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# A Study on Evaluation of Portfolio Analysis on Selected Securities of NSE in India

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*Abstract: Investors consistently seek a balance between safety and returns, aiming for secure investments with maximum profitability. While debt investments are traditionally preferred for their stable but moderate returns and lower liquidity, equity investments are gaining traction due to their potential for higher returns. Recent trends in the Indian stock market, bolstered by increased Foreign Institutional Investor (FII) participation and market dynamics, indicate a growing preference for equities. This paper explores the critical aspects of security analysis and portfolio selection, focusing on understanding the mix of securities—comprising debt, equity, and hybrid instruments—in achieving an optimal balance of risk and return. Security analysis, a cornerstone of financial analysis, involves evaluating tradable financial instruments to assess their viability and potential performance. It emphasizes the intricate relationship between risks and returns, which is essential for informed investment decisions. The primary objective of this study is to analyse the risk-return profiles of selected securities and provide insights into constructing a diversified portfolio that aligns with investors' goals. By delving into recent market trends and the underlying principles of security analysis, the paper underscores the importance of a strategic approach to investment, highlighting the trade-offs and opportunities in navigating the financial markets effectively.*
*Keywords: India, National Stock Exchange, Portfolio Analysis, Stocks, Stock Market, Security Analysis.*

## I. INTRODUCTION

Investing is a fundamental activity aimed at enhancing wealth through the allocation of funds to various financial assets over time. At its core, investing involves committing money to generate returns, enabling investors to increase their future consumption possibilities. Funds for investment typically stem from personal savings, borrowed capital, or existing assets. As investors forgo current consumption in Favor of potential future gains, they navigate a complex landscape of investment options that can range from tangible assets, such as real estate and machinery, to financial instruments like stocks, bonds, and mutual funds. The choice between real and financial investments is crucial. Real investments usually involve physical assets that provide utility and can appreciate over time. In contrast, financial investments offer contracts or claims to future cash flows, making them more liquid but also subject to market volatility. Investors often seek to minimize risk while maximizing returns, leading to the development of various strategies and portfolio management techniques. In recent years, the dynamics of the investment landscape have evolved significantly, particularly in emerging markets like India. The Indian stock market, characterized by its rapid growth and increasing participation from Foreign Institutional Investors (FIIs), presents both opportunities and challenges for investors. With the potential for higher returns in equity markets compared to traditional debt investments, many investors are re-evaluating their asset allocation strategies. Security analysis plays a pivotal role in investment decision-making, serving as a cornerstone for evaluating the viability of different financial instruments. By analysing tradable securities, investors can assess their risk-return profiles, allowing for informed portfolio selection that aligns with individual investment goals. This process involves examining various factors, including historical performance, market trends, and economic indicators, to understand the intricate relationship between risk and return.

This study aims to analyse the risk-return profiles of selected securities across multiple sectors, including IT, Automobiles, Cement, and Pharma, to provide insights into constructing a well-diversified portfolio. By focusing on recent market trends and the principles of security analysis, this research seeks to highlight the importance of strategic investment approaches in navigating the complexities of financial markets. Ultimately, the findings of this study will contribute to a deeper understanding of effective portfolio management, enabling investors to make more informed decisions in their pursuit of financial growth and stability.

## II. OBJECTIVE

1) To study the selected securities risks & returns.
2) To know wisely alternative investments between the securities.
3) To understand the different securities mix portfolio selection.

## III.    REVIEW OF LITERATURE

1) Markowitz's Modern Portfolio Theory (MPT) (1952) emphasizes the importance of diversification in reducing portfolio risk while maximizing returns. Various studies have built upon MPT, demonstrating that a well-diversified portfolio can yield better risk-adjusted returns (Elton & Gruber, 1997). Research in the Indian context has shown that diversification across different sectors on the NSE leads to reduced overall portfolio risk (Singh & Rani, 2018).

2) The Capital Asset Pricing Model (CAPM) is frequently referenced in portfolio analysis to assess the risk-return trade-off. Studies have applied CAPM to Indian equities, revealing that higher beta stocks typically offer higher expected returns (Bhatia & Ranjan, 2019). However, empirical evidence suggests that the relationship may not hold consistently in the Indian market, particularly during periods of high volatility (Reddy & Sharma, 2020).

3) Behavioural finance has gained traction in understanding investor behavior and decision-making in portfolio management. Studies indicate that psychological factors, such as overconfidence and loss aversion, influence investors' portfolio choices in India (Kumar & Goyal, 2019). Understanding these biases can help in designing better investment strategies.

4) Research has highlighted the significance of strategic asset allocation in portfolio performance. A study by Rao and Rao (2021) examined various asset allocation strategies for Indian investors, finding that a mix of equities, bonds, and commodities significantly outperformed traditional investment approaches during certain market conditions. The study emphasizes the importance of adjusting allocations based on market cycles.

5) Several studies have explored how different market conditions affect portfolio performance. For instance, during bearish market phases, the correlation among stocks tends to increase, leading to diminished diversification benefits (Choudhury & Sinha, 2020). This finding underscores the necessity for dynamic portfolio management strategies that can adapt to changing market environments.

6) The rise of technology-driven investment strategies, including algorithmic trading and robo-advisors, has begun to reshape portfolio management practices. Research indicates that these technologies can enhance portfolio performance by employing advanced analytics and real-time data processing (Patel & Jain, 2022). The adoption of machine learning techniques for predicting stock prices has also shown promising results in improving portfolio outcomes.

7) Sectoral analysis plays a crucial role in portfolio construction. Studies focusing on specific sectors within the NSE, such as technology, pharmaceuticals, and finance, reveal varying performance metrics and risk profiles. A comparative analysis of sectoral returns can guide investors in constructing sector-tilted portfolios that align with their risk tolerance and investment goals (Mishra & Kumar, 2021)

## IV.    RESEARCH METHODOLOGY

The methodology used in the study for the completion of the project and the fulfillment of the project objectives, is follows; Market prices of 12 companies have been taken for 12 months of different dates, there by dividing the companies into 4 sectors. A final portfolio is made at the end of the year to know the changes (increase/decrease) in the portfolio at the end of the year.
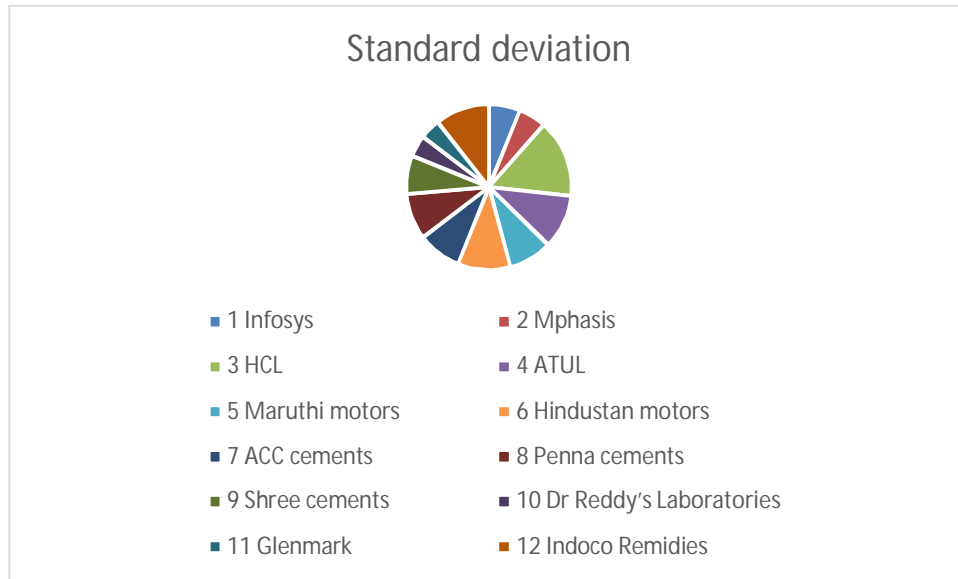
Sources of Data

Primary Data: Primary data are generated through personal investigation on the companies.

Secondary Data: The secondary information. collected from the records and published annual reports of the company, web sites, Magazines, Books, news papers and Journals etc.

## V.    DATA ANALYSIS & INTERPRETATION
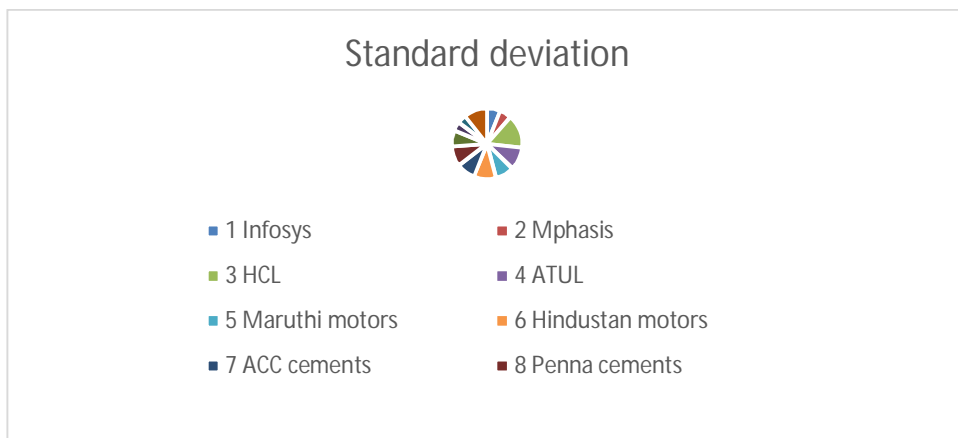
1) Calculation of average returns of the companies

| Company | Return |
| --- | --- |
| Infosys | 2.64 |
| Mphasis | 1.50 |
| HCL | 8.66 |
| ATUL | 9.48 |
| Maruthi motors | 4.74 |
| Hindustan motors | 1.82 |
| ACC cements | 2.75 |
| Penna cements | 4.57 |
| Shree cements | 4.19 |
| Dr Reddy's Laboratories | 1.57 |
| Glenmark | 1.91 |
| Indoco Remedies | 8.8 |

Standard deviation

- 1 Infosys
- 2 Mphasis
- 3 HCL
- 4 ATUL
- 5 Maruthi motors
- 6 Hindustan motors
- 7 ACC cements
- 8 Penna cements
- 9 Shree cements
- 10 Dr Reddy's Laboratories
- 11 Glenmark
- 12 Indoco Remidies

Interpretation: Here we have taken 12 companies from 4 different sectors like IT, Automobiles, Cement and Pharma to calculate the average returns for the period of July 2016 to June 2017. The table 5.1 clearly indicates that Atul Auto Motors. HCL and Indoco Remedies were sop performers by generating significant returns of 9.48%, 8.66% and 8.80% respectively. At the same time Maruti Motors.

*2)* Calculation of standard deviation

| Company | Standard deviation |
| --- | --- |
| Infosys | 8.511 |
| Mphasis | 7.45 |
| HCL | 21.15 |
| ATUL | 14.83 |
| Maruthi motors | 11.85 |
| Hindustan motors | 14.28 |
| ACC cements | 11.81 |
| Penna cements | 12.68 |
| Shree cements | 10.38 |
| Dr Reddy's Laboratories | 5.81 |
| Glenmark | 5.63 |
| Indoco Remedies | 14.79 |



Standard deviation

- 1 Infosys
- 2 Mphasis
- 3 HCL
- 4 ATUL
- 5 Maruthi motors
- 6 Hindustan motors
- 7 ACC cements
- 8 Penna cements

Interpretation: As per requirement for analysis, here we have calculated the standard deviation for identifying the risk levels of the stocks. The table 5.2. clearly shows that the Hei Infesters. Atul Motors, Hindustan Motors and Indoco Remedies had high standard deviation values which indicate higher portfolio risk of 4105 and portfolio no 3 generates higher portfolio return of 1.925 with lower portfolio risk of 3.76 that means higher risk portfolio will generate higher sears but sometimes if portfolio is well diversified with appropriate weights of the portfolio, it leads to higher portfolio returns with low-risk securities.

## VI.    FINDINGS

1) Analysed 12 companies from IT, Automobiles, Cement, and Pharma sectors (July 2016 - June 2017).
2) Atul Auto Motors achieved the highest average return of 9.48%.
3) HCL Technologies delivered a return of 8.66%.
4) Maruti Motors and other companies exhibited lower returns.
5) Standard deviation was calculated to assess the risk levels of the stocks.
6) HCL Technologies, Atul Auto Motors, Hindustan Motors, and Indoco Remedies showed high standard deviation values, indicating higher portfolio risk.
7) Portfolio 3 generated a return of 1.925 with a lower risk of 3.76.
8) A well-diversified portfolio can achieve attractive returns while minimizing risk.
9) High-risk stocks can lead to significant returns, but diversification helps optimize returns with reduced risk.

## VII.    SUGGESTIONS

1) Investors should consider allocating a larger portion of their portfolios to top-performing companies like Atul Auto Motors and HCL Technologies, which have demonstrated significant returns during the analysis period.
2) Continuously assess the standard deviation of stocks in the portfolio to monitor risk levels. This can help identify high-risk investments and adjust the portfolio as needed to align with risk tolerance.
3) Diversify investments across different sectors beyond IT, Automobiles, Cement, and Pharma to reduce overall portfolio risk. This can include exploring emerging industries or geographic diversification.
4) Stay updated on market trends and economic indicators that can impact stock performance. This knowledge can guide investment decisions and help in making timely adjustments to the portfolio.
5) Periodically rebalance the portfolio to maintain the desired asset allocation. This ensures that the portfolio remains aligned with investment goals and risk tolerance over time.
6) In addition to high-risk stocks, include some defensive stocks in the portfolio. These stocks tend to be more stable during market downturns, providing a cushion against volatility.
7) Educate yourself about market dynamics, investment strategies, and financial analysis techniques. This knowledge can enhance decision-making and improve investment outcomes.
8) Leverage financial analysis tools and software to streamline portfolio management, risk assessment, and performance tracking.
9) Consider consulting with financial advisors or investment professionals to gain insights and personalized recommendations based on individual investment objectives and risk tolerance.

## VIII.    CONCLUSION

The exploration of investment strategies highlights the ongoing challenge investors face in balancing safety and profitability. As traditional debt investments provide moderate returns with lower liquidity, the rising appeal of equity investments reflects a shift in investor sentiment, particularly in the context of the Indian stock market. This trend is further amplified by increased participation from Foreign Institutional Investors (FIIs), indicating a growing confidence in equity markets and their potential for higher returns. This study emphasizes the critical role of security analysis and portfolio selection in constructing an optimal investment mix. By examining various securities—debt, equity, and hybrid instruments—investors can strategically navigate the trade-offs between risk and return. Security analysis serves as a vital tool in assessing the viability and performance potential of these financial instruments, enabling informed decision-making. The findings underscore the necessity of a strategic approach to investment, where understanding market trends and the principles of security analysis can significantly enhance portfolio performance. In conclusion, by adopting effective investment strategies and prioritizing diversification, investors can not only safeguard their capital but also maximize their returns in an increasingly dynamic financial landscape.

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