

Exploring Risk and Return Dynamics in Equity Stocks of Chosen 10 Companies: A Five-Year Investigation (2019-2023)

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ABSTRACT:

This research paper titled “Exploring Risk and Return Dynamics in Equity Stocks of Chosen 10 Companies: A Five-Year Investigation (2019-2023)” delves into the complex interplay between risk and return within equity markets. Over a five-year period, the study meticulously examines the performance of equity stocks from ten selected companies, offering valuable insights into the correlation between risk and return. Leveraging a diverse methodological approach, including historical data analysis and quantitative techniques, the research provides empirical evidence and fresh perspectives to aid investors and financial analysts in making informed investment decisions. The findings underscore the importance of understanding the risk-return tradeoff and the necessity of diversification to construct well-balanced investment portfolios. By offering actionable insights and recommendations, this study contributes to the broader understanding of risk and return analysis in financial markets, empowering stakeholders to navigate dynamic market conditions effectively.

1. Introduction:

The research titled "Exploring Risk and Return Dynamics in Equity Stocks of Chosen 10 Companies: A Five-Year Investigation (2019-2023)" delves into the intricacies of risk and return within equity markets. Over five years, from 2019 to 2023, it examines the performance of equity stocks from ten selected companies. The primary objective is to furnish investors and financial analysts with valuable insights into the correlation between risk and return, aiding in well-informed investment decisions. Leveraging existing literature, the study builds upon foundational knowledge while offering fresh empirical evidence and perspectives. With market volatility prevailing, the study aims to empower stakeholders with evidence-based insights to optimize portfolio performance and manage risks effectively. Methodologically, the research employs a diverse approach, including criteria-based company selection, historical data analysis, and quantitative techniques such as statistical measures and financial ratios. The study's scope is limited to analyzing equity stocks from the chosen ten companies over the specified period, utilizing variance and standard deviation as key statistical measures to quantify return dispersion and volatility. Through meticulous data analysis and interpretation, the research seeks to provide actionable insights for navigating equity investments amidst dynamic market conditions, contributing to the broader understanding of risk and return analysis in financial markets and aiding stakeholders in informed decision-making.

2. Problem Statement:

The central focus is on elucidating the crucial relationship between risk and return within investment strategies. It underscores that risk encapsulates the uncertainty surrounding expected profits in a specific investment endeavor. The overarching objective of a thorough risk and return analysis is to identify optimal portfolios that maximize returns relative to the level of risk taken. In today's diverse investment landscape, investors face a myriad of choices, leading to uncertainty about prioritizing higher returns or lower risk. Through the application of risk and return analysis, investors can methodically assess their investment options, achieving a balance between potential returns and associated risks.

3. Need for the Study:

The research aims to provide clarity and guidance to investors grappling with the complexities of investment decision-making. By conducting a comprehensive risk and return analysis, it seeks to offer insights into the interaction between risk and return, enabling investors to make informed choices aligned with their financial objectives and risk tolerance levels. Moreover, the study addresses the prevalent ambiguity among investors regarding the trade-off between higher returns and lower risk. Through empirical analysis and data-driven insights, the research aims to elucidate optimal investment strategies that effectively balance risk and return considerations.

4. Objectives of the study:

- To examine the mean returns of chosen firms' stocks which are listed under NSE.
- To ascertain the level of risk linked with the securities of designated companies.
- To recommend the most suitable security for investors considering investing in 10 selected companies.

5. Review of Literature

(Horne & James , 2001) argued that although beta may not be a good indicator of the realized returns, it remains a reasonable measure of risk (Horne & James, 2001). Study of the Meric et al (2010) in the stock market of US shows a positive risk-return relationship between Industries listed in US stock market. There are many controversial results have been revealed in empirical literature; therefore, this study reviews Capital Asset Pricing Model (CAPM) to explore the relationship between expected return and systematic risk. The COMPUSTAT database, a major corporate financial data base widely used in both academia and businesses, provides market beta estimates for individual firms. Investment services firms also provide beta estimates as “risk attributes” or “volatility measures” of their bond and stock funds. No other theoretically well-founded model alternative to the CAPM has been implemented for the estimation of the cost of equity capital (Kaplan & Peterson, 1998). (Awalakki&Archanna , 2021)The study examines the relationship between economic and financial indicators and stock returns for 28 selected firms listed on the National Stock Exchange over an eight-year period (2010-2017). Utilizing panel data regression, the results indicate that Return on Equity (ROE) and Price to Book Value (PB) exert a positive and significant impact on stock returns. The findings suggest that managers can enhance stock valuation by understanding and effectively utilizing key resources, emphasizing the importance of informed decision-making for investment strategies and market predictions. (Awalakki&Archanna, 2021). The research paper investigates the impact of key accounting ratios, including ROE, ROA, P/E, P/B, P/S, and P/C, on stock prices of the National Stock Exchange over a 15-year period (2005-2020).

The study aims to analyze how these financial indicators influence stock returns, emphasizing their importance for investors, creditors, and stakeholders in evaluating the financial condition and profitability of companies listed on the exchange. (Markowitz, , 1952) Portfolio investment theory was the first modern theory proposed by Markowitz (1952). Assumed that the rates of return of individual assets covariance with one another, and there is a rather stable covariance, or correlation coefficient, between the rates of return of every two assets. Thus, he stated that it is theoretically possible to construct a variance-covariance matrix of all risky assets. (Awalakki&Archanna, 2023) This non-empirical research paper delves into the interplay between investor attention and financial market volatility, leveraging insights from behavioural finance. It explores the determinants of investor attention, including cognitive biases and social factors, and analyses their impact on market dynamics, offering a thorough review of existing literature and theoretical frameworks to enhance comprehension of this intricate relationship. (Abedi, Dargiri, &Rasiah, 2012). This study emphasizes the importance of the risk-return relationship in aiding investors and organizations in decision-making. By reviewing theories, empirical studies, and performance measures like Treynor, Sharpe, and Jansen Indices derived from the Capital Asset Pricing Model (CAPM), it aims to enhance the understanding of industry sectors' risk-return constructs for improved decision support. (Awalakki&Archanna, 2023). This study explores the impact of overconfidence biases on investment portfolios, examining cognitive and emotional mechanisms such as illusion of knowledge and emotional attachment. Rooted in behavioral finance literature, it highlights consequences like excessive trading and loss aversion, proposing mitigation strategies like diversification, passive investing, and behavioral coaching for more informed and rational portfolio decisions. (Subramanyam, Nalla, &Kalyan, 2018). The study aims to educate investors on mutual funds, emphasizing the potential for maximizing returns amidst India's growing capital market. It sheds light on investor awareness, risk tolerance, and preferences, showcasing the role of mutual funds in diversifying investments for optimal returns and risk mitigation. (Awalakki, 2022). This article explores the interplay between neurotransmitters (dopamine, serotonin, and norepinephrine), emotions, and investment outcomes, unraveling their role in shaping investor behavior and decision-making. It emphasizes the neural mechanisms driving decision diversification and addresses biases, underscoring the significance of education for cognitive function and bias mitigation in managing investor behavior within the finance domain. (Moolbharathi&Sugandi, 2021). This study analyzes the Risk and Return of stocks in the Auto, Banking, Finance, FMCG, and IT sectors from 2017-2021, using statistical tools like Standard Deviation, Beta, and Regression Analysis. It guides investors by assessing sector-wise performance against benchmark indices, aiding in informed investment decisions based on risk and return considerations. (Awalakki S. M., 2015). The study in Kalaburagi, Karnataka, reveals that salaried employees predominantly consider investments for retirement, and recent survey results indicate a lack of significant increase in their investment levels compared to businesspersons. Despite a historical focus on retirement, the growing awareness of investment options suggests an evolving landscape with increased choices for salaried individuals. (AWALAKKI, 2015)This study examines the capital structures of five prominent cement companies (ACC, Ultratech, Ambuja, J.K., Chettinad) from 2008-09 to 2013-14, assessing the impact of these structures on investment patterns and emphasizing the importance of debt-equity mix in effective financing decisions. The intra-company analysis aims to provide insights into the financial dynamics of these firms. Mr. Pandya and Mr. Bhargav (2017), "Total Shareholder Return and Excess Return: An Analysis of Nifty Pharma Index Companies." The paper examines the total shareholder return (TSR) and excess return of pharmaceutical companies in the

NIFTY pharma index from 2010 to 2016. Using financial data from the CMIE PROWESS database and risk-free rates from the Reserve Bank of India website, the study finds statistically significant positive TSR and excess return, indicating wealth creation for shareholders. Additionally, there is a positive association between return on net worth (RONW) and both TSR and excess return, suggesting that increasing RONW can enhance TSR and excess return, offering implications for managerial decision-making. Abhishek. V (2018) “A Study on Risk and Return Analysis of Selected Stocks In Bse Sensex”. The aim of this study is to assess the risk and return associated with specific stocks and determine the optimal investment options. Standard deviation and beta values are utilized to gauge the risk of the chosen stocks within the Sensex index. Additionally, the research proposes that opting for short-term securities over long-term investments can help mitigate risk. The Sharpe’s index model, developed by William Sharpe, is highlighted as an effective investment strategy. Consequently, investors can diversify their risk by investing in a portfolio of securities. (Rohit&Bhavna, 2018), “The Effect of Risk Return Analysis Of Pharmaceutical Companies On Indian Stock Market”. The study examines the risk-return relationship of selected pharmaceutical companies in the Indian stock market from 2013 to 2018. With India’s pharmaceutical industry ranking third globally in volume and fourteenth in value, it is an attractive sector for investors. Using MS Excel for data analysis, the research highlights that while Sun Pharmaceutical Industries Ltd offers exceptional returns, its shares carry high market risk. Conversely, Divi’s Laboratories Ltd presents a more favorable option due to its combination of high returns and lower associated risk. This analysis aids potential investors in making informed investment decisions within the pharmaceutical sector. Rahul Moolbharathi and TukaramSugandi (2021) “A Comparison Study On Risk And Return Analysis Of SelectedCompanies With Benchmark Index In Nse”. The research provides investors with insights into various statistical methods for assessing stock risk and return, with a focus on comparing index performance to benchmark indices. Additionally, it aims to determine the most favorable sector for risk and return investments. The primary goal is to analyze the statistical variation of stocks and indices using regression analysis. Findings reveal that HDFC Bank exhibits higher risk and returns compared to other stocks. Notably, all equities in the portfolio have a beta of one, indicating efficiency in terms of risk and return among the selected market stocks. Mr. S. Sathish, Ms. A. Nagarathinam (2021) “A Study On Risk And Return Analysis Of FMCG Companies In Indian Stock Market”. This article was undertaken to analyse the risk and return of the selected NIFTY FMCG sectors. This research examines the optimal security for an investor seeking a high return with minimal risk. Descriptive research is been adopted and based on this it is highlighted that ITC Ltd. Has the lowest return among FMCG companies. They suggest that if an investor expects high returns then he has to face high risk. A stock with a higher beta value is not suggested since it has a significant market risk that cannot be diversified.

6. Research Methodology

6.1. Sources of data collection

The research utilized secondary data obtained from various sources such as the NSE website, publications, and journals. The study employs a descriptive research design.

6.2. Sample size

The study consists of NIFTY health sector companies which are listed on NSE.

6.3. Statistical tools and techniques

Returns: A company’s stock price can fluctuate due to various factors, resulting in positive or negative

outcomes. Market return refers to the profit earned over a period of time, where profit is considered positive and loss negative. Returns are calculated as the percentage change between the closing and opening prices.

Standard Deviation: Standard deviation measures the extent of dispersion of a dataset relative to its mean. It is determined by taking the square root of the variance. A stock with high volatility will have a higher standard deviation, while a stable blue-chip stock will have a lower standard deviation.

Data Analysis and Interpretation

1. Table showing the MEAN return of the companies in descending order:

Rank	Companies	Average returns
1	IEX	50.788
2	NESTLE	19.997
3	RELIANCE	19.142
4	CEAT TYRES	16.068
5	EICHER MOTORS	12.988
6	ADITYA BIRLA CAPITAL	12.6554
7	BATA INDIA	10.6734
8	CANARA BANK	10.3596
9	PEDLITE INDUS	1.2312
10	DABUR INDIA	-0.262

Interpretation:

The table displays the average returns of various companies in descending order. At the top of the list is IEX with an average return of 50.788%, indicating the highest return among the listed companies. Following IEX is Nestle with an average return of 19.997%, showcasing strong performance as well. Reliance, CEAT Tyres, Eicher Motors, and Aditya Birla Capital also exhibit favorable average returns above 10%. Towards the bottom of the list, we observe lower average returns from companies such as BATA India, Canara Bank, Pedlite Industries, and Dabur India. Overall, this ranking provides insight into the relative performance of these companies in terms of their average returns.

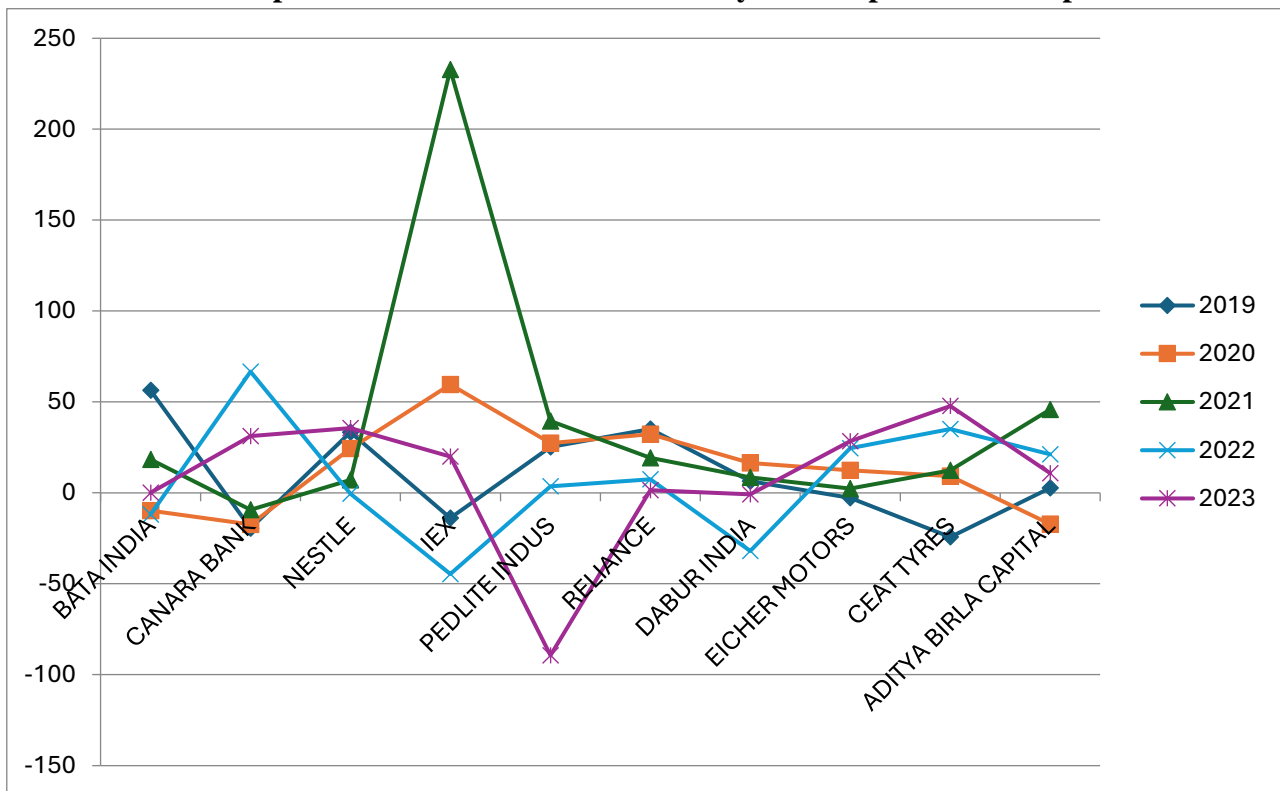
2. Table showing standard deviation of companies in descending order:

Rank	Companies	Standard deviations
1	IEX	108.8734
2	PEDLITE INDUS	52.2647
3	CANARA BANK	37.6038
4	BATA INDIA	28.2616
5	CEAT TYRES	27.6453
6	ADITYA BIRLA CAPITAL	23.2674
7	DABUR INDIA	18.7657
8	NESTLE	16.0159
9	RELIANCE	14.7754
10	EICHER MOTORS	13.5128

Interpretation:

The standard deviations listed reflect the varying degrees of volatility in returns among different companies. IEX stands out with the highest standard deviation, suggesting significant fluctuations in its returns, followed closely by PEDLITE INDUS and CANARA BANK, which also exhibit considerable variability. BATA INDIA, CEAT TYRES, and ADITYA BIRLA CAPITAL show noteworthy levels of volatility in their returns as well. Conversely, DABUR INDIA, NESTLE, RELIANCE, and EICHER MOTORS demonstrate comparatively lower standard deviations, indicating relatively more stable returns. This analysis underscores the importance of understanding the risk associated with investment returns, as higher standard deviations imply greater potential for variability and uncertainty in investment outcomes.

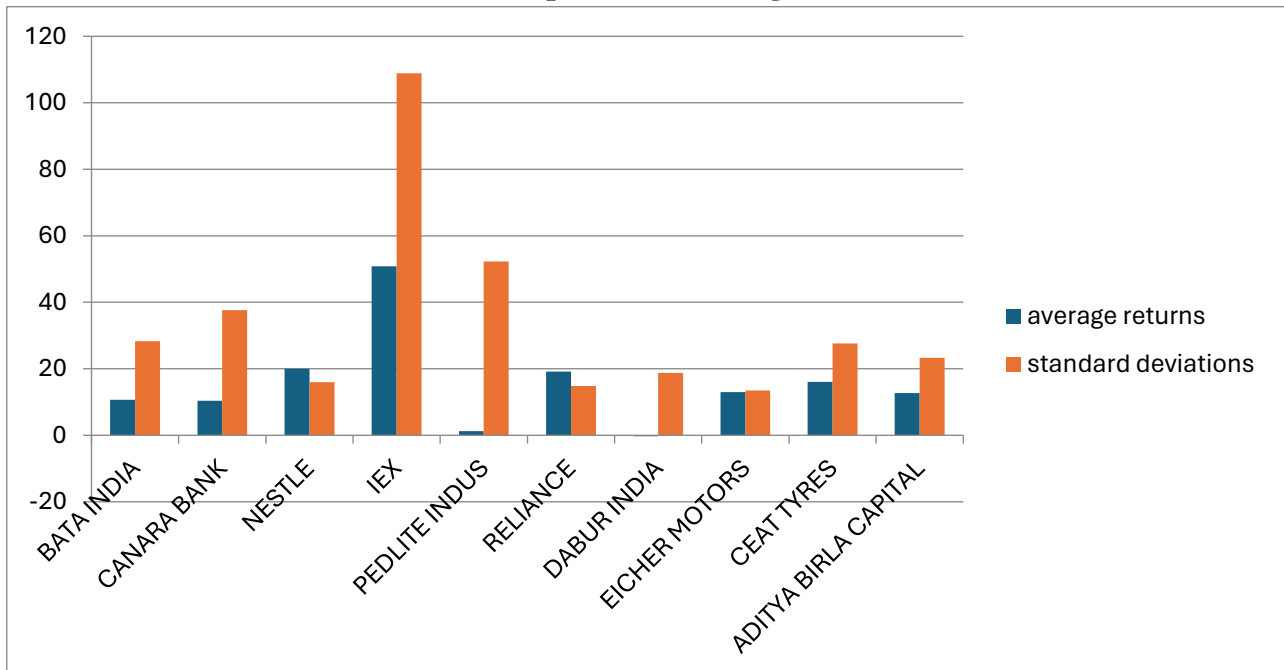
3. The Line Graph shows annual returns earned by the companies for the period 2019–2023



Interpretation:

The line chart illustrates the average returns of various companies, providing insight into their comparative performance. Notably, IEX emerges as the top performer with the highest average return, followed by NESTLE and RELIANCE. CEAT TYRES, EICHER MOTORS, and ADITYA BIRLA CAPITAL also demonstrate respectable average returns. Towards the lower end of the spectrum, BATA INDIA and CANARA BANK exhibit moderate average returns, while PEDLITE INDUS and DABUR INDIA display relatively lower average returns, with DABUR INDIA showing a slight negative return. This visualization enables investors to assess the historical performance of these companies and make informed decisions regarding investment strategies based on their risk tolerance and return objectives.

4. The Bar Chart shows the comparison of average returns and standard deviations:



Interpretation:

The bar chart provides a visual representation of the average returns of different companies, offering insights into their relative performance. The tallest bar corresponds to the company with the highest average return, which in this case is IEX, indicating its strong performance. NESTLE and RELIANCE also stand out with notable average returns, represented by the height of their respective bars. CEAT TYRES, EICHER MOTORS, and ADITYA BIRLA CAPITAL follow closely behind, showcasing respectable average returns. Towards the lower end of the chart, BATA INDIA and CANARA BANK demonstrate moderate average returns, while PEDLITE INDUS and DABUR INDIA exhibit comparatively lower returns, with DABUR INDIA even displaying a slight negative return. This visual representation allows investors to quickly identify companies with strong historical performance and consider them in their investment decisions.

Findings:

The analysis of average returns and volatility among various companies offers valuable insights into the risk-return dynamics of investment options. Among the companies examined, IEX emerges as a top performer with the highest average return of 50.788%, followed closely by Nestle with an average return of 19.997%. Reliance, CEAT Tyres, Eicher Motors, and Aditya Birla Capital also demonstrate strong average returns above 10%. Conversely, companies like BATA India, Canara Bank, Pedlite Industries, and Dabur India exhibit lower average returns, with Dabur India even displaying a slight negative return. While high average returns are enticing, they often come with increased volatility, as evidenced by IEX, Pedlite Industries, and Canara Bank, which exhibit significant fluctuations in their returns. BATA India, CEAT Tyres, and Aditya Birla Capital also demonstrate noteworthy levels of volatility. In contrast, companies such as Dabur India, Nestle, Reliance, and Eicher Motors display comparatively lower standard deviations, indicating relatively more stable returns. This analysis highlights the risk-return tradeoff, where higher average returns are typically associated with increased volatility and risk.

Therefore, investors must carefully weigh the potential returns against the level of risk they are willing to tolerate. Companies with stable returns, like Dabur India and Nestle, may appeal to risk-averse investors seeking more predictable outcomes, while those with higher risk tolerance may consider investments in companies like IEX and Pedlite Industries, despite their higher volatility. Overall, understanding the relationship between risk and return is crucial for constructing well-balanced investment portfolios.

Suggestions:

When constructing an investment portfolio based on the findings, it's essential to prioritize diversification to spread risk across various companies. Combine stable performers like Nestle and Reliance with higher-risk, higher-return options such as IEX and Pedlite Industries. Assess your risk tolerance carefully; if it's lower, focus on companies with stable returns like Dabur India and Eicher Motors. For those comfortable with higher risk, consider CEAT Tyres and Aditya Birla Capital. Keep a long-term perspective, emphasizing companies with strong fundamentals like Nestle and Reliance for sustainable growth. Regularly monitor portfolio performance and adjust as needed to stay aligned with your goals. Seeking professional advice can provide personalized guidance tailored to your financial situation and objectives, ensuring that your portfolio effectively balances risk and return for long-term success.

Conclusion:

In conclusion, this research paper has shed light on the intricate relationship between risk and return within equity markets through a comprehensive analysis of ten selected companies over a five-year period. The findings reveal that while higher average returns are appealing, they often come with increased volatility and risk. It is crucial for investors to carefully weigh potential returns against their risk tolerance levels when constructing investment portfolios. Diversification emerges as a key strategy to spread risk across various companies, combining stable performers with higher-risk, higher-return options. Additionally, maintaining a long-term perspective and regularly monitoring portfolio performance are essential practices for sustainable growth and success in the dynamic landscape of financial markets. By providing evidence-based insights and actionable recommendations, this study aims to empower investors and financial analysts to make well-informed decisions, ultimately optimizing portfolio performance and managing risks effectively in pursuit of their financial objectives.

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