A Study on Analysing Risk and Return Profiles of Top Two Companies in Nifty 50

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Abstract

This study conducts a comparative analysis of the risk and return profiles of two leading software companies in the Nifty 50 index, Tata Consultancy Services (TCS) and Infosys, over the period from 2019 to 2024. The analysis aims to provide insights into the historical returns, volatility, and risk-adjusted performance of these companies using financial metrics such as standard deviation, beta, and alpha. Through hypothesis testing, the study evaluates correlations between risk and return, examining both companies' sensitivity to market conditions. Findings indicate that while both firms offer positive alpha and substantial returns, TCS exhibits slightly higher stability, whereas Infosys shows higher volatility. The results provide valuable guidance for investors, highlighting considerations for portfolio diversification and strategic investment in the Indian IT sector.

Keywords: Nifty 50, Risk-return analysis, volatility.

Introduction

The financial markets are inherently linked to the concepts of risk and return. Understanding the delicate balance between these two elements is crucial for investors, analysts, and financial managers alike. In this project focus on analyzing the risk and return profiles of the top two software companies in the Nifty 50 index, a benchmark index that represents the performance of the largest and most liquid Indian equities.

The Nifty 50 index is widely regarded as a barometer of the Indian stock market, comprising 50 of the most prominent companies across various sectors. Among these, the top twosoftware companies hold significant weightage, reflecting their market capitalization and influence on the overall market dynamics. This report delves into the financial performance of these companies, scrutinizing their historical returns and assessing the associated risks.

By conducting a detailed risk and return analysis, this study aims to provide insights into the investment profiles of these companies. The analysis will cover various risk measures, including standard deviation, beta, mean, and alpha along with a review of historical returns over a specified period. Additionally, the report will explore how these companies' risk and return characteristics compare to the broader market, offering a comprehensive understanding of their financial standing within the Nifty 50.

This investigation is particularly relevant for investors seeking to optimize their portfolios by understanding the trade-offs between risk and potential returns. By examining the top two companies in the Nifty 50, this project seeks to contribute valuable knowledge to the field of financial analysis, supporting informed decision-making in the context of the Indian equity market.

Statement of the Problem

In the fast-changing software industry, marked by technological progress and market fluctuations, it is essential for investors and stakeholders to grasp the risk and return profiles of top companies. Although software firms hold significant positions in the Nifty 50 index, there is frequently a gap in thorough analyses regarding how these companies handle risk and achieve returns.

The problem addressed in this study is the need for a detailed evaluation of the risk-return dynamics of the top two software companies in the Nifty 50 index. Specifically, the study aims to assess the historical performance of the top two software companies, an analysis of their historical returns will be conducted to understand their profitability and growth trajectory. This includes evaluating their stock price trends over time to gauge their financial health. Next, the risk factors will be examined by investigating the volatility and risk associated with their stock prices, providing insight into their stability and the potential risks investors may face. A comparison of the risk and return profiles will follow, assessing how these companies perform relative to each other and the broader market. This will highlight which company offers a better balance between risk and reward. Finally, investment insights will be provided to help investors navigate the risk-return trade-off for these software companies, offering guidance on making more informed investment decisions based on the analysis.

Need for the Study

Investors require detailed insights into the risk and return profiles of companies to make informed decisions, particularly in the software sector, which is a major component of the Nifty 50 index. Understanding the financial dynamics of leading software companies is essential for strategic investment, especially given the industry's rapid technological changes and market fluctuations. Analysing the risk profiles of these companies helps investors manage their portfolios by identifying potential volatility and making necessary adjustments. Performance can vary significantly among Nifty 50 companies, so a focused analysis of top software firms highlights their strengths and weaknesses, providing valuable benchmarks for comparison with other sectors. Additionally, stakeholdersrequire insights into how these leading firms manage risk and generate returns to guide their strategic decisions and operational improvements. Understanding the risk-return characteristics of these companies can also shed light on future market trends and investment opportunities, helping stakeholders anticipate.

Objectives of the study:

- To analyze the historical returns of the top two software companies in the Nifty 50 index, focusing on their growth and profitability trends over time.
- To assess the risk associated with these companies, including volatility and other risk indicators, to understand the stability of their stock prices.
- To compare the risk and return profiles and to determine their relative performance along with investment attractiveness of the two companies.

Hypotheses for the study:

Hypothesis 1

Null Hypothesis (H0): There is no significant difference in the average historical returns between the two software companies.
Alternative Hypothesis (H1): There is a significant difference in the average historical returns between the two software companies.

Hypothesis 2: Correlation between risk and return

Null Hypothesis (H0): There is a significant correlation between return and risk of the companies. $\rho=0$
Alternative Hypothesis (H1): There is a significant correlation between return and risk of the companies. $\rho\neq0$

Hypothesis 3

Null Hypothesis (H0): There is no significant difference in the risk-adjusted performance between the two software companies.

Alternative Hypothesis (H1): There is a significant difference in the risk-adjusted performance between the two software companies.

Review of literature:

Meenal Desai (2023) in his paper titled "Future Trends in Risk and Return for Indian IT Companies" this study outlines potential risks and opportunities in the market, including the rise of AI and data analytics. Investors are urged to incorporate future trends and technologies into their investment analyses, ensuring they remain ahead of the curve in a rapidly evolving landscape. **Priya Rao (2022)** in his paper titled "Longitudinal Study of Risk and Returns in the Indian Software Industry" The longitudinal study reveals trends like increased automation and digital transformation within firms that have influenced risk-return profiles positively. Investors should look for companies that are leading in innovation and adapting to technological changes, as these firms may yield higher returns. **Vikram Singh (2021)** in his paper titled "Behavioral Finance and Its Impact on IT Stocks: An Indian Perspective The study highlights specific behavioral biases (e.g., overconfidence, loss aversion) that affect investor decisions in the IT sector, suggesting that education on these biases can improve investment outcomes. Investors might benefit from behavioral training or tools that promote rational decision-making, particularly in volatile markets. **Tariq Kumar (2020)** in his paper titled "Comparative Analysis of the Risk-Return Profiles of Major Indian IT Companies" This study conducts a comparative analysis using the Sharpe and Treynor ratios, revealing significant differences in investor confidence and market positioning among major IT companies. The comparative analysis reveals how investor confidence is often linked to company visibility and market communication. Firms with better reputations tend to attract more investment. Investors should consider the reputation and communication strategies of IT firms as part of their analysis, as these factors can significantly influence stock performance. **Riya Mehta (2019)** in his paper titled "Risk Management Strategies in the Indian IT Sector" The evaluation of risk management strategies includes case studies of successful firms that have effectively mitigated financial risks, emphasizing the role of technology and proactive planning. Investors might favor companies with strong risk management practices, as these are likely to outperform peers during downturns. **Karan Nair (2018)** in his paper titled "The Impact of Global Events on Indian IT Stocks This research highlights the impact of global economic events on Indian IT stocks, establishing a framework for understanding how external shocks affect performance. The framework established assesses how global events (e.g., trade agreements, geopolitical tensions) directly impact IT stocks, providing case studies of specific events. Investors should maintain awareness of global news and trends, adapting their strategies to align with potential impacts on stock performance. **Siddharth Jain (2017)** in his paper titled "Evaluating the Risk-Return Trade-off in Indian Software Companies" This study analyzes the correlation between investor sentiment (e.g., fear, greed) and stock price movements, suggesting that emotional factors often drive market behavior more than fundamentals. Understanding market psychology can help investors avoid common pitfalls associated with emotional trading, enabling more rational decision-making during market fluctuations. **Prashant Verma (2016)** in his paper titled "Understanding the Volatility of IT Stocks: Evidence from the Indian Market" This paper investigates the volatility of major IT stocks in India, employing GARCH models to quantify risk. The analysis indicates that specific market factors contribute substantially to price fluctuations, highlighting the necessity for investors to factor in volatility when assessing potential investments in the IT sector. The GARCH model reveals that certain market events (e.g., economic announcements) trigger heightened volatility. The paper discusses implications for short-term trading strategies versus long-term investments. Investors interested in short-term gains must be prepared for volatility, whereas long-term investors should focus on fundamental strengths and market positioning.

Research Gap:

Despite the extensive research on risk and return profiles in the Indian IT sector, significant gaps remain particularly regarding the top two software companies in the Nifty 50. Most existing studies have concentrated on broad assessments of volatility and financial performance, often overlooking a comparative analysis that highlights the distinct risk-return profiles of these leading firms. Additionally, there is a lack of focus on sector-specific risks that uniquely impact these companies, such as regulatory challenges, competitive dynamics, and technological disruptions. Longitudinal studies are also sparse, which limits the understanding of how these firms' risk-return dynamics evolve over time in response to changing market conditions. existing literature tends to ignore the strategic corporate decisions that shape risk profiles, as well as the perspectives of various stakeholders impacted by these firms' performance. Addressing these gaps will enhance the understanding of the nuances within the top two Nifty 50 software companies and provide valuable insights for investors and stakeholders in navigating the complexities of the Indian IT market.

Limitations of the Study

The study faces several limitations that may impact its findings. Firstly, limited historical data for certain financial metrics, especially for newer companies, can skew results and compromise the accuracy of the analysis. Incomplete data sets may necessitate the use of estimates or proxies, introducing further uncertainty. Additionally, the focus on only the top two software companies in the Nifty 50 index restricts the sample size, potentially limiting the generalizability of the conclusions. Lastly, relying on quarterly or annual data may overlook short-term volatility and trends, which are crucial for understanding real-time investor reactions and risk exposures.

Type of Research

This study uses a descriptive research design to analyze and compare the top two software Companies in Nifty 50.The descriptive approach allows for a comprehensive examination of the historical performance and risk-return profiles of these firms. By utilizing quantitative metrics such as financial ratios, volatility measures, and risk metrics, the research aims to paint a clear picture of how these companies perform in relation to one another.

This design facilitates the identification of key factors influencing their performance, such as market conditions, investor sentiment, and strategic decisions. Through comparative analysis, the study seeks to highlight differences and similarities between the two companies, offering valuable insights for investors and stakeholders. By systematically presenting the data and findings, the research aims to provide a detailed understanding of the competitive landscape within the Indian IT sector, guiding informed decision-making for potential investors.

Scope of the study

- To evaluate and compare the risk and return profiles of TCS and Infosys, two leading software companies listed on the Nifty 50 index.
- This study aims to help investors to assess the attractiveness of TCS and Infosys as investment options based on their risk-return profiles.
- The analysis is limited to a defined period from 2019-2024to assess performance trends and volatility.

Sources of Data Collection

Sources of data collection for the study on the risk and return profiles of the top two software companies in the Nifty 50, this study is purely based on secondary data. The data regarding historical price were collected from the investing.com of the companies. Annual and quarterly reports from the companies official websites.

Population and Sampling unit

Population

10 software companies are included in the Nifty 50 namely Infosys, TCS, HCL Technologies, Wipro, Tech Mahindra, Mindtree, L&T Technology services, Mphasis, Coforge and Zensar Technologies. This diverse group represents a significant segment of the Indian IT sector, characterized by varying business models, market strategies, and financial performances. The study will focus specifically on the top two companies by market capitalization within this population, enabling a detailed comparative analysis of their risk-return profiles and historical performance. By examining these leading firms, the research aims to provide valuable insights relevant to investors and stakeholders in the context of the Indian market.

Sampling Unit

The sampling unit is the individual entity or segment within the population that will be examined or measured. Individual Software Companies each of the top two software companies within the Nifty 50 index serves as a sampling unit. Data will be collected and analyzed separately for each company to assess their risk and return profiles.

Sampling method:

The purposive sampling method is used, wheretwo software companies with highest market capitalization during the period 1.4.2019 to 31.3.2024 are selected for this study.

Sample Size:

The study focuses exclusively on the top two software companies listed in the Nifty 50 index. This fixed size is determined by the study's objective to analyze and compare the risk and return profiles of these two specific firms.

Statistical Tools and Techniques:

In this project report, statistical tools and techniques such as standard deviation, alpha, mean, and betahas been used to calculate risk and return. Data visualization techniques will be used to create charts and graphs that show the distribution of data and to identify the patterns and trends in the data.

Hypothesis testing tools

- The T-test is used to determine whether there is a significant difference between the risk adjusted performance of the companies.
- The Correlation analysis: to determine the strength and direction of the relationship betweenprice volatility of the two companies.

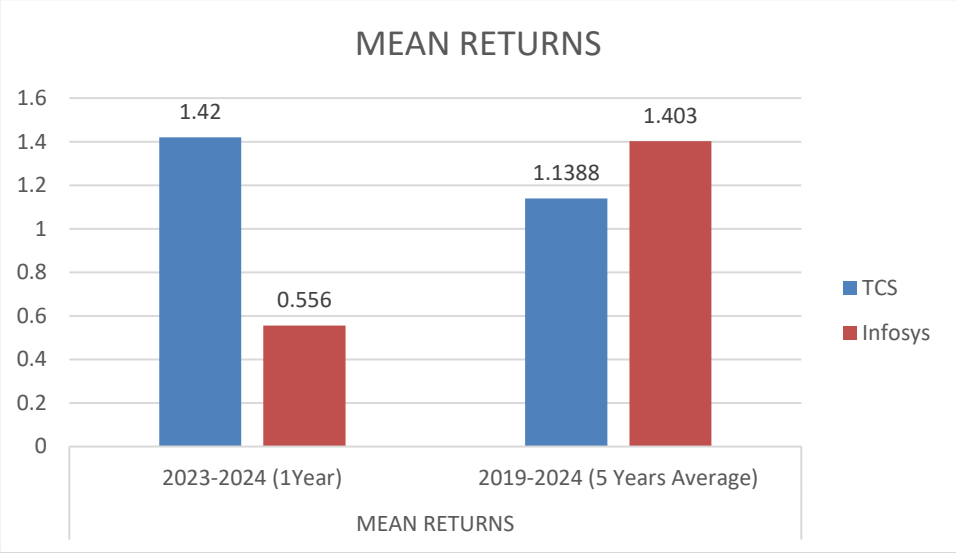
DATA ANALYSIS AND INTERPRETATION

Table showing the Mean Returns of top two software companies for the period of 2023-2024 and the average returns from the year 2019 to 2024

COMPANY	MEAN RETURNS	
	2023-2024 (1Year)	2019-2024 (5 Years Average)
TCS	1.42	1.1388
Infosys	0.556	1.403

Analysis:
In the year 2023-2024, TCS showed a mean return of 1.42, higher than its 5-year average of 1.1388. In contrast, Infosys had a mean return of 0.556 for 2023-2024, which is lower than its 5-year average of 1.403.

Graph showing the Mean Returns of top two software companies for the period of 2023-2024 and the average returns from the year 2019 to 2024



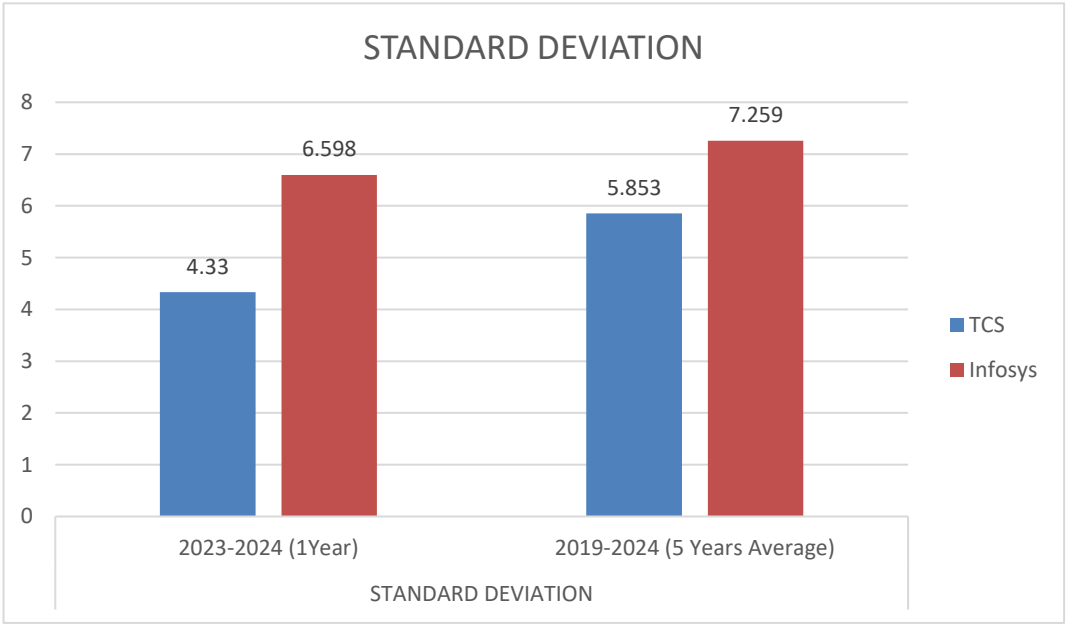
Interpretation :
The mean returns for TCS in 2023-2024 are higher than its 5-year average, indicating a stronger performance in the most recent year. In contrast, Infosys experienced lower mean returns in 2023-2024 compared to its 5-year average, suggesting a weaker recent performance. TCS appears to have outperformed its historical trend, while Infosys has underperformed relative to its past average. The figures suggest a divergence in the recent financial returns of both companies compared to their longer-term trends.

Table showing the Standard Deviation of top two software companies for the period of 2023-2024 and the average returns from the year 2019 to 2024

COMPANY	STANDARD DEVIATION	
	2023-2024 (1Year)	2019-2024 (5 Years Average)
TCS	4.33	5.853
Infosys	6.598	7.259

Analysis:
In the year 2023-2024, TCS had a standard deviation of 4.33, which is lower than its 5-year average of 5.853. Similarly, Infosys had a standard deviation of 6.598 for 2023-2024, also lower than its 5-year average of 7.259.

Graph showing Table showing the Standard Deviation of top two software companies for the period of 2023-2024 and the average returns from the year 2019 to 2024



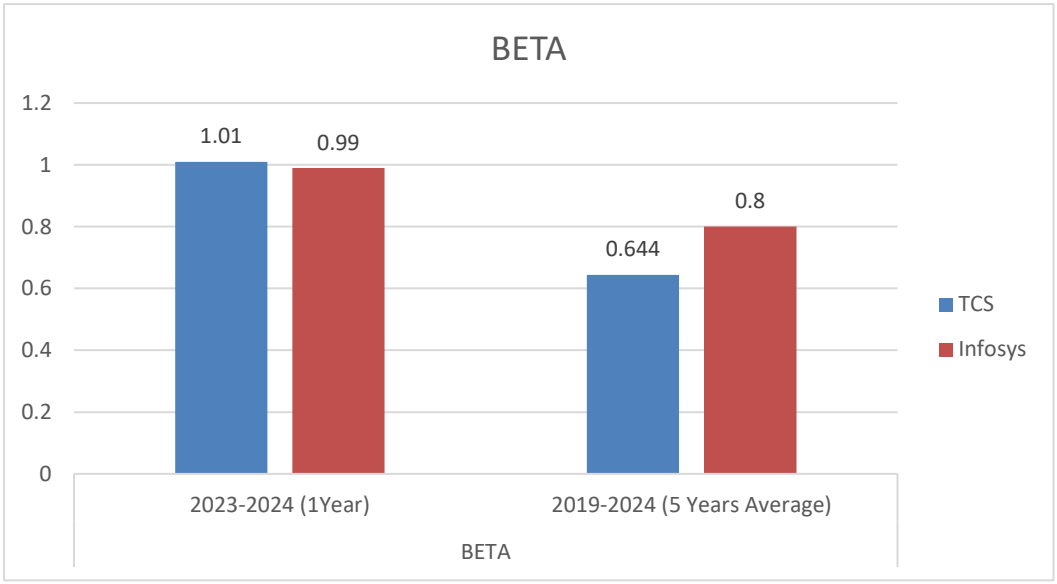
Interpretation:
The standard deviation for both TCS and Infosys in 2023-2024 is lower than their respective 5-year averages, indicating reduced volatility in the most recent year. TCS has a smaller standard deviation compared to Infosys for both the 1-year and 5-year periods, suggesting that TCS's returns have been more stable. Infosys, while showing reduced volatility in 2023-2024, still exhibits higher fluctuations in returns compared to TCS.

Table showing the Beta of top two software companies for the period of 2023-2024 and the average returns from the year 2019 to 2024

COMPANY	BETA	
	2023-2024 (1Year)	2019-2024 (5 Years Average)
TCS	1.01	0.644
Infosys	0.99	0.8

Analysis:
In the year 2023-2024, TCS had a beta of 1.01, higher than its 5-year average of 0.644, while Infosys had a beta of 0.99, also higher than its 5-year average of 0.8.

Graph showing the Beta of top two software companies for the period of 2023-2024 and the average returns from the year 2019 to 2024



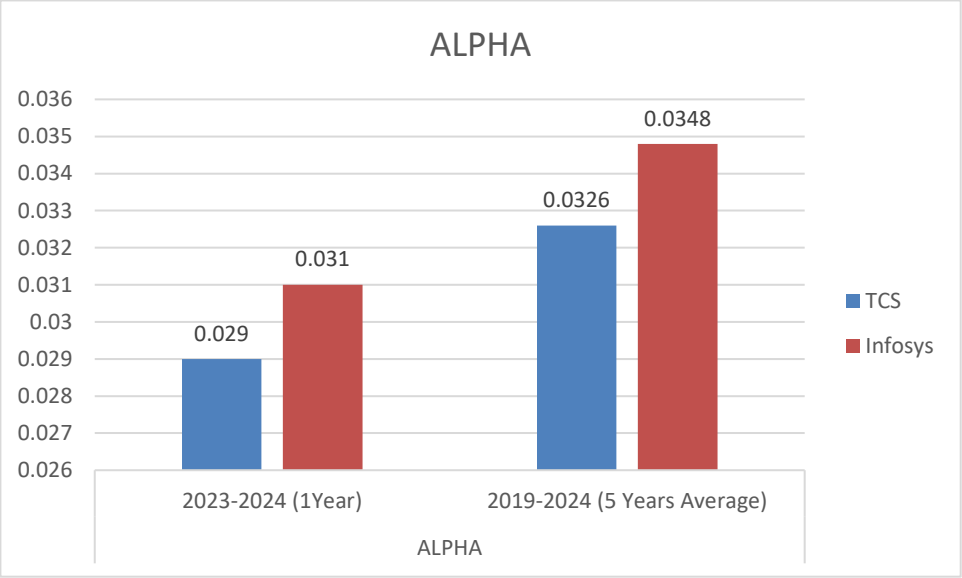
Interpretation:
In 2023-2024, TCS had a higher beta of 1.01 compared to its 5-year average of 0.644, indicating that its stock is more sensitive to market movements in the most recent year. Similarly, Infosys showed a beta of 0.99 in 2023-2024, which is higher than its 5-year average of 0.8, reflecting increased market sensitivity as well. Both companies experienced a rise in beta values, suggesting that their stocks has become more aligned with overall market volatility in the short term compared to their historical averages.

Table showing the Alpha of top two software companies for the period of 2023-2024 and the average returns from the year 2019 to 2024

COMPANY	ALPHA	
	2023-2024 (1Year)	2019-2024 (5 Years Average)
TCS	0.029	0.0326
Infosys	0.031	0.0348

Analysis:
In the year 2023-2024, TCS had an alpha of 0.029, slightly lower than its 5-year average of 0.0326. Infosys had an alpha of 0.031 for 2023-2024, also relatively lower than its 5-year average of 0.0348.

Graph showing the Alpha of top two software companies for the period of 2023-2024 and the average returns from the year 2019 to 2024



Interpretation:
In 2023-2024, both TCS and Infosys had slightly lower alpha values compared to their 5-year averages. TCS's alpha decreased from 0.0326 to 0.029, while Infosys's alpha dropped from 0.0348 to 0.031. This showsthat the companies have generated higher returns without the impact of market forces. During the short term period as well as long term period. Infosys is able to generate a higher alpha.

Hypothesis Testing

Hypothesis 1

Null Hypothesis (H0): There is no significant relationship between return and risk profiles of TCS (ρ=0).

Alternative Hypothesis (H1): There is a significant relationship between return and risk profiles of TCS (ρ≠0).

Year	Mean	S.D
2020	-0.59814	7.270914
2021	4.761793	5.371478
2022	1.28769	7.71626
2023	-1.17634	4.578086
2024	1.426285	4.3347

Correlations

		Mean (Return)	Std. Deviation(Risk)
Mean (Return)	**Pearson Correlation**	**1**	**-.098**
	Sig. (2-tailed)		**.875**
	N	**5**	**5**
Std. Deviation(Risk)	**Pearson Correlation**	**-.098**	**1**
	Sig. (2-tailed)	**.875**	
	N	**5**	**5**

Interpretation

The Pearson correlation between Mean Return and Standard Deviation for TCS is -0.098, indicating a very weak negative correlation. The p-value of 0.875 is much higher than the 0.05 significance level, suggesting that the correlation is not statistically significant. This weak relationship implies that as risk slightly increases, average return tends to decrease, but the connection is not meaningful. Consequently, there is insufficient evidence to conclude a significant correlation between return and risk for TCS. Thus, accept alternative hypothesis.

Hypothesis 2

Null Hypothesis (H0): There is no significant correlation between return and risk profiles of Infosys ($\rho=0$).

Alternative Hypothesis (H1): There is a significant correlation between return and risk profiles of Infosys ($\rho\neq0$).

Year	Mean	S.D
2020	-1.02885	7.019148
2021	6.896719	9.324131
2022	2.744845	6.314389
2023	-2.15199	7.041485
2024	0.556974	6.598462

Correlations

		Mean(Return)	Std. Devtn (Risk)
Mean(Return)	Pearson Correlation	1	.702
	Sig. (2-tailed)		.186
	N	5	5
Std. Devtn (Risk)	Pearson Correlation	.702	1
	Sig. (2-tailed)	.186	
	N	5	5

Interpretation

The Pearson correlation between Mean Return and Standard Deviation for Infosys is 0.702, indicating a moderate positive correlation between average returns and risk. However, the p-value of 0.186 is greater than the 0.05 significance level, suggesting that this correlation is not statistically significant. This means that while there is a tendency for average returns to increase as risk rises, the relationship's strength is not high enough to draw meaningful conclusions. Thus, the null hypothesis is accepted.

Hypothesis 3

Null Hypothesis (H0): There is no significant difference in the average returns of the top 2 software companies. H0:μ1=μ2, where μ1 and μ2 are the mean returns of TCS and Infosys, respectively.
Alternative Hypothesis (H1): There is a significant difference in the average returns of the top 2 software companies. H0:μ1≠μ2, where μ1 and μ2 are the mean returns of TCS and Infosys, respectively.

Year	Mean(TCS)	Mean (INFY)
2020	-0.59814	-1.02885
2021	4.761793	6.896719
2022	1.28769	2.744845
2023	-1.17634	-2.15199
2024	1.426285	0.556974

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	TCSMEAN	1.140258	5	2.3242051	1.0394161
	INFYMEAN	1.40354	5	3.579424	1.600767

Paired Samples Test

	Paired Differences							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	Df	Sig. (2-tailed)
Pair 1 TCSMEAN INFYMEAN	-.2632820	1.4342008	.6413941	-2.0440776	1.5175136	-.410	4	.702

Interpretation

The mean difference in returns between TCS and Infosys is -0.2633, indicating that TCS has slightly lower returns on average. The t-value of -0.410 reflects how far this difference is from zero, but the magnitude suggests a minor difference. With a p-value of 0.702, which exceeds the 0.05 significance level, hence accept the null hypothesis (H_0). Therefore, there is no statistically significant difference in average returns between TCS and Infosys. This observed difference could be attributed to random variation rather than a genuine difference in performance.

Hypothesis 4

Null Hypothesis(H0): There is no significant difference in the total risk of the top 2 software companies. Mathematically: H0: $\mu 1=\mu 2$

Alternative Hypothesis (H1): There is a **significant difference** in the total risk of the top 2 software companies. Mathematically: H1:$\mu 1\neq\mu 2$.

Year	TCS	INFY
2020	7.270914	7.019148
2021	5.371478	9.324131
2022	7.71626	6.314389
2023	4.578086	7.041485
2024	4.3347	6.598462

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	TCS	5.85429	5	1.552797	.694432
	INFY	7.25952	5	1.193546	.533770

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	TCS & INFY	5	-.245	.692

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1 TCS – INFY	-1.405236	2.177821	.973951	-4.109357	1.298886	-1.443	4	.223

Interpretation

The mean difference in standard deviation (risk) between TCS and Infosys is -1.4052, indicating that TCS has lower risk by approximately 1.41 units. The t-value of -1.443 suggests that the difference in risk is not large. With 4 degrees of freedom (N - 1 = 4), the p-value is 0.223, which is greater than the 0.05 significance level, indicating that the difference in risk is not statistically significant. The correlation between the risks of TCS and Infosys is -0.245, reflecting a weak negative correlation with a p-value of 0.692, further supporting the lack of statistical significance. Therefore, the null hypothesis (H_0) is accepted, concluding that there is no significant difference in risk between TCS and Infosys; any observed difference could be attributed to random variation rather than a true difference in their risk profiles.

Findings

- TCS has a mean return of 1.45 in 2023-2024, outperforming its 5-year average, while Infosys has a mean return of -0.82, indicating underperformance relative to its historical trend.
- TCS's standard deviation is 5.99, higher than Infosys's 1.56, suggesting greater volatility and risk; both companies experienced reduced volatility in 2023-2024 compared to their 5-year averages.
- TCS has a beta of 1.01, up from 0.644, indicating increased sensitivity to market movements, while Infosys's beta is 0.99, reflecting higher market sensitivity compared to its 5-year average of 0.8.
- TCS's alpha decreased from 0.0326 to 0.029, while Infosys's alpha declined from 0.0348 to 0.031, suggesting both companies generated slightly less risk-adjusted excess returns but remained positive.
- TCS and Infosys have a strong positive correlation of 99.8% between their returns, indicating that changes in one company's returns closely align with changes in the other.
- The Pearson correlation for TCS is -0.098 with a p-value of 0.875, suggesting a very weak negative correlation between mean return and standard deviation, which is not statistically significant.
- The Pearson correlation for Infosys is 0.702, with a p-value of 0.186, indicating a moderate positive correlation that is also not statistically significant.
- The mean difference in returns between TCS and Infosys is -0.2633 with a t-value of -0.410 and a p-value of 0.702, indicating no statistically significant difference in average returns.
- The mean difference in standard deviation between TCS and Infosys is -1.4052, with a t-value of -1.443 and a p-value of 0.223, suggesting no significant difference in risk profiles.

Suggestions

- TCS's increased beta, investors should be cautious as it indicates higher sensitivity to market changes, suggesting a need for close monitoring during volatile market periods. Infosys, with its relatively stable beta, may serve as a hedge against market movements.
- Both companies maintaining positive alpha values, although slightly lower, indicates they are still providing returns above the market benchmark. Investors might consider maintaining their positions in both companies while keeping an eye on future performance metrics.
- The high correlation between TCS and Infosys suggests that diversifying within this sector may not significantly reduce risk. Investors may want to explore opportunities outside of this pair to enhance their portfolio diversification.
- The weak negative correlation for TCS implies that fluctuations in risk do not significantly impact returns. Investors might focus on other factors, such as market conditions or company-specific news, rather than solely on risk metrics when assessing TCS.
- The moderate positive correlation suggests that as risk increases, average returns might also increase, though not significantly. Investors in Infosys should be aware of this relationship and remain vigilant in monitoring market conditions that could affect risk levels.
- Since there is no statistically significant difference in average returns between TCS and Infosys, investors might consider reallocating funds or diversifying into other opportunities if they seek higher returns.
- With no significant difference in risk profiles, investors may not need to prioritize one stock over the other based on risk alone. They should consider other performance indicators or company fundamentals when making investment decisions.

Conclusion

This study provided an in-depth analysis of the risk and return profiles of two of the leading software companies in the Nifty 50-Tata Consultancy Services (TCS) and Infosys. By comparing their financial metrics over a five-year period, we found that TCS exhibited stronger performance in terms of mean returns and stability, while Infosys showed higher volatility but maintained positive risk-adjusted returns. Although both companies demonstrated positive alpha values, indicating outperformance relative to the market, TCS emerged as a more stable investment option with higher recent returns. Overall, this research contributes valuable insights into the relative risk-return dynamics of top players in the Indian IT sector, helping investors make more informed decisions.

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