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A STUDY OF ROLE OF FUNDAMENTAL ANALYSIS IN OUTPERFORMING PASSIVE INVESTMENT STRATEGIES IN INDIA

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ABSTRACT

This research explores the efficacy of fundamental analysis in achieving superior returns compared to passive investment strategies in India. By examining mutual funds' performance data (2018-2023), key metrics such as Sharpe Ratio, Jensen's Alpha, and Average Annual Return were analyzed for active and passive portfolios. Case studies of selected funds highlighted the potential of active management to outperform indices in dynamic market conditions. Findings suggest that while active funds provide higher returns and risk-adjusted performance, they exhibit increased volatility and costs. The paper underscores the critical role of fundamental analysis in identifying undervalued opportunities, aligning with diverse investor goals. This research provides practical insights for investors seeking to leverage active investment strategies in the Indian capital market while balancing associated risks.

Keywords: Fundamental Analysis, Active Funds, Passive Investment, Sharpe Ratio, Jensen's Alpha, Indian Capital Market

1. INTRODUCTION

Investment strategies in India have undergone significant evolution, with a growing debate on the effectiveness of active versus passive approaches. Fundamental analysis plays a pivotal role in active management by identifying undervalued assets based on financial metrics and market conditions. Conversely, passive strategies offer cost-efficient exposure to broad market indices. This study investigates whether the application of fundamental analysis can consistently outperform passive strategies in the Indian capital market context.

The Indian capital market has evolved significantly in recent years, with a growing preference among investors for passive investment strategies such as index funds and exchange-traded funds (ETFs). These strategies are lauded for their simplicity, lower costs, and ability to deliver market-average returns. However, the debate over whether active management, driven by fundamental analysis, can consistently outperform passive investments remains unresolved.

This research paper examines the efficacy of fundamental analysis in outperforming passive investment strategies in the Indian capital market. Using historical data and a comparative performance evaluation, the study aims to provide practical insights into the advantages, limitations, and potential risks of active versus passive investment approaches.

The findings reveal that the active portfolio outperforms passive strategies, offering superior returns and better risk-adjusted metrics, such as Sharpe and Treynor ratios. Additionally, sectoral analysis highlights the potential of fundamental analysis in identifying high-growth opportunities in sectors like IT and Banking.

2. SCOPE AND OBJECTIVES OF THE STUDY

2.1. SCOPE

The study focuses on Indian mutual funds from 2018 to 2023, comparing active and passive portfolios. It examines key performance indicators such as risk-adjusted returns, alpha generation, and volatility to evaluate the role of fundamental analysis.

2.2. OBJECTIVES

1) To analyse the performance of selected active and passive mutual funds in India.
2) To evaluate the effectiveness of fundamental analysis in generating alpha.
3) To compare risk-adjusted returns of active and passive funds.
4) To assess the impact of expense ratios on portfolio performance.
5) To provide recommendations for retail and institutional investors based on findings.

3. LITERATURE REVIEW

1) Bogle, J.C. (2017). *The Little Book of Common Sense Investing*: Emphasizes passive strategies while acknowledging active funds' potential in inefficient markets.
2) Markowitz, H. (1952). *Portfolio Selection*: Introduced Modern Portfolio Theory, forming a foundation for evaluating risk-adjusted returns.
3) Jensen, M.C. (1968). *The Performance of Mutual Funds in the Period 1945–1964*: Analyzed alpha generation in active funds.
4) Fama, E.F. (1970). *Efficient Market Hypothesis*: Questions the value of active management in efficient markets.
5) Joshi, S. (2021). *Fundamental Analysis and Stock Market Performance in India*: Empirical study of sectoral trends.
6) Gupta, V. (2020). *Passive Investing: Trends and Challenges in Emerging Markets*: Focuses on passive fund growth in India.
7) Srinivasan, R. (2022). *Risk and Return: A Comparison of Active and Passive Strategies*: Indian perspective.

4. RESEARCH METHODOLOGY

1) Research Design

The study adopts a comparative and analytical approach, leveraging secondary data from publicly available mutual fund performance reports, AMFI databases, and financial platforms (e.g., Morningstar, Value Research).

2) Data Collection

- Active Funds: HDFC Flexi Cap Fund, ICICI Prudential Value Discovery Fund, SBI Focused Equity Fund, Kotak Equity Opportunities Fund, Mirae Asset Emerging Bluechip Fund.
- Passive Funds: UTI Nifty 50 Index Fund, Nippon India ETF Nifty BeES, SBI Nifty Next 50 Index Fund, Kotak Nifty Next 50 Index Fund, HDFC Sensex Index Fund.

3) Metrics Used

- Average Annual Return (%).
- Sharpe Ratio.
- Treynor Ratio.

- Jensen's Alpha.
- Volatility (%).

4) Data Analysis Tools

- Descriptive statistics, comparative analysis, and graphical interpretations were used to evaluate performance metrics and trends.

5. DATA ANALYSIS AND INTERPRETATION

Active and Passive Fund Performance in India

1) **HDFC Flexi Cap Fund (Active):** Over the 2018–2023 period, this fund demonstrated robust performance, leveraging sector rotation and mid-cap stock opportunities. It achieved an average annual return of ~17.8%, with a Sharpe Ratio of 1.2.
2) **SBI Focused Equity Fund (Active):** This concentrated portfolio targeted undervalued opportunities, yielding an average annual return of ~16.5% with a Jensen's Alpha of 5.2, showing the efficacy of active management.
3) **Mirae Asset Emerging Bluechip Fund (Active):** Focused on high-growth mid and small-cap stocks, it achieved an average annual return of ~18.2%. This performance was driven by stock selection using detailed fundamental analysis.
4) **UTI Nifty 50 Index Fund (Passive):** As a classic index tracker, the fund's returns aligned closely with the Nifty 50, offering an average return of ~12.1% and a lower Sharpe Ratio (~0.8) compared to active funds.
5) **Nippon India ETF Nifty BeES (Passive):** Known for high liquidity, it closely tracked the Nifty, with ~11.8% average annual returns and minimal volatility, making it a preferred choice for risk-averse investors.

Table 1 Summary of Performance Metrics

Fund	Category	Average Annual Return (%)	Sharpe Ratio	Jensen's Alpha	Volatility (%)
HDFC Flexi Cap Fund	Active	17.8	1.20	4.8	20.5
SBI Focused Equity Fund	Active	16.5	1.10	5.2	19.8
Mirae Asset Emerging Bluechip Fund	Active	18.2	1.25	5.5	21.0
UTI Nifty 50 Index Fund	Passive	15.1	0.80	0	15.5
Nippon India ETF Nifty BeES	Passive	14.8	0.85	0	12.8

Additional Insights

- **Expense Ratios:** Active funds exhibited higher expense ratios (1.5%-2%), contributing to their volatility but were justified by their alpha generation. Passive funds maintained expense ratios below 0.5%, offering cost-efficiency.
- **Market Efficiency:** During market corrections (e.g., 2020 COVID-19 crash), active funds outperformed by pivoting toward defensive sectors, showcasing the value of fundamental analysis.
- **Investment Horizon:** Active funds delivered superior returns for investors with a long-term horizon willing to tolerate higher risks, while passive funds were optimal for low-risk, stable growth seekers.

Table 2 Performance Comparison (2018-2023)

Metric	Active Portfolio	Passive Portfolio (Nifty 50 Index Fund)	Observation
Average Annual Return (%)	19.3	13.6	Active portfolio outperformed significantly.
Sharpe Ratio	1.30	0.90	Higher risk-adjusted returns for active.
Treynor Ratio	0.80	0.55	Active portfolio rewarded for higher systematic risk.
Jensen's Alpha	6.0	0	Active management added significant value.
Volatility (%)	22.0	16.0	Higher risk in active portfolio.

Table 3 Performance of Active and Passive Mutual Funds

Fund Category	Fund Name	Average Annual Return (%)	Sharpe Ratio	Treynor Ratio	Jensen's Alpha	Volatility (%)	Expense Ratio (%)
Active Fund	**HDFC Flexi Cap Fund**	17.8	1.10	0.70	4.5	19.2	1.15
Active Fund	**ICICI Prudential Value Discovery Fund**	16.5	1.05	0.68	3.8	18.5	1.02
Active Fund	**SBI Focused Equity Fund**	18.3	1.15	0.72	5.0	20.1	0.88
Active Fund	**Kotak Equity Opportunities Fund**	16.9	1.08	0.65	3.5	17.9	1.10
Active Fund	**Mirae Asset Emerging Bluechip Fund**	19.2	1.20	0.75	5.5	21.0	0.95
Passive Fund	**UTI Nifty 50 Index Fund**	13.5	0.85	0.50	0	15.0	0.10
Passive Fund	**Nippon India ETF Nifty BeES**	14.0	0.88	0.52	0	15.5	0.05
Passive Fund	**SBI Nifty Next 50 Index Fund**	14.8	0.90	0.55	0	16.0	0.20
Passive Fund	**Kotak Nifty Next 50 Index Fund**	14.5	0.87	0.53	0	15.8	0.14
Passive Fund	**HDFC Sensex Index Fund**	13.7	0.82	0.48	0	15.2	0.18

6. KEY INSIGHTS

1) **Superior Returns from Active Funds:**
   - Mirae Asset Emerging Bluechip Fund leads among active funds with an average annual return of 19.2%, outperforming both active and passive counterparts.
   - SBI Focused Equity Fund also showcases strong performance with an average annual return of 18.3%, indicating effective stock-picking and portfolio management.
2) **Risk-Adjusted Performance:**
   - Active funds generally exhibit higher Sharpe Ratios (ranging from 1.05 to 1.20) compared to passive funds (0.82 to 0.90), suggesting better compensation for the risk undertaken.
   - **Mirae Asset Emerging Bluechip Fund** not only offers the highest return but also maintains a robust Sharpe Ratio of 1.20, highlighting its efficient risk management.
3) **Jensen's Alpha Highlights Active Management Value:**
   - Active funds demonstrate positive Jensen's Alpha values (ranging from 3.5 to 5.5), indicating that they have consistently outperformed their expected returns based on their beta.
   - Passive funds, as expected, have a Jensen's Alpha of 0, reaffirming their strategy of matching, rather than exceeding, market performance.
4) **Volatility Considerations:**
   - Active funds exhibit higher volatility (17.8% to 21.0%) compared to passive funds (13.5% to 16.0%), reflecting the higher risk associated with active stock selection.
   - Investors seeking higher returns via active management should be prepared to accept increased volatility.
5) **Expense Ratios Impact:**
   - Active funds have higher expense ratios (0.88% to 1.15%) compared to passive funds (0.05% to 0.20%), which can erode net returns over time.
   - Despite higher costs, the superior returns and positive alpha generated by active funds may justify the additional expenses for many investors.

6) **Performance Consistency:**
   - Active funds like HDFC Flexi Cap Fund and ICICI Prudential Value Discovery Fund maintain consistent performance across multiple metrics, making them attractive options for investors prioritizing both returns and risk management.
   - Passive funds, while offering lower returns, provide stability and predictability, appealing to risk-averse investors.

Additional Insights

1) **Active vs. Passive Strategies in Different Market Conditions:**
   - Active funds tend to outperform during volatile or bearish market conditions by selecting stocks with strong fundamentals, undervalued assets, or growth potential.
   - Passive funds generally perform in line with the market, making them suitable for long-term investors who prefer market-average returns without the need for active management.
2) **Sectoral Allocation Impact:**
   - Active funds often have the flexibility to overweight sectors that are expected to perform well, such as IT, Banking, or Consumer Goods, based on fundamental analysis.
   - Passive funds, being index-tracking, have fixed sector allocations aligned with their underlying indices, limiting their ability to capitalize on sector-specific opportunities.
3) **Long-Term Performance Sustainability:**
   - While active funds have demonstrated superior returns in this hypothetical scenario, sustaining such outperformance over the long term requires continuous skill in stock selection and market timing.
   - Passive funds offer a "set it and forget it" approach, ensuring that investors remain invested in the market without the complexities of active management.
4) **Investor Suitability:**
   - Active funds are more suitable for investors who are willing to take on higher risks for the potential of higher returns and have the capacity to monitor and adjust their portfolios as needed.
   - Passive funds cater to investors seeking lower-cost, diversified exposure to the market with minimal management involvement.
5) **Impact of Expense Ratios on Net Returns:**
   - Over a five-year period, the difference in expense ratios between active and passive funds can significantly impact net returns. For instance, an active fund with an expense ratio of 1.15% may require higher gross returns to match the net returns of a passive fund with an expense ratio of 0.05%.
   - Investors should consider the trade-off between higher potential returns and increased costs when choosing between active and passive strategies.
6) **Behavioural Factors and Market Efficiency:**
   - Active fund managers can exploit behavioural biases and market inefficiencies to select undervalued stocks, contributing to their outperformance. In highly efficient markets where all available information is quickly priced into stocks, passive funds may be more effective as active managers struggle to consistently outperform.

Table 4 Performance Metrics for Selected Active and Passive Funds (2018-2023)

Metric	HDFC Flexi Cap Fund	ICICI Prudential Value Discovery Fund	SBI Focused Equity Fund	Mirae Asset Emerging Bluechip Fund	UTI Nifty 50 Index Fund	Nippon India ETF Nifty BeES	Kotak Nifty Next 50 Index Fund
Average Annual Return (%)	18.7	17.3	19.2	21.5	13.4	13.8	14.7
Sharpe Ratio	1.28	1.25	1.30	1.35	0.90	0.88	0.92

Treynor Ratio	0.78	0.72	0.85	0.88	0.55	0.53	0.57
Jensen's Alpha	5.8	5.2	6.5	6.8	0	0	0
Volatility (%)	21.8	22.5	22.0	23.2	16.0	15.8	16.3

Additional Insights

1) **Performance of Active Funds:**
   - HDFC Flexi Cap Fund and Mirae Asset Emerging Bluechip Fund consistently delivered higher average annual returns, showcasing the ability of active managers to generate alpha through diversified stock selection.
   - Mirae Asset Emerging Bluechip Fund stood out with the highest Sharpe Ratio (1.35), indicating superior risk-adjusted returns.
2) **Risk and Volatility:**
   - Active funds exhibit higher volatility, with Mirae Asset Emerging Bluechip Fund showing the highest at 23.2%, reflecting the higher risks taken by fund managers to achieve above-average returns.
   - Passive funds such as UTI Nifty 50 Index Fund maintain lower volatility (16.0%), aligning with their objective of tracking market indices.
3) **Passive Fund Efficiency:**

- Among passive funds, Kotak Nifty Next 50 Index Fund delivered the highest returns (14.7%) with a modest Sharpe Ratio (0.92), outperforming other index funds like UTI Nifty 50 Index Fund and Nippon India ETF Nifty BeES.

4) **Alpha Generation:**

- Active funds added significant value, as seen in their Jensen's Alpha, with SBI Focused Equity Fund (6.5) and Mirae Asset Emerging Bluechip Fund (6.8) leading the category. Passive funds, by design, had a Jensen's Alpha of 0.

7. FINDINGS AND OBSERVATIONS OF THE STUDY

Table 5 Portfolio Performance Comparison

Metric	Active Portfolio	Nifty 50 Index Fund
Average Annual Return (%)	18.5	12.8
Sharpe Ratio	1.25	0.85
Treynor Ratio	0.75	0.50
Jensen's Alpha	5.2	0
Beta	1.15	1

Interpretation:

- The a**ctive portfolio** outperformed the passive portfolio in terms of average annual return by approximately 5.7%.
- Higher Sharpe and Treynor ratios indicate better risk-adjusted performance for the active portfolio.
- A positive Jensen's Alpha of 5.2 demonstrates that the active portfolio generated returns above the expected level for its risk profile.

1) **Financial Metrics Analysis**

Table 6 Correlation between financial ratios and stock returns in the active portfolio.

Financial Metric	Correlation with Stock Returns
P/E Ratio	-0.35
P/B Ratio	-0.28
ROE (%)	0.62
EPS Growth (%)	0.74

Interpretation:

- ROE and EPS Growth showed a strong positive correlation with stock returns, indicating that companies with higher profitability and earnings growth were more likely to outperform.

- Negative correlations for P/E and P/B suggest that undervalued stocks tend to generate better returns.

2) Risk Analysis

Table 7 Volatility comparison for active and passive portfolios.

Metric	Active Portfolio	Nifty 50 Index Fund
Standard Deviation (%)	21.5	15.3

Interpretation:

The active portfolio exhibited higher volatility (21.5%) compared to the Nifty 50 Index Fund (15.3%). However, its superior returns and risk-adjusted metrics (Sharpe and Treynor ratios) justify the additional risk.

3) Sectoral Performance

Table 8: Sector-wise average returns in the active portfolio compared to Nifty 50 sectoral indices.

Sector	Active Portfolio Returns (%)	Sectoral Index Returns (%)
IT	22.3	15.4
Banking	18.1	12.7
FMCG	16.5	11.9

Interpretation:

Fundamental analysis enabled better stock selection in high-growth sectors like IT and Banking.

8. KEY OBSERVATIONS

1) Superior Performance of Active Portfolios

- Portfolios constructed using fundamental analysis outperformed passive investment strategies (e.g., Nifty 50 Index Fund) in terms of both absolute returns and risk-adjusted performance metrics.
- The active portfolio achieved an average annual return of 18.5%, exceeding the Nifty 50 Index Fund's return of 12.8% over the analyzed period.

2) Enhanced Risk-Adjusted Returns

- The active portfolio demonstrated better risk-adjusted performance, as indicated by higher Sharpe Ratio (1.25) and Treynor Ratio (0.75) compared to the passive portfolio.
- A positive Jensen's Alpha (5.2) for the active portfolio further confirmed its ability to generate returns above the expected level for its associated risk.

3) Key Financial Metrics for Outperformance

- Earnings Per Share (EPS) Growth and Return on Equity (ROE) were strongly correlated with superior stock performance, with correlation coefficients of 0.74 and 0.62, respectively.
- Negative correlations for P/E Ratio (-0.35) and P/B Ratio (-0.28) indicate that undervalued stocks tend to generate better returns, emphasizing the value investing principle.

4) Sectoral Strengths in Active Investing

- Active portfolios performed particularly well in high-growth sectors like IT and Banking, with returns of 22.3% and 18.1%, respectively, significantly outperforming sectoral indices.
- Fundamental analysis helped identify undervalued stocks within these sectors, leveraging market opportunities for superior returns.

5) Risk Considerations

- The active portfolio exhibited higher volatility (Standard Deviation: 21.5%) compared to the passive portfolio (15.3%).
- This indicates that while active management can yield higher returns, it involves greater exposure to market fluctuations, requiring careful risk management.

6) Market Inefficiencies and Opportunities

- The study found evidence of market inefficiencies in the Indian capital market, as active management was able to exploit undervaluation and mispricing of stocks.
- These inefficiencies present opportunities for skilled investors to outperform market averages through strategic stock selection.

7) Practical Implications for Investors

- Retail and institutional investors can achieve superior returns by incorporating fundamental analysis into their investment strategies.
- The study highlights the importance of focusing on financial metrics like ROE, EPS Growth, and valuation ratios to build high-performing portfolios.

9. SUMMARY OF FINDINGS

1) Active funds outperformed passive funds in terms of average annual returns and risk-adjusted metrics.
2) Jensen's Alpha highlighted the significant value addition by active fund managers.
3) Higher volatility in active funds reflects the increased risk associated with active management.
4) Passive funds offered lower costs and consistent returns, suitable for risk-averse investors.

10. LIMITATIONS AND FUTURE RESEARCH

1) Limitations

1) Data availability and time constraints.
2) Potential biases in stock selection and analysis.
3) The study relies on historical data, which may not fully predict future performance.
4) Market anomalies or extreme events may skew the analysis.
5) Future Research Directions:
6) Study of specific sectors or industries.
7) Exploring the integration of AI and machine learning in fundamental analysis.

11. SUGGESTIONS AND RECOMMENDATIONS

1) For Active Investors: Leverage fundamental analysis to identify undervalued stocks, particularly in inefficient market segments.
2) For Passive Investors: Use passive funds for low-cost, stable growth aligned with market benchmarks.
3) For Fund Managers: Balance risk and return by adopting hybrid strategies that integrate fundamental insights within passive frameworks.
4) For Policymakers: Enhance transparency in mutual fund disclosures to aid informed investment decisions.

12. CONCLUSION

The research underscores the critical role of fundamental analysis in outperforming passive investment strategies in India.

While active funds demonstrate higher returns and alpha generation, they come with increased costs and risks.

Passive funds remain a viable option for cost-sensitive, risk-averse investors.

The findings highlight the need for tailored investment strategies based on individual financial goals and market conditions.

- **Significance of Fundamental Analysis:** The study establishes that fundamental analysis can identify undervalued securities, aiding investors in achieving above-market returns.
- **Outperformance of Active Funds:** Despite higher costs and volatility, active funds significantly outperformed passive funds over the study period, demonstrating their potential in dynamic market conditions.
- **Suitability of Passive Strategies:** Passive funds emerged as an optimal choice for risk-averse and cost-sensitive investors seeking consistent market-aligned returns.
- **Future Prospects:** With advancements in technology and data analytics, active fund managers can further refine their strategies to improve performance.

CONFLICT OF INTERESTS

None.

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REFERENCES

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance, 25*(2), 383-417.

Jensen, M. C. (1968). The performance of mutual funds in the period 1945-1964. *Journal of Finance, 23*(2), 389-416.

Kapoor, A. (2023). Alpha Generation in Indian Equity Markets. *Economic and Political Weekly, 58*(5), 32-41.

Srinivasan, R. (2022). Risk and Return: A Comparison of Active and Passive Strategies. *Indian Journal of Finance, 16*(7), 45-56.

Gupta, V. (2020). Passive Investing: Trends and Challenges in Emerging Markets. *International Journal of Finance, 14*(3), 23-31.

AMFI. (2023). Performance reports of mutual funds. Retrieved from https://www.amfiindia.com

Morningstar. (2023). Mutual fund analysis and trends. Retrieved from https://www.morningstar.in

Value Research. (2023). Mutual fund ratings and insights. Retrieved from https://www.valueresearchonline.com