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## RISK AND RETURN ANALYSIS ON EQUITY STOCKS OF SELECTED "IT" COMPANIES

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### ABSTRACT

The equity analysis for the IT industry indicates a strong connection between the specific IT sector and the industry at large. Understanding these values helps in making informed decisions regarding stock purchases. Investments inherently involve a balance of risk and potential return, which directly influences investor actions. The IT sector is widely recognized for its rapid growth rate, making it an appealing target for investors seeking strong returns. This research aims to compare the risk and return profiles of various IT equities, informing and guiding investors towards specific investment opportunities within the IT sector.

**KEYWORDS:** Risk And Return, Standard Deviation.

### 1. Introduction

The stock market is ever-changing, and predictions play a significant role in investors' decision-making. An investment's success depends on finding a balance between risk and return. This involves understanding risk to maximize rewards. Analyzing return and risk affects how an individual decides where to invest. Market knowledge is essential for risk analysis and informs decision-making and risk management strategies. Risk is assessed by considering volatility and the difference between expected and actual returns. Risk and return analysis is crucial for assessing an investment's potential returns against its risk. Diversification can help reduce portfolio risk, but it also limits potential returns. For instance, focusing solely on a single market sector may yield high returns if that sector does well, but it could lead to losses if that sector underperforms. However, the benefits of diversification diminish if two assets' returns are highly correlated.

## 2. Statement Of The Problem

Risk and return are intertwined concepts in investing. Risk represents the likelihood that an investment may not deliver the anticipated returns. In contrast, return is the actual profit generated by an investment. A risk and return analysis aims to identify the most efficient portfolios, which can yield the highest return for a given level of risk. This analysis is crucial for financial experts to evaluate investment opportunities effectively. In today's market, investors have a plethora of investment choices, which often leads to confusion about where to invest. Utilizing risk and return analysis, investors can better understand the risk associated with their investment decisions. This analytical approach helps individuals to select investments based on their risk tolerance and expected return. The purpose of this study is to equip investors with the necessary information to make informed decisions when selecting their investment holdings.

## 3. Need of Study

The stock market is volatile, particularly in India where stock exchanges have a long history. Identifying high-reward, low-risk areas for investment is crucial. However, assessing the level of risk linked with securities can be complex. This study aims to evaluate the risk and return of selected equity stocks and IT firms, with the goal of maximizing returns while minimizing risk. The objectives of this study are to identify suitable investment opportunities and analyze the risk-return profiles of specific Indian IT businesses listed on the NSE's IT Index.

## 4. OBJECTIVE OF THE STUDY

To Determine Return and Standard Deviation of "IT Industry" With Ten Selected Company

## 5. LITERATURE REVIEW

Mrs. R. Thirugnanasoundari (2018). The study on the risk-return analysis of equity investments in the Indian stock market, focusing on the NIFTY index, aims to understand the potential returns and risks for investors, particularly in different sectors of the Indian economy. It found that Infosys' stock price, at ₹3283, was consistently higher than others in the Information Technology sector during the study period, suggesting that investors should seek financial planner advice to enhance their investment decisions. Abhishek. Y (2019). The study on the risk-return analysis of equity investments in the Indian stock market, focusing on the NIFTY index, aims to understand the potential returns and risks for investors, particularly in different sectors of the Indian economy. It found that Infosys' stock price, at ₹3283, was consistently higher than others in the Information Technology sector during the study period, suggesting that investors should seek financial planner advice to enhance their investment decisions. Dr. P. Subramanyam, Dr. NallaBala Kalyan (2019). This study aims to educate investors about mutual fund investing and the potential for maximizing returns while minimizing risk through diversification across industries and enterprises, with a focus on market volatility and its impact on scrip pricing. Mrs. Rahul Moolbharathi and Mrs. Tukaram Sugandi (2022). This research aims to help investors assess stock risk and return using various statistical methodologies, focusing on index performance versus benchmark

index and sector-based risk and return investing. By employing regression analysis, it seeks to measure the statistical variation of stocks and indices, identifying HDFC Bank as having the highest risk and return among the studied stocks. The equities in the portfolio all have a beta of one, suggesting they are efficient in terms of risk and return. Mr. S. Sathish, Ms. A. Nagarathinam (2022) This study investigates the risk and return of selected NIFTY FMCG sectors, aiming to identify optimal securities for high returns with minimal risk. It concludes that ITC Ltd. has the lowest return among FMCG companies and suggests that high returns are associated with high risk. It cautions against stocks with higher beta values, which carry significant market risk that cannot be diversified. (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.

## 6. Research Design

The study was conducted using secondary data. The information was gathered from a number of sources, including the NSE website, publications, and journals, among others. This study's research design is a descriptive one.

**6.1 Sample size:** The study consists of NIFTY IT companies which are listed on NSE.

## 6.2 Statistical tools and techniques

## I. Returns

A company's share price may increase or decrease based on multiple factors. A market return is the profit earned over the period of time. The returns can resemble as positive or negative outcomes. Profit can be considered as positive and loss can be considered as negative.

## II. Standard deviation

The standard deviation of a dataset is a measure of its dispersion in respect to its mean. The square root of the variance is used to determine the standard deviation. A volatile stock has a high standard deviation, whereas a stable blue-chip stock has a low standard deviation.

- First returns of TEN stocks will be calculated.
- Find the standard deviation for stocks.
- Average returns of industries.

Formula for calculating the returns

$$Return_i = \frac{Ending\ price_i - Beginning\ price_i}{Beginning\ price_i}$$

Formula for calculating the standard deviation

$$SD_i = \sqrt{Variance_i}$$

$$Variance (\sigma) = \frac{\sum(R_i - R_j)^2}{n - 1}$$

Formula for getting average returns of the stocks.

$$Average\ return\ for\ i; Stock = \frac{\sum Stock\ Returns_i}{n}$$

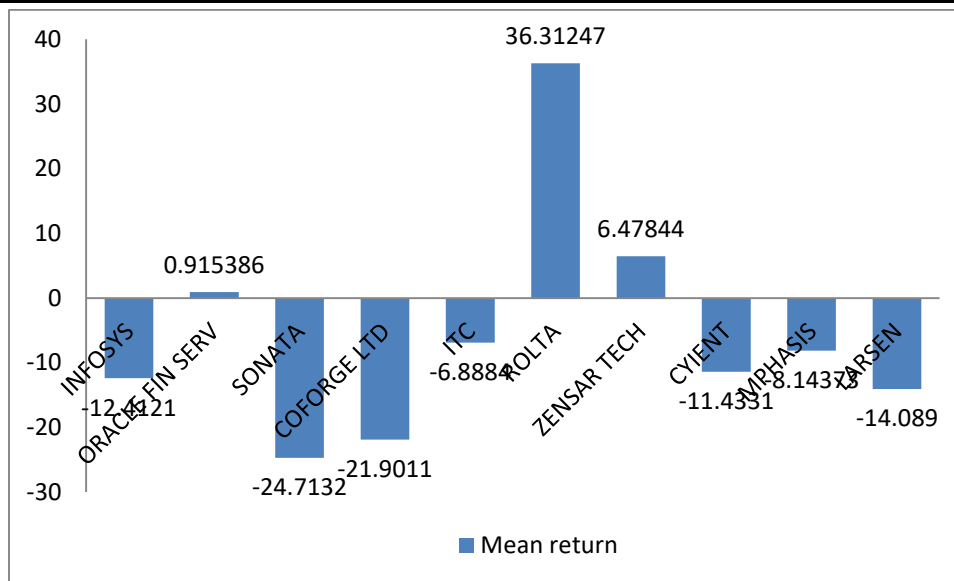
Note: n = Number stocks

## 7. Data Analysis And Interpretation

Table No: 1; The Mean Returns Of 'IT' Companies

Name of company	Mean return
INFOSYS	-12.4121
ORACLE FIN SERV	0.915386
SONATA	-24.7132
COFORGE LTD	-21.9011
ITC	-6.8884
ROLTA	36.31247
ZENSAR TECH	6.47844
CYIENT	-11.4331
MPHASIS	-8.14373
LARSEN	-14.089

TABLE NO: 1; Mean returns of IT stocks



### INTERPRETATION: 1

The mean return values for the listed companies present a mixed picture of their financial performance. Rolta and Zensar Tech stand out with positive returns, implying potential profitability and positive investor sentiment. However, Sonata, Coforge Ltd, and Larsen exhibit negative returns, signaling challenges or financial setbacks. The negative returns for Infosys, ITC, and Cyient also indicate potential areas of concern. It's crucial to delve deeper into the financial health, market dynamics, and industry trends for a comprehensive analysis before making any investment decisions. Additionally, considering the broader economic context and company-specific factors is essential for a well-informed interpretation of these return values.

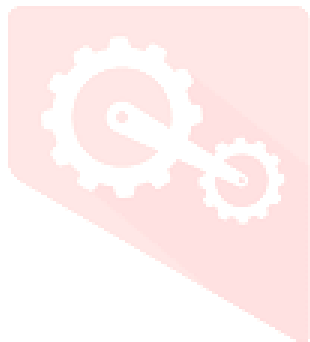
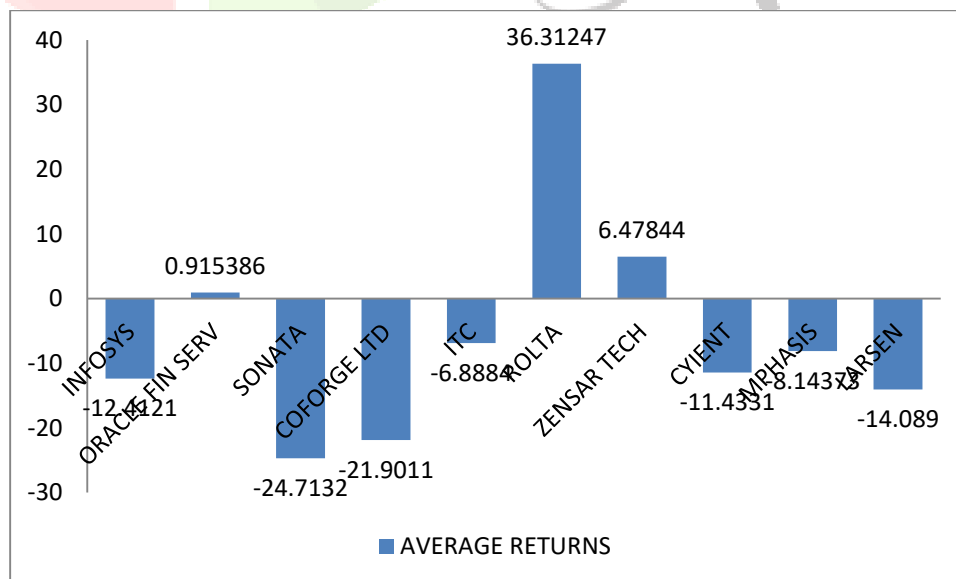


TABLE NO : 2

## THE AVERAGE RETURNS OF "IT" COMPANIES

COMPANY	AVERAGE RETURNS
INFOSYS	-12.4121
ORACLE FIN SERV	0.915386
SONATA	-24.7132
COFORGE LTD	-21.9011
ITC	-6.8884
ROLTA	36.31247
ZENSAR TECH	6.47844
CYIENT	-11.4331
MPHASIS	-8.14373
LARSEN	-14.089

CHART NO : 2

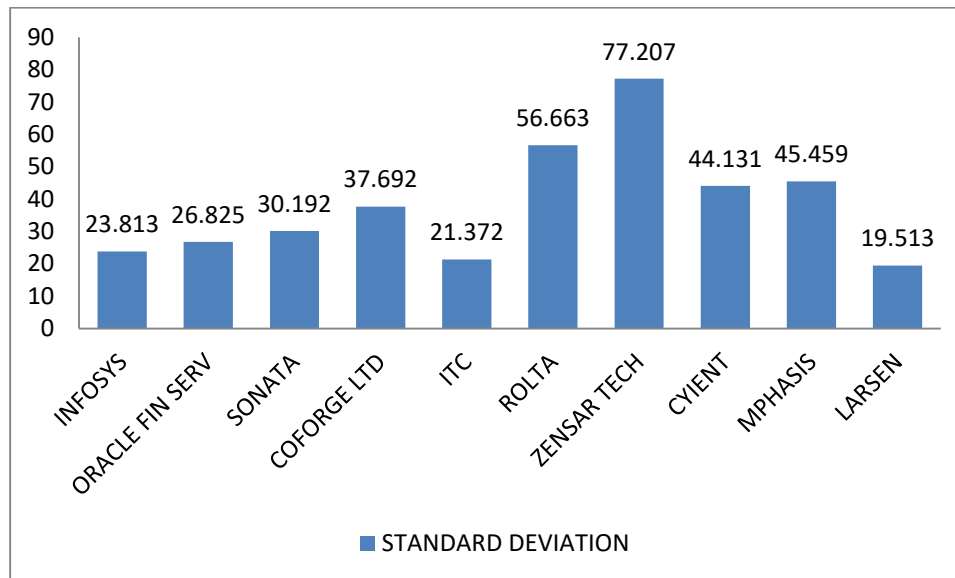


**INTERPRETATION: 2**

The average returns for the listed companies reflect a diverse range of financial performances. Notably, Rolta and Zensar Tech showcase positive average returns, suggesting potential profitability and positive investor sentiment. Conversely, Sonata, Coforge Ltd, and Larsen exhibit negative average returns, indicating challenges or financial downturns. Infosys, ITC, and Cyient also demonstrate negative average returns, raising considerations for potential areas of concern. A comprehensive analysis, considering industry trends, market dynamics, and company-specific factors, is essential to make well-informed investment decisions based on these average return values.

**TABLE NO: 3****THE STANDARD DEVIATION**

COMPANY	STANDARD DEVIATION
INFOSYS	23.813
ORACLE FIN SERV	26.825
SONATA	30.192
COFORGE LTD	37.692
ITC	21.372
ROLTA	56.663
ZENSAR TECH	77.207
CYIENT	44.131
MPHASIS	45.459
LARSEN	19.513

**CHART NO: 3****INTERPRETATION: 3**

The standard deviation values for the listed companies reflect the degree of variability or volatility in their returns. Higher standard deviations, such as those for Zensar Tech and Rolta, suggest greater price fluctuations, indicating higher risk. Conversely, lower standard deviations, like those for Larsen and ITC, indicate relatively more stable returns with lower volatility. Investors should consider these standard deviation values along with other factors like average returns and industry trends to make informed decisions based on their risk tolerance and investment goals.

**FINDING**

The evaluation of listed companies' financial performance reveals a nuanced landscape. Notably, Rolta and Zensar Tech emerge as positive outliers, displaying favorable returns that suggest potential profitability and positive investor sentiment. In contrast, Sonata, Coforge Ltd, and Larsen present negative returns, indicating challenges or financial setbacks. Additionally, Infosys, ITC, and Cyient also exhibit negative returns, prompting consideration of potential areas of concern. The analysis of average returns provides further insight, with Rolta and Zensar Tech maintaining positive averages, while Sonata, Coforge Ltd, and Larsen display negative averages. This underscores the importance of conducting a comprehensive analysis that takes into account industry trends, market dynamics, and company-specific factors. Standard deviation values contribute to the assessment by highlighting the volatility in returns, with higher standard deviations for Zensar Tech and Rolta suggesting greater risk. On the other hand, lower standard deviations for Larsen and ITC indicate more stable returns. In making investment decisions, investors should weigh these factors against their risk tolerance and goals, ensuring a well-informed and holistic approach to financial analysis.



## SUGGESTION

The assessment of mean return values among the listed companies provides a varied perspective on their financial performance. Noteworthy are Rolta and Zensar Tech, standing out with positive returns, indicating potential profitability and positive investor sentiment. Conversely, Sonata, Coforge Ltd, and Larsen display negative returns, suggesting challenges or financial setbacks. Similar concerns arise with Infosys, ITC, and Cyient, which also show negative returns. To gain a comprehensive understanding, a thorough analysis of financial health, market dynamics, and industry trends is imperative before making any investment decisions. Additionally, accounting for broader economic context and company-specific factors is crucial for a well-informed interpretation of these return values. Examining the average returns further underscores the diverse financial performances of the listed companies. Notably, Rolta and Zensar Tech exhibit positive average returns, hinting at potential profitability and positive investor sentiment. Conversely, Sonata, Coforge Ltd, and Larsen present negative average returns, suggesting challenges or financial downturns. Infosys, ITC, and Cyient also demonstrate negative average returns, prompting considerations for potential areas of concern. To make informed investment decisions based on these average return values, a comprehensive analysis considering industry trends, market dynamics, and company-specific factors is essential. The standard deviation values provide insights into the variability or volatility in the companies' returns. Higher standard deviations, such as those for Zensar Tech and Rolta, indicate greater price fluctuations and higher risk. In contrast, lower standard deviations, like those for Larsen and ITC, suggest relatively more stable returns with lower volatility. To make well-informed decisions aligned with their risk tolerance and investment goals, investors should consider these standard deviation values alongside other factors such as average returns and industry trends.

## CONCLUSION

This study focuses on examining the IT Nifty Stock to help investors choose securities based on risk and return. A stock with a higher beta value is not recommended, as it is exposed to higher market risk and cannot be diversified. The beta ratio is most useful for short-term decisions with significant price volatility. Mindtree has the highest return with normal risk. Investors may perceive that if the market recovers, the scrip returns will increase. While these stocks may not be safe investments, they may offer greater rewards for both risk-takers and risk-averse investors in the short term rather than the long term.

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