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A Comparative Performance Analysis of Banking and IT Stocks in India Risk-Adjusted Returns and Investment Insights

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Abstract: This analysis evaluates the financial performance of ten leading Indian IT and Banking companies from April 2020 to March 2025 using historical stock prices and NIFTY 50 benchmark returns. Key metrics including annualized returns, volatility, Beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha were used to assess risk-adjusted performance and market sensitivity. The results show that banking companies, particularly ICICI Bank and SBI, achieved stronger risk-adjusted returns and positive alphas, indicating consistent outperformance. In contrast, major IT firms such as TCS, Infosys, and Wipro experienced higher volatility, lower risk-adjusted returns, and negative alphas, reflecting underperformance during the period. Overall, the dataset provides a solid foundation for equity research, portfolio evaluation, and sectoral comparison within the Indian market.

The content focuses on assessing financial performance through tools like Sharpe, Treynor, Jensen's Alpha, and Beta. It analyses risk, volatility, and returns using CAPM, compares IT and Banking sector stocks with the NIFTY 50 index, and reviews historical prices to evaluate overall portfolio efficiency.

I. INTRODUCTION

This report provides a clear and concise analysis of how ten major Indian IT and Banking companies performed over the five years from April 2020 to March 2025. Using Excel-based data, it reviews annual stock returns, compares them with the NIFTY 50 index, and applies key financial tools like the Sharpe Ratio, Treynor Ratio, Jensen's Alpha, and CAPM to understand risk, volatility, and market sensitivity. The study covers well-known firms such as TCS, Infosys, HCL, Wipro, ICICI Bank, SBI, HDFC Bank, Kotak Mahindra Bank, and Axis Bank. By examining both sectors together, the report highlights how their risk–return patterns differ in a period marked by post-pandemic recovery and economic fluctuations. Overall, this introduction prepares the reader for a practical, data-driven look at sector performance and the usefulness of risk-adjusted return measures in the Indian stock market.

II. REVIEW OF LITERATURE

Research on sectoral performance in India has historically highlighted the divergent drivers of the Banking and IT sectors. Pre-2020 studies (e.g., Singh & Bagga, 2019) established that Banking sector performance is strongly correlated with macroeconomic variables like interest rates (RBI policy), credit growth, NPAs, and GDP growth. Conversely, the IT sector's performance has been linked to global factors—primarily US economic health, currency fluctuations (INR/USD), and tech demand cycles (Patel, 2018). The post-2020 period, marked by the COVID-19 pandemic, geopolitical shifts, and monetary policy transitions, has necessitated a re-examination of these drivers. Recent work by the Reserve Bank of India (Financial Stability Reports, 2022-2024) documents the banking sector's resilience post-NPA crisis, supported by improved provisioning and digital adoption, while also flagging challenges from sectoral credit concentration. For IT, NASSCOM Strategic Reviews (2021-2024) emphasize the pandemic-driven acceleration in digital transformation, cloud adoption, and the emergence of Generative AI as both an opportunity and a disruption, altering traditional revenue models.

The literature specific to the 2020–2025 window is dominated by analyses of the pandemic's asymmetric impact. Studies by Bose & Malik (2021) and IBEF (2022) found that Indian IT stocks exhibited significant positive abnormal returns as the "stay-at-home" economy boomed, becoming defensive plays during the market crash of March 2020. In stark contrast, banking stocks, particularly of public sector banks (PSBs), faced severe stress due to moratorium concerns and anticipated asset quality deterioration, though private banks recovered faster due to stronger digital infrastructure. Furthermore, the Russia-Ukraine conflict (2022) introduced stagflationary fears, impacting banking stocks through higher input costs and potential loan defaults, while IT faced margin pressures from rising attrition and wage inflation, yet benefited from strong order books in digital security and ERP.

The comparative analysis of risk-adjusted returns is rooted in modern portfolio theory. Traditional metrics like the Sharpe Ratio, Treynor Ratio, and Jensen's Alpha (Alpha) are standard in performance evaluation (Bodie, Kane, & Marcus). Recent literature, however, incorporates more nuanced measures. Post-COVID studies (e.g., Kumar & Sharma, 2023) increasingly use the Sortino Ratio to distinguish harmful volatility, more relevant for the high-volatility banking sector. Calmar Ratio analysis for drawdown recovery is also gaining traction, especially to evaluate the rapid rebound of IT stocks in late 2020 versus the slower recovery in banking. Studies like Mishra & Joshi (2022) have applied these metrics to Nifty Bank and Nifty IT indices, finding that IT consistently outperformed on a risk-adjusted basis during the 2020-2022 bull run, but note a potential mean reversion and sector rotation as interest rates rose.

A critical and updated strand of literature focuses on the global monetary tightening cycle initiated in 2022-23 and its divergent sectoral impact. RBI Bulletin analyses (2023-24) detail how rising repo rates initially bolstered Net Interest Margins (NIMs) for banks, boosting profitability, but later raised concerns about credit growth slowdown and MTM losses on bond portfolios. For the IT sector, high-interest rates in the US and Europe threatened to reduce client tech budgets, leading to demand moderation and valuation de-rating, as noted in brokerage reports from ICICI Securities and Motilal Oswal (2024). This period highlights a role reversal, where banking became a cyclical beneficiary while IT faced headwinds, underscoring the importance of the chosen timeframe in any comparative conclusion.

Emerging literature points to a convergence narrative. The banking sector's deep tech adoption (FinTech partnerships, UPI, AI-driven credit scoring) is blurring traditional lines. Research by Accenture and McKinsey (2023-24) argues that tech-enabled banks are being rewarded with higher valuations, akin to IT product companies. Simultaneously, IT companies are entering the financial domain through Banking-as-a-Service (BaaS) and FinTech. This convergence suggests that future performance drivers may be less sector-specific and more dependent on a firm's digital maturity and innovation quotient.

III. STATEMENT OF THE PROBLEM

Understanding how well equity investments perform requires more than just checking their annual returns—it also involves assessing the level of risk taken to earn those returns. In a market as active and evolving as India's, this deeper, risk-adjusted view becomes essential, especially when comparing sectors like IT and Banking that behave very differently. While earlier research has used tools such as Beta, Sharpe Ratio, Treynor Ratio, and Jensen's Alpha, there is still a lack of comprehensive and updated studies that analyze both sectors together using the same methods. Very few studies incorporate fresh post-pandemic data up to 2025, leaving gaps in understanding how recent economic changes, regulations, and global shifts have affected sector performance. This study aims to address those gaps by evaluating whether IT or Banking companies deliver better risk-adjusted returns, identifying which firms show stability or vulnerability, and examining how their performance aligns with overall market risk and benchmarks.

IV. RESEARCH GAP

Although many studies have examined equity performance in India, several important gaps still remain. Much of the existing research relies on data that ends before 2022, leaving out crucial developments such as the post-pandemic recovery, changing monetary policies, inflation trends, and recent regulatory shifts that have shaped both the IT and Banking sectors. Additionally, earlier studies usually focus on one sector at a time, resulting in limited direct comparison between IT and Banking stocks using the same methods, time period, and benchmark. Many researchers also use different indices and inconsistent risk-adjusted models, making cross-sector comparisons difficult. Practical investment insights are often missing as well, with most studies emphasizing theory rather than helping investors understand which stocks perform efficiently relative to risk. Finally, there is a lack of detailed datasets that combine updated stock returns, sector comparisons, uniform benchmarks, and year-wise risk-free rates in an accessible format. This study addresses these gaps by using recent data up to March 2025, applying standardized financial metrics across both sectors, and offering clear, interpretable results that can support real-world investment decisions.

V. OBJECTIVES OF THE STUDY

- To analyze the risk and return performance of selected IT and Banking sector stocks using statistical tools.
- To measure and compare risk-adjusted returns using Sharpe Ratio, Treynor Ratio, and Jensen's Alpha.
- To study the volatility and stability of selected stocks through standard deviation, beta, skewness, and kurtosis.
- To compare the performance of IT and Banking sector stocks and identify the better-performing sector.
- To help investors make informed investment decisions based on quantitative analysis of risk and return.

Table 1: Performance Comparison of Direct Stocks (Annual Returns in %)

Direct Stock	Minimum Return	Maximum Return	Mean Return	Std. Deviation	Skewness	Std. Error (Skewness)	Kurtosis	Std. Error (Kurtosis)
TCS Ltd.	-15.09%	86.10%	20.44%	36.26%	-0.12	0.913	-1.85	2.000
Tech Mahindra Ltd.	-23.50%	83.64%	28.39%	36.91%	0.11	0.913	-1.46	2.000
HCL Technologies Ltd.	-7.21%	135.01%	37.61%	50.77%	1.27	0.913	0.40	2.000
Wipro Ltd.	-39.32%	118.54%	32.40%	57.06%	-0.43	0.913	-1.69	2.000
Infosys Ltd.	-25.44%	126.98%	29.94%	53.12%	0.57	0.913	-1.27	2.000
ICICI Bank Ltd.	19.15%	87.09%	35.27%	27.20%	0.50	0.913	-0.84	2.000
SBI Bank Ltd.	1.74%	95.33%	35.39%	35.99%	0.17	0.913	-1.28	2.000
HDFC Bank Ltd.	-10.04%	80.07%	20.03%	31.32%	-0.28	0.913	-0.10	2.000
Kotak Mahindra Bank Ltd.	-2.81%	48.37%	13.46%	19.66%	0.31	0.913	-1.03	2.000
Axis Bank Ltd.	4.64%	94.53%	27.74%	34.39%	0.85	0.913	-0.66	2.000

Source: Authors calculation

Table 2: Descriptive Statistics of Direct Stocks (Annual Returns in %)

Direct Stock	2020–21	2021–22	2022–23	2023–24	2024–25
TCS Ltd.	86.10%	17.64%	-15.09%	21.71%	-8.18%
Tech Mahindra Ltd.	83.64%	54.66%	-23.50%	13.17%	13.96%
HCL Technologies Ltd.	135.01%	17.34%	-7.21%	40.61%	2.30%
Wipro Ltd.	118.54%	42.20%	-39.32%	31.42%	8.15%
Infosys Ltd.	126.98%	37.65%	-25.44%	4.91%	5.62%
ICICI Bank Ltd.	87.09%	22.87%	19.15%	24.63%	22.63%
SBI Bank Ltd.	95.33%	33.17%	3.06%	43.67%	1.74%
HDFC Bank Ltd.	80.07%	-1.11%	6.88%	-10.04%	24.33%
Kotak Mahindra Bank Ltd.	48.37%	-2.81%	-2.46%	3.04%	21.25%
Axis Bank Ltd.	94.53%	6.75%	10.85%	21.94%	4.64%

Source: Authors calculation

Table 3: Sharpe Ratio Analysis of Investment Options

Investment Option	Mean Return (%)	Standard Deviation (%)	Risk-Free Rate (%)	Sharpe Ratio	Rank
ICICI Bank Ltd.	35.27%	27.20%	6.73%	1.05	1
SBI Bank Ltd.	35.39%	35.99%	6.73%	0.80	2
HCL Technologies Ltd.	37.61%	50.77%	6.73%	0.61	3
Axis Bank Ltd.	27.74%	34.39%	6.73%	0.61	4

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Investment Option	Mean Return (%)	Standard Deviation (%)	Risk-Free Rate (%)	Sharpe Ratio	Rank
Tech Mahindra Ltd.	28.39%	36.91%	6.73%	0.59	5
Wipro Ltd.	32.40%	57.06%	6.73%	0.45	6
Infosys Ltd.	29.94%	53.12%	6.73%	0.44	7
HDFC Bank Ltd.	20.03%	31.32%	6.73%	0.42	8
TCS Ltd.	20.44%	36.26%	6.73%	0.38	9
Kotak Mahindra Bank Ltd.	13.46%	19.66%	6.73%	0.34	10

Source: Authors calculation

Table 4: Jensen's Alpha Analysis of Direct Stocks

Stock	Mean Return (%)	Standard Deviation (%)	Risk-Free Rate (%)	Beta	Jensen's Alpha (%)	Rank
ICICI Bank Ltd.	35.27%	27.20%	6.73%	1.05	12.13%	1
SBI Bank Ltd.	35.39%	35.99%	6.73%	1.21	7.63%	2
Tech Mahindra Ltd.	28.39%	36.91%	6.73%	1.09	5.42%	3
HCL Technologies Ltd.	37.61%	50.77%	6.73%	1.81	3.89%	4
Axis Bank Ltd.	27.74%	34.39%	6.73%	1.17	-0.53%	5
Wipro Ltd.	32.40%	57.06%	6.73%	1.75	-6.80%	6
HDFC Bank Ltd.	20.03%	31.32%	6.73%	0.89	-3.02%	7
Kotak Mahindra Bank Ltd.	13.46%	19.66%	6.73%	0.56	-3.65%	8
Infosys Ltd.	29.94%	53.12%	6.73%	1.78	-8.98%	9
TCS Ltd.	20.44%	36.26%	6.73%	1.23	-9.52%	10

Source: Authors calculation

Table 5: Treynor Ratio Analysis of Direct Stocks

Direct Stock	Mean Return (%)	Beta (from Excel)	Risk-Free Rate (%)	Treynor Ratio (from Excel Interpretation)	Rank
ICICI Bank Ltd.	35.27%	0.88	6.73%	32.50%	1
SBI Bank Ltd.	35.39%	1.19	6.73%	24.00%	2
Axis Bank Ltd.	27.74%	1.17	6.73%	18.00%	3
Tech Mahindra Ltd.	28.39%	1.09	6.73%	19.86%	4
HDFC Bank Ltd.	20.03%	0.89	6.73%	15.00%	5
HCL Technologies Ltd.	37.61%	1.81	6.73%	17.00%	6
Wipro Ltd.	32.40%	1.75	6.73%	14.67%	7
Kotak Mahindra Bank Ltd.	13.46%	0.56	6.73%	12.00%	8
Infosys Ltd.	29.94%	1.78	6.73%	13.00%	9
TCS Ltd.	20.44%	1.23	6.73%	11.00%	10

Source: Authors calculation

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Table 6: Comparative Analysis - Banking Sector vs IT Sector

Rank	Direct Stock	Sector	Mean Return (%)	Standard Deviation (%)	Risk-Free Rate (%)	Sharpe Ratio	Benchmark Index	Benchmark Return (%)	Compared to Benchmark
1	ICICI Bank Ltd.	Banking	35.27 %	27.20%	6.73 %	1.05	NIFTY 50	25.75%	Outperforming
2	SBI Bank Ltd.	Banking	35.39 %	35.99%	6.73 %	0.80	NIFTY 50	25.75%	Outperforming
3	HCL Technologies Ltd.	IT	37.61 %	50.77%	6.73 %	0.61	NIFTY 50	25.75%	Outperforming
4	Axis Bank Ltd.	Banking	27.74 %	34.39%	6.73 %	0.61	NIFTY 50	25.75%	Outperforming
5	Tech Mahindra Ltd.	IT	28.39 %	36.91%	6.73 %	0.59	NIFTY 50	25.75%	Outperforming
6	Wipro Ltd.	IT	32.40 %	57.06%	6.73 %	0.45	NIFTY 50	25.75%	Outperforming
7	Infosys Ltd.	IT	29.94 %	53.12%	6.73 %	0.44	NIFTY 50	25.75%	Outperforming
8	HDFC Bank Ltd.	Banking	20.03 %	31.32%	6.73 %	0.42	NIFTY 50	25.75%	Underperforming
9	TCS Ltd.	IT	20.44 %	36.26%	6.73 %	0.38	NIFTY 50	25.75%	Underperforming
10	Kotak Mahindra Bank Ltd.	Banking	13.46 %	19.66%	6.73 %	0.34	NIFTY 50	25.75%	Underperforming

Source: Authors calculation

Table 7: Sector-wise Sharpe, Jensen, Treynor Ratio Comparison of Direct Stocks

Sector	Stocks Included	Average Sharpe Ratio	Average Jensen's Alpha (%)	Average Treynor Ratio	Comparison with NIFTY 50
Banking Sector	ICICI Bank, SBI Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank	0.64	3.51%	18.28%	**Superior** (Banking stocks outperform NIFTY 50 average)
IT Sector	TCS, Tech Mahindra, HCL Technologies, Wipro, Infosys	0.49	-1.24%	15.11%	**Mixed** (Higher returns but higher risk vs NIFTY 50)

Source: Authors calculation

VI. INTERPRETATION

Table 1 shows that IT stocks had very high returns in 2020-21, but they also moved up and down a lot, especially in 2022–23 when most of them dropped. Tech Mahindra stayed more stable, while Wipro was the most unpredictable. Banking stocks were steadier overall. ICICI Bank performed well every year, HDFC Bank had a bad year but recovered, and Kotak Mahindra gave smaller but steady returns. Overall, IT stocks gave higher returns but with more risk, while banking stocks especially ICICI Bank were more reliable.

Table 2 shows that banking stocks were generally safer, with ICICI Bank and SBI giving good returns, and Kotak Mahindra having the lowest risk. HDFC Bank's performance was moderate. In the IT sector, returns were higher but more unstable. HCL Technologies had the best average return but big ups and downs, and Wipro was very risky. Tech Mahindra and TCS were somewhat steadier. Overall, banking stocks showed more stability, while IT stocks offered higher returns but with greater risk.

Table 3 shows how well each stock performed after adjusting for risk using the Sharpe Ratio. ICICI Bank comes out on top, giving the best return for the level of risk taken, followed by SBI Bank. In the IT sector, HCL Tech has very high returns but drops in the ranking because its volatility is too high. Stocks like Wipro and Infosys also lose points due to their large ups and downs. Kotak Bank ranks the lowest because its returns are too small, even though its risk is low. Overall, banking stocks provide stronger risk-adjusted performance, while IT stocks offer higher returns but with much more uncertainty.

Table 4 shows which stocks earned more or less than what was expected for their risk. ICICI Bank performed the best, giving much higher returns than expected, and SBI Bank and Tech Mahindra also did well. HCL Tech gave slightly better returns than expected even though it was risky. Most other stocks, mainly in the IT sector like Wipro, Infosys, and TCS, didn't earn enough for the risk they had, with TCS performing the worst. Overall, banks did better than expected, while many IT stocks did not.

Table 5 shows how much return each stock gives for the market risk it takes. ICICI Bank comes out on top with the best balance of return and risk, followed by SBI and Axis Bank. In IT, Tech Mahindra performs the best, while stocks like HCL Tech, Wipro, Infosys, and especially TCS give lower returns for their higher risk. Overall, banking stocks handle market risk better than most IT stocks.

Table 6 shows how the stocks performed compared to the NIFTY 50. Most stocks beat the benchmark, but banking stocks like ICICI Bank and SBI Bank gave good returns with lower risk. IT stocks such as HCL Tech and Wipro had higher returns but were more volatile. HDFC Bank, TCS, and Kotak Mahindra did worse than the benchmark. Overall, banks are safer with steady returns, while IT stocks offer bigger gains but more risk.

Table 7 shows that banking stocks are more stable and give better returns for the risk taken, with higher Sharpe, positive Alpha, and good Treynor scores. IT stocks can give higher returns but are more volatile, with negative Alpha and lower Treynor, so they are less efficient for risk. Overall, banks are safer and more reliable, while IT stocks offer bigger growth but with more risk. A mix of both can balance safety and returns.

VII. CONCLUSION

From 2020 to 2025, Banking stocks, particularly ICICI Bank and SBI, showed more consistent and stable performance on a risk-adjusted basis. Although certain IT stocks like HCL Technologies and Tech Mahindra achieved higher raw returns, they were much more volatile and riskier. In summary, for investors focused on steady and reliable growth, the Banking sector emerged as the safer choice, while the IT sector offered higher potential gains but with considerably more uncertainty.

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Sincerely,
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