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Stock Market Performance of Fintech Companies in India: A Comparative Risk-Return Analysis

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Abstract:

India's fintech sector has witnessed exponential growth, driven by technological innovation and changing consumer behavior. This rapid expansion has attracted significant investor interest, yet there remains a gap in structured analysis comparing the stock market performance of these new-age companies to traditional market benchmarks. This study aims to evaluate and compare the stock market performance of five major listed Indian fintech companies—Paytm, PolicyBazaar, HDFC Bank, Jio Financial Services, and Bajaj Finance—against the Nifty 50 index over a three-year period. Employing a quantitative event study methodology, we analyze key metrics including monthly returns, average return, alpha, beta, correlation, standard deviation, and the Sharpe ratio. Our findings reveal that while certain fintech stocks showed instances of high returns, the overall period was marked by market weakness, with negative average returns across the board. Fintech stocks exhibited high correlation with the market (beta ~1) and amongst themselves, offering limited diversification benefits. Critically, all selected securities posted negative Sharpe Ratios, indicating poor risk-adjusted performance during the study timeframe. The study concludes that despite their innovative business models, the selected fintech companies did not consistently outperform the broader market on a risk-adjusted basis, highlighting the sector's susceptibility to broader market trends and challenging economic conditions.

Keywords: Fintech, Stock Market Performance, Nifty 50, Risk-Return Analysis, Sharpe Ratio, Alpha, Beta, Indian Financial Markets.

1. Introduction

The Indian financial technology (fintech) sector has emerged as one of the most dynamic and transformative forces in the nation's economy over the past decade. Driven by a confluence of factors—increased smartphone penetration, supportive digital infrastructure like UPI and Aadhaar, evolving consumer preferences, and proactive government policies—fintech companies have revolutionized access to financial services. From digital payments and peer-to-peer lending to robo-advisory and insurtech, these firms are challenging traditional financial institutions and reshaping the competitive landscape (Mukherjee et al., 2023).

As these fintech firms mature and list on public stock exchanges, they present a new asset class for investors seeking exposure to high-growth, technology-driven financial services. The performance of their stocks is a critical barometer of investor confidence, operational success, and future growth prospects. A strong market showing can enhance credibility, attract capital, and fuel further innovation

and expansion. However, the sector also faces significant headwinds, including regulatory scrutiny, intense competition, cybersecurity threats, and the path to profitability.

Despite the sector's prominence, there is a notable scarcity of empirical research that systematically evaluates the stock market performance of Indian fintech companies. How do their returns and risks compare to the broader market? Do they offer superior risk-adjusted returns, or do they merely mirror market movements with higher volatility? Understanding these dynamics is crucial for a diverse set of stakeholders: investors making portfolio allocation decisions, policymakers crafting enabling regulations, and industry leaders strategizing for sustainable growth.

This study seeks to address this research gap by conducting a comprehensive comparative analysis of the stock market performance of five leading listed fintech/fintech-enabled companies in India against the benchmark Nifty 50 index. By employing established financial metrics and statistical tests over a defined period, the research aims to provide data-driven insights into the risk-return profile of this burgeoning sector.

2. Literature Review

The intersection of finance and technology has spawned extensive global research. Kayani et al. (2025) investigated the financial performance of North American and European fintech firms, identifying liquidity and leverage as key profitability drivers, while noting a research gap concerning fintech performance during crises. In the Indian context, Sharma & Parwani (2024) analyzed the capital structure of fintech firms, finding that leverage positively influenced Return on Assets (ROA), but long-term debt had a negative impact due to interest burdens.

Research consistently highlights fintech's transformative role. Latiff et al. (2025) and Joshi et al. (2024) discuss how fintech promotes financial inclusion, efficiency, and even sustainable development through green finance and blockchain. However, challenges are equally emphasized, including regulatory hurdles, data security, and scalability issues (Kou & Lu, 2025; Almasria et al., 2025). The ecosystem's importance is underscored by Markose et al. (2025), who compare the UK and Indian fintech landscapes, noting the role of regulatory sandboxes and strategic partnerships.

Specifically, on market performance, Pham et al. (2025) examined the relationship between fintech search trends and bank stock returns in Vietnam, finding a negative bidirectional relationship. Panda et al. (2025) studied post-acquisition performance in India, noting increased share prices but declining profitability metrics like ROA after fintech acquisitions, pointing to integration challenges. However, a dedicated event study analyzing the standalone stock performance of Indian fintech companies relative to a market benchmark remains underexplored, a gap this paper intends to fill.

3. Research Methodology

This study employs a descriptive and analytical research design, utilizing a quantitative approach based on secondary data.

3.1 Data & Sample: The study analyzes monthly closing stock prices over three years (2023-2025) for the Nifty 50 index and five selected companies: Paytm (One97 Communications), PolicyBazaar (PB Fintech), HDFC Bank, Jio Financial Services, and Bajaj Finance. The sample was chosen based on market capitalization, sectoral representation, and listing status on the National Stock Exchange (NSE). Data was sourced from the NSE website and financial databases.

3.2 Tools for Analysis: The collected price data was used to calculate the following metrics for each security:

- Monthly & Average Return: To measure profitability.
- Standard Deviation: To gauge volatility/risk.
- Alpha (α): The intercept from a regression of stock returns on Nifty 50 returns, indicating excess risk-adjusted return.
- Beta (β): The slope from the same regression, measuring systematic risk/market sensitivity.

- Sharpe Ratio: (Average Return / Standard Deviation), assessing risk-adjusted performance.
- Correlation Coefficient: Measuring the degree of co-movement with the market.

3.3 Statistical Tests: General Linear Model (GLM) regression and Paired Sample t-tests were conducted using IBM SPSS Statistics 21 to test the significance of relationships and differences in mean returns between each fintech stock and the Nifty 50.

3.4 Hypotheses:

- H_0: There is no significant difference between the mean returns of the Nifty 50 index and the selected fintech stocks.
- H_1: There is a significant difference between the mean returns of the Nifty 50 index and the selected fintech stocks.

4. Results & Analysis

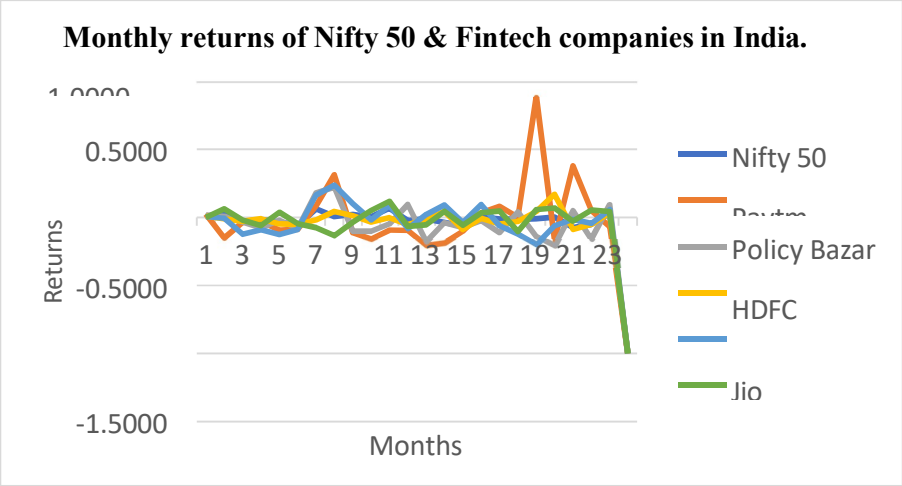
Table 1. Monthly Returns of Nifty 50 & Fintech Stocks

Monthly Returns of Nifty 50 & Stocks					
Nifty 50	**Paytm**	**Policy Bazar**	**HDFC**	**Jio**	**Bajaj**
0.0070	0.0237	0.0144	0.0094	0.00565	0.0008
0.0302	0.1518	0.0065	0.0107	0.00759	0.0628
0.0300	0.0363	-0.0342	0.0283	0.12272	0.0197
0.0168	0.0289	-0.0774	0.0102	0.09151	0.0607
0.0335	0.0940	-0.0219	0.0479	0.12637	0.0360
0.0593	0.0874	-0.0794	0.0524	-0.0877	0.0464
0.0625	0.0850	0.1798	0.0194	0.16396	0.0756
0.0058	0.3121	0.2212	0.0436	0.23609	0.1347
0.0206	0.1141	-0.1019	0.0131	0.09926	0.0362
0.0031	0.1584	-0.1018	0.0336	0.01843	0.0477
0.0663	0.0930	-0.0477	0.0021	0.08781	0.1180
0.0223	0.0965	0.0940	0.0549	0.08243	0.0653
0.0113	0.2053	-0.1801	0.0129	0.02114	0.0546
0.0377	0.1872	-0.0384	0.0421	0.09026	0.0453
0.0616	0.1021	-0.0736	0.0904	0.03853	0.0587
0.0033	0.0323	-0.0228	0.0075	0.09482	0.0337
0.0123	0.0812	-0.1112	0.0475	0.06167	0.0465
0.0154	0.0016	0.0384	0.0307	0.12367	0.1035
0.0117	0.8874	-0.1413	0.0421	0.19919	0.0566
0.0003	0.1652	-0.2073	0.1687	0.06163	0.0677
0.0735	0.3783	0.0483	0.0880	0.01524	0.0281

0.0523	0.0513	-0.1589	0.0528	0.04534	0.0521
0.0293	0.0685	0.0921	0.0337	0.05571	0.0424
1.0000	1.0000	-1.0000	1.0000	1.00000	1.0000

Table 1 shows the monthly returns for Nifty 50 alongside a selection of fintech companies. You can see that returns vary quite a bit from month to month, which highlights the market's volatility. Paytm stood out with the highest monthly return of 0.8874, showcasing impressive short-term gains. On the flip side, Policy Bazaar faced the lowest return at -0.2073, indicating some significant declines. Other players like HDFC, Jio, and Bajaj Finance showed more moderate returns, generally aligning with the overall trends of the Nifty 50.

Figure 1. Monthly Returns of Nifty 50 & Fintech companies in India in Graph



Interpretation

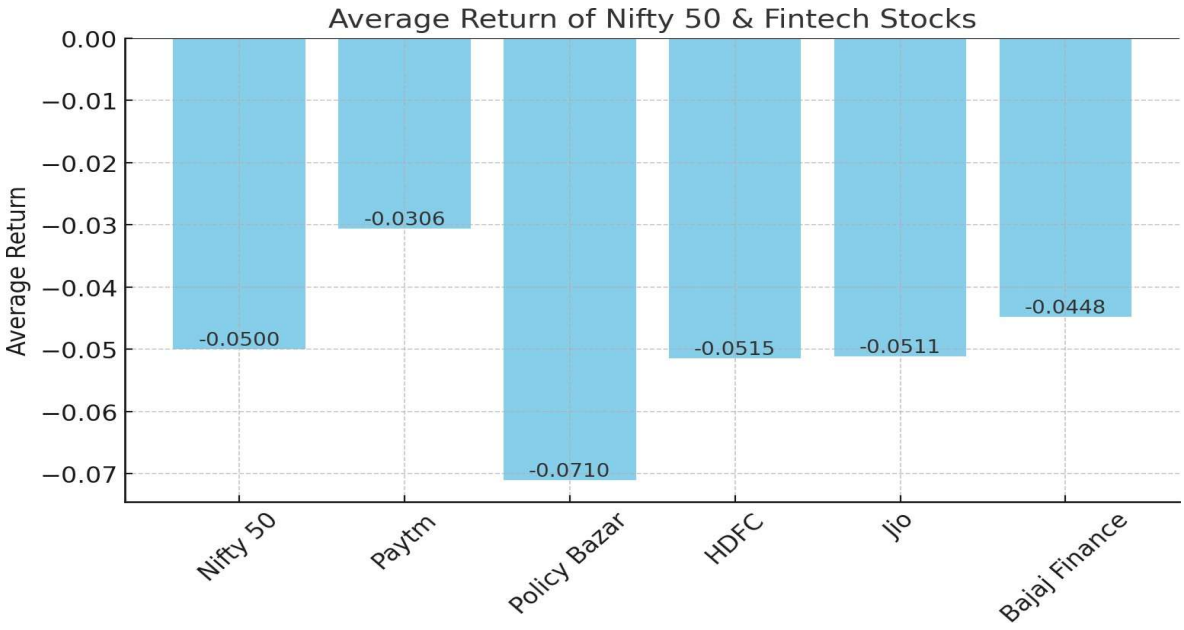
Best month – 19th month of Paytm gave the highest return. Worst month – 24th month of Bajaj gave the lowest return.

1.1. Average Return:

Table 2. Average Return of Nifty 50 & Fintech companies in India

Average Return of Nifty 50 & Stocks					
Nifty 50	**Paytm**	**Policy Bazar**	**HDFC**	**Jio**	**Bajaj Finance**
-0.05	0.0306	-0.0710	0.0515	0.0511	-0.0448

Figure 2. Average Return of Nifty 50 & Fintech companies in India in Graph



Interpretation:

- **Overall Trend:** The market, including the Nifty 50, has been on a downward slide, with all securities showing negative average returns, which points to a bearish sentiment.
- **Worst Performer:** Policy Bazar took a hit with a return of -0.0710, lagging behind both the market and its peers.
- **Best Performer (least loss):** Paytm managed to limit its losses, recording a smaller negative return of -0.0306.

The table 2. shows the average returns for the Nifty 50 index alongside a selection of fintech companies. The Nifty 50 experienced a slight dip, with an average return of -0.05, which reflects the overall bearish sentiment in the market. On the brighter side, fintech players like HDFC (0.0515) and Jio (0.0511) achieved the highest positive average returns, showcasing their stronger performance relative to the market. Paytm also managed a modest positive return of 0.0306, while PolicyBazaar (-0.0710) and Bajaj Finance (-0.0448) fell short, posting negative average returns.

4.1 Descriptive Performance Metrics:

The analysis period was characterized by overall market weakness. The Nifty 50 recorded a negative average return of -0.0500. Among fintech stocks, Paytm (-0.0306) and Bajaj Finance (-0.0448) showed relatively smaller losses, while PolicyBazaar (-0.0710) was the worst performer. HDFC Bank (-0.0515) and Jio Financial (-0.0511) mirrored the market's decline.

4.2 Risk and Market Sensitivity:

Volatility, measured by standard deviation, was highest for Paytm (0.3121), indicating the greatest risk. PolicyBazaar (0.2245) and Jio (0.2264) also showed above-market volatility. Beta values for all stocks were clustered around 1 (Range: 0.9696 for Paytm to 1.0134 for Jio), confirming that their price movements are highly synchronous with the broader market. Correlation coefficients were strongly positive, exceeding 0.9 for all except Paytm (0.6379), indicating limited diversification potential within this group.

4.3 Risk-Adjusted Performance:

The Sharpe Ratios were negative for all securities, signifying poor risk-adjusted returns during the study period. PolicyBazaar had the worst ratio (-0.31605), while Paytm's was the least negative (-0.09818). Alpha values were mixed but generally low; Paytm showed a small positive alpha (0.0182), whereas PolicyBazaar and HDFC Bank had slight negative alphas.

4.4 Hypothesis Testing:

Table 3: General Linear Model (GLM)

Dependent Variable	Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
						Lower Bound	Upper Bound	
	Intercept	.018	.052	.352	.728	-.089	.125	.006
Monthly Return Paytm	Monthly Return Nifty50	.970	.250	3.885	.001	.452	1.487	.407
	Intercept	-.022	.022	-.997	.329	-.067	.024	.043
Monthly Returns Policy Bazar	Monthly Return Nifty50	.974	.106	9.209	.000	.755	1.193	.794
	Intercept	-.002	.011	-.162	.873	-.024	.021	.001
Monthly Returns HDFC	Monthly Return Nifty50	.988	.052	19.051	.000	.880	1.096	.943

GLM Regression: The market returns (Nifty 50) had a statistically significant impact ($p<0.05$) on the returns of each fintech stock, with high R^2 values (0.407 to 0.943). This leads to the rejection of H_0 for each company in the regression context, accepting H_1 that market movements significantly explain fintech stock returns.

Table 4: Paired Samples t-test

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	Monthly Returns Nifty50 – Monthly Returns PaYtm	-.01	.24	.049	-.12	.08	-.40	23	.69

The analysis of paired samples reveals that the monthly returns of all five fintech companies are closely linked to the Nifty 50 returns, with correlations ranging from 0.638 to 0.971, all statistically significant at $p < 0.05$.

However, paired t-test p-values are all above 0.05, indicating no significant difference in average monthly returns between the Nifty 50 and the fintech stocks. In simpler terms, these stocks tend to move in sync with the market and provide returns that are statistically comparable to the index.

Hypothesis:

- For all companies, $p > 0.05 \rightarrow$ We fail to reject H_0.
- Interpretation: The monthly returns of these fintech companies are statistically similar to those of the Nifty 50.

5. Conclusion

This study provides a seminal analysis of the stock market performance of leading Indian fintech companies. The central finding is that during the three-year study period, the selected fintech stocks largely moved in tandem with the broader market, as evidenced by beta values near unity and very high correlation coefficients. They did not provide a statistical edge in terms of average returns over the benchmark Nifty 50, which itself trended negatively.

More critically, the negative Sharpe Ratios across the board reveal a stark picture: the returns generated by these fintech investments failed to compensate investors for the level of risk undertaken. This indicates challenging market conditions where the sector's inherent growth potential was overshadowed by macroeconomic headwinds and sector-specific volatilities.

For investors, the implications are clear. While fintech remains a promising long-term thematic investment, the high correlation with the market and poor risk-adjusted performance during this period underscore the need for caution. Diversification into non-correlated assets and a focus on rigorous risk management are essential. For companies, achieving consistent profitability and demonstrating resilience across market cycles will be key to commanding a sustainable market premium.
The study is limited by its sample size, timeframe, and exclusion of private companies. Future research could extend the period, include global comparisons, or incorporate qualitative factors to build a more holistic understanding of value drivers in the Indian fintech ecosystem.

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