Fund: - An equity fund, also termed as a growth fund, is a mutual fund primarily structured to invest in stocks or shares of companies. Its core objective is wealth accumulation or capital appreciation, offering the potential for higher returns and suitability for long-term investments.

Examples comprise:

- Large-cap funds, which prioritize investments in established businesses.
- Mid-cap funds, focusing on investments in mid-sized companies.
- Small-cap funds, concentrating on investments in smaller enterprises.
- Multi-cap funds, diversifying investments across companies of different sizes or specific sectors like technology.
- Thematic funds, such as infrastructure funds, which target companies poised to benefit from growth in the infrastructure sector.
- Tax-saving funds.

Income or Bond or Fixed income fund: - These funds focus on investing in a range of fixed income securities such as Treasury Bills, Commercial Paper, Debentures, and various Money Market Instruments. They also include holdings in Government Securities or Bonds, Commercial Paper, and Debentures. Examples of such funds consist of Corporate debt, dynamic bonds, gilt funds, short-term liquid funds, and floating rates.

Hybrid funds: These funds offer a mix of investments in both equities and fixed income, allowing investors to generate income while seeking growth opportunities simultaneously. Examples include pension plans, child plans, monthly income plans, aggressive balanced funds, conservative balanced funds, and similar alternatives.

REVIEW OF LITERATURE

The literature review encompasses a range of studies focusing on various aspects of the performance and practices within the Indian mutual fund industry.

(Sapar and Madava, 2003) analyzed the performance of Indian mutual funds during a bear market using multiple performance metrics, suggesting that a majority of the sampled funds met investor expectations by generating excess returns. (Rao, 2006) explored the financial performance of open-ended equity mutual fund schemes, finding that growth plans yielded higher returns albeit with greater risk compared to dividend plans. (Debasish, 2009) investigated the performance of fund managers post-liberalization and privatization, identifying disparities in performance among different mutual fund companies. (Sundaram, 2012) conducted a descriptive study across BRIC countries, noting differences in mutual fund industry dynamics and market trends. (Patel and Patel, 2012) evaluated the success of diversified equity growth plans, revealing discrepancies in performance assessment methodologies. Finally, (Zabiulla, 2014) scrutinized the active portfolio management approach of Indian fund managers, indicating suboptimal stock selection and limited

market timing capabilities.

Recent academic research delves into the relationship among active fund managers, mispricing in financial markets, and the efficiency of those markets. (Kokkonen and Suominen, 2015) scrutinized changes in quarterly holdings, revealing indications that hedge funds engage in trading activities to mitigate mispricings, especially during periods of enhanced funding liquidity. (Jylhä, Rinne and Suominen, 2014) demonstrated the role of hedge funds in providing liquidity. Other relevant studies, including (Akbas *et al.*, 2016) , (Avramov, Cheng and Hameed, 2015), and (Cao *et al.*, 2018), further validate the fundamental concept of the second channel proposed. Notably, within anomaly research, there is a growing trend of concurrently examining the systematic patterns of a comprehensive set of anomalies using publicly available databases (e.g., (Green, Hand and Zhang, 2014), (McLean and Pontiff, 2016). This paper underscores that the interplay between active managers and mispricing becomes evident in liquidity beta. We present substantial evidence of the impact of liquidity risk on numerous anomalies. Additionally, we offer direct evidence based on actual trades, complementing prior indirect evidence derived from changes in fund quarterly holdings. This evidence provides insights into the causal relationship between informed trading, changes in market liquidity, and returns from strategies based on mispricing.

Objective of the study

The objectives of the study are:

- To examine the top 12 equity mutual schemes performance.
- To research the top mutual fund company for equities mutual funds.
- To evaluate the funds' beta sensitivity to market fluctuations, and
- To evaluate the performance of particular equity mutual fund schemes in light of the model suggested by Sharpe, Treynor, and Alpha's risk return adjustment.

RESEARCH METHODOLOGY

Research Methodology:

This study relies on secondary data sourced from entities such as the Association of Mutual Funds in India (AMFI), comprising the Net Asset Values (NAVs) of mutual funds covering the period from 2018 to 2023. This dataset was organized into an Excel spreadsheet and utilized to calculate diverse performance indicators, such as alpha, beta, standard deviation, Sharpe ratio, and Treynor ratio. Subsequently, the gathered data is analyzed, compared, and employed to reach conclusions.

Selection of data:

The study examines data spanning from September 2018 to August 2023, with a specific emphasis on the daily Net Asset Value (NAV) of each individual mutual fund scheme and their related benchmark values.

Net Asset Value (NAV) reflects the intrinsic value of a fund's shares, resembling a company's book value. It is computed by dividing the total value of cash and securities in the fund's portfolio, net of liabilities, by the number of outstanding shares.

Net Asset Value/unit (NAV): (Assets - Liabilities) / Total Outstanding Shares

Statistical Tools:

Numerous statistical methods are employed, including the Treynor Ratio, Sharpe Ratio, Beta, Standard deviation, and Alpha. An excel spreadsheet is used for all calculations.

Performance parameters:

ALPHA

Alpha is a metric for the risk-adjusted return that a manager (in the case of an investment fund) or management (in the case of a company or stock) is able to provide based on their expertise and value-added contribution. A fund has exceeded its benchmark index by 1% if its positive alpha is greater than 1.0. Likewise, a negative alpha of the same magnitude would denote a 1% underperformance.

BETA

The benchmark for assessing market risk is beta. The ratio of a certain stock's moment to the moment of the entire market is measured by beta (typically the Sensex or Nifty). The co-movement of the market's individual stocks and all of the market's stocks is measured by beta.

STANDARD DEVIATION

The standard deviation is used to calculate the risk of a mutual fund. It gauges how far a fund's returns stray from its excess return based on past performance. In other words, standard deviation is used to measure the fund's volatility. The net asset value of a fund with a larger standard deviation is thought to be more volatile, making it riskier than a fund with a lower standard deviation.

SHARPE RATIO

The Sharpe Ratio calculates the return on investment for each unit of risk, where risk is represented by standard deviation. Better rewards for the risk taken are implied by a greater Sharpe Ratio. As a result, when comparing two schemes of the same type, the one with the greater Sharpe ratio offers investors a better return.

By deducting the risk-free rate from the rate of return for a portfolio and dividing the result by the standard deviation of the returns for the portfolio, the Sharpe ratio is calculated.

Sharpe formula: $(r_p - r_f) / \sigma_p$

Where,

r_p is the expected total portfolio return,
r_f is the risk rate, and
σ_p is the portfolio standard deviation.

TREYNOR RATIO

The Treynor ratio is a systematic risk-based measure of return that has been risk-adjusted. The Sharpe ratio and this are comparable. With the distinction that the treynor ratio employs beta as the volatility indicator. It is determined as:

(Average return of the portfolio – Average return of the risk - free rate) / Beta of the portfolio

Data Collection:

The gathering of data is a crucial step in any research project. When data gathering is done incorrectly; the research's findings are impacted and are inaccurate. Data collecting only uses a supplementary method. And it is gathered from the fund's and company's websites.

Based on the CRISIL Ranking, sampling was carried out. In other words, the company chosen for this study has high CRISIL rankings.

The data of the selected equity mutual fund:-

Equity Mutual Funds:

TABLE -1

List of Selected Mutual

Names	Category
Canara Robeco Bluechip equity fund Direct plan – Growth	Large Cap Fund
Mirae Assets Large Cap fund- Direct plan –Growth	
Axis Small Cap fund- Direct plan –Growth	Small Cap Fund
SBI Small Cap fund- Direct plan –Growth	
Kotak flexi Cap fund- Direct plan –Growth	Flexi Cap Fund
UTI flexi -Cap fund- Direct plan –Growth	
Axis Midcap fund- Direct plan -Growth	Mid Cap Fund
DSP Midcap fund- Direct plan -Growth	
Canara Robeco Equity Tax Saver fund- Direct plan – Growth	ELSS(Tax Saver) Scheme
Kotak Tax Saver fund- Direct plan -Growth	
Axis Focused 25 fund- Direct plan -Growth	Focused Scheme
SBI Focussed Equity fund- Direct plan –Growth	

Analysis of data:

The act of observing, cleaning, manipulating, and modelling data is known as data analysis, and it is used to find meaningful information, make conclusions, and make decisions.

TABLE 2

Performance Evaluation of Large cup Funds and Small cap Fund Scheme

SL. NO.	Name of Scheme	3-Yr CAGR (%)	5-Yr CAGR (%)	Alpha	Beta	Sharpe Ratio	Treynor Ratio	S.D.
1	Canora Robeco Bluechip Fund-DP-(G)	21.28	14.78	3.03	0.90	0.87	0.20	20.22
2	Mirae Assets Large Cap Fund-DP-(G)	18.09	12.52	-0.07	0.97	0.70	0.16	21.04
3	Axis Small Cap Fund-DP-(G)	31.96	21.37	6.75	0.77	1.35	0.33	18.61
4	SBI Small Cap Fund-DP-(G)	33.30	15.42	9.32	0.73	1.50	0.36	17.62

Interpretation: Mutual funds are divided into large cap and small cap categories based on their risk and return characteristics. Analysis of the data indicates that Canara Robeco Bluechip Fund - DP (G) achieved the highest returns over 3 and 5 years in the large cap category, while SBI Small Cap Fund - DP (G) performed best among small cap funds. Overall, market return volatility exceeds that of the portfolio. Beta values of 0.90, 0.97, 0.77, and 0.73 were assigned to Canara Robeco Blue Chip Fund - DP (G), Mirae Assets Large Cap Fund - DP (G), Axis Small Cap Fund - DP (G), and SBI Small Cap Fund - DP (G) schemes, respectively, indicating varying levels of risk. Canara Robeco Bluechip and Axis Small Cap Fund showed higher Sharpe ratios in the large and small cap categories, respectively, while Mirae Assets and SBI Small Cap Fund displayed lower Sharpe ratios, indicating relatively weaker performance. According to the Treynor Index, Canara Robeco Bluechip and SBI Small Cap outperformed the market in large and small cap categories, respectively. Furthermore, these funds exhibited positive Alpha values, suggesting effective prediction of future security prices by fund managers. Notably, Axis Small Cap and Mirae Assets Large Cap had standard deviations of 21.04 and 18.61, respectively, emphasizing the prevalence of equity mutual funds with higher standard deviation.

TABLE 3:

Performance Evaluation of Flexi cup and Mid Cap Funds

SL. No.	Name of Scheme	3-Yr CAGR (%)	5-Yr CAGR (%)	Alpha	Beta	Sharpe Ratio	Treynor Ratio	S.D.
1	Kotak Flexi Cap Fund -DP-(G)	17.54	11.78	-2.20	0.97	0.69	0.15	21.34
2	UTI Flexi Cap Fund - DP-(G)	21.88	14.85	4.22	0.89	0.93	0.21	20.19

3	Axis Mid Cap Fund - DP-(G)	26.43	18.28	1.85	0.80	1.17	0.26	18.12
4	DSP Mid Cap Fund - DP-(G)	20.64	11.70	-2.70	0.85	0.91	0.21	19.06

Interpretation: Mutual funds are divided into Flexi Cap and Mid Cap plans based on their risk profiles. UTI Flexi Cap Fund - DP (G) has demonstrated the highest returns over 3 and 5 years in the Flexi Cap category, while Axis Mid Cap Fund - DP (G) emerged as the top performer among Mid Cap schemes. The overall variability of market returns exceeds that of the portfolio. Beta values of 0.97, 0.89, 0.80, and 0.85 were assigned to Kotak Flexi Cap - DP (G), UTI Flexi Cap Fund - DP (G), Axis Mid Cap Fund – DP(G), and DSP Mid Cap Fund – DP(G) schemes, respectively, indicating a less risky offensive strategy. UTI Flexi Cap Fund - DP (G) and DSP Mid Cap Fund - DP (G) exhibited better performance in terms of Sharpe ratio in the Flexi Cap and Mid Cap categories, respectively. However, Kotak Flexi Cap and Axis Mid Cap have been labeled as underperforming schemes due to their lower Sharpe ratios. Axis Mid Cap Fund - DP (G) in the Mid Cap and UTI Flexi Cap Fund - DP (G) in the Flexi Cap categories are regarded as top schemes according to the Treynor Index, offering the highest returns. Moreover, all these strategies outperformed the market according to the Treynor Index. Positive Alpha values of UTI Flexi Cap - DP (G), Axis Mid Cap – DP(G), and DSP Mid Cap Fund – DP(G) indicate the ability of fund managers to accurately predict future investment prices. Kotak Flexi Cap Fund DP(G) and DSP Mid Cap Fund in the Mid Cap category displayed standard deviations of 21.34 and 19.06, respectively, highlighting the effectiveness of equity mutual funds. This underscores the preference for equity mutual funds with higher standard deviation.

TABLE: 4

Performance Evaluation of ELSS (Tax Savings) and Focused

SL. No	Name of Scheme	3-YR CAGR %	5-Yr CAGR %	Alpha	Beta	Sharpe Ratio	Treynor Ratio	Standard Deviation
1	Canara Robeco Equity Tax Saver fund-DP-(G)	25.36	16.88	4.41	0.92	1.01	0.22	20.46
2	Kotak Tax Saver Fund -DP-(G)	22.49	14.02	2.53	0.92	0.91	0.20	20.26
3	Axis Focused 25 Fund -DP-(G)	16.35	11.8	-2.40	0.94	0.65	0.15	21.27
4	SBI Focused Equity Fund-DP-(G)	20.76	15.07	3.02	0.77	0.92	0.22	18.08

Interpretation: The mutual fund falls into the ELSS (Equity Linked Savings Scheme) or tax-saving category, focusing on scheme returns relative to risk. Canara Robeco Equity Tax Saver Fund - DP(G) demonstrated the highest returns over 3 and 5 years in the ELSS category, while SBI Focused Equity Fund - DP(G) outperformed other targeted equity funds. Overall, market volatility surpasses

portfolio return volatility. Beta values of 0.92, 0.92, 0.94, and 0.77 were assigned to Canara Robeco Equity Tax Saver Fund DP(G), Kotak Tax Saver Fund DP(G), Axis Focused 25 Fund DP(G), and SBI Focused Equity Fund DP(G) schemes, respectively, suggesting a less risky offensive strategy. Canara Robeco Equity Tax Saver Fund - DP(G) and SBI Focused Equity Fund - DP(G) outperformed other ELSS and focused funds in terms of Sharpe Ratio. However, Kotak Tax Saver DP(G) and Axis Focused 25 Fund DP(G) were considered inferior performing schemes due to their lower Sharpe Ratios.

As per the Treynor Index, SBI Focused Equity Fund - DP(G) in the focused scheme and Canara Robeco Equity Tax Saver Fund - DP(G) in the ELSS scheme rank highest, offering the best returns. Additionally, all these strategies outperformed the market according to the Treynor Index. Positive Alpha values of Canara Robeco Equity Tax Saver Fund - DP(G), Kotak Tax Saver Fund DP(G), and SBI Focused Equity Fund DP(G) indicate the effectiveness of fund managers in predicting future security prices accurately. Canara Robeco Equity Tax Saver Fund - DP(G) and Axis Focused 25 Fund - DP(G) showed standard deviations of 20.46 and 21.27, respectively, in the ELSS and focused scheme categories, emphasizing the value of equity mutual funds. This underscores the preference for equity mutual funds with higher standard deviation.

Recommendations and Conclusion

This research examined the performance of mutual funds across various criteria, encompassing risk and return, 3 and 5-year returns, Alpha, Beta, Sharpe Ratio, Treynor Ratio, and Standard Deviation. In the realm of large-cap equity funds, Canara Robeco Blue Chip Fund outshined Mirae Assets Large Cap Fund over three and five years. Similarly, in the small-cap equity category, SBI Small Cap Fund demonstrated superior returns over three and five years compared to Axis Small Cap Fund. UTI Flexi Cap Fund outperformed Kotak Flexi Cap Fund over three, five, and ten-year periods in the flexi cap segment, while Axis Mid Cap Fund surpassed DSP Mid Cap Fund over similar periods in the mid-cap category. When contrasting Canara Robeco Equity Tax Saver Fund with Kotak Tax Saver Fund and Axis Focused 25 Fund, the former displayed higher profitability over three and five years. Likewise, SBI Focused Equity Fund excelled in the equity-focused schemes over the same periods. The majority of the selected mutual fund schemes exceeded their benchmark indices. SBI and Axis small-cap funds exhibited market performance through their respective 3-year and 5-year compounded annual growth rates (CAGRs), demonstrating positive value and outperforming the market, except for Mirae Assets Large Cap Fund, Kotak Flexi Cap Fund, DSP Mid Cap Fund, and Axis Focused 25 Fund when evaluated using other metrics. SBI Small Cap Fund emerged as one of the leading funds overall, demonstrating strong performance compared to the market benchmark and offering the highest 3-year CAGR return according to the Treynor measure. Axis Small Cap Fund showcased the highest 5-year CAGR return with less return variance, indicating notable performance in the small-cap category. It is notable that Canara Robeco Equity Tax Saver Fund showcased higher returns and lower risk among Tax Relief Funds. A negative alpha in portfolio management suggests insufficient diversification in investments, while a positive beta indicates that stocks generally move in the same direction as the market. In summary, the SBI Small Cap Fund stands out as the top-performing program overall.

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