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Profitability Analysis for Stock Pricing Statergy of Nifty Bank Index Companies in Indian Stock Market

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Abstract

Fundamental analysis is a method used to assess the intrinsic value of a company's stock by evaluating its financial performance through key indicators such as earnings, dividends, sales, and profitability ratios. Unlike technical analysis, fundamental analysis does not consider behavioral factors or overall market trends; instead, it focuses exclusively on company-specific financial data. In the context of the Indian economy, the banking sector plays a crucial role, with both public and private sector banks contributing significantly to financial stability and growth. The objective of this study is to analyze the profitability position of selected Nifty Bank Index banks in India. The data is collected from the financial statements of public sector banks like State Bank of India (SBI), Bank of Baroda (BOB), and Punjab National Bank (PNB), and private sector banks such as Housing Development Finance Corporation (HDFC) and Industrial Credit and Investment Corporation of India (ICICI) for the period 2014–2024.

Keywords: Ratio Analysis, Operating Profit, Net Profit, Return on Equity

Introduction

Stock price forecasting has long been a critical area of research in financial markets, as accurate predictions of stock price movements can significantly enhance investment decisions and trading strategies. The complexity and volatility of stock markets, particularly in emerging markets like India, make precise forecasting challenging. The Indian stock market, represented by key indices such as the Nifty Bank Index, is heavily influenced by both macroeconomic factors and market sentiment, which makes it essential to adopt sophisticated models that account for these complexities. The banking sector, being a cornerstone of the Indian economy, reflects the overall health and stability of financial markets. Hence, understanding the financial performance, risk-return profile, and price movements of banking stocks under the Nifty Bank Index is crucial for investors, policymakers, and financial analysts.

Review of Literature

Jaouida Elleuch (2009) Jaouida Elleuch concluded that fundamental analysis is a simple yet effective investment strategy. By analyzing a company's financial statements, investors can predict future share prices. This method aids investors in building portfolios that are likely to yield better returns in the future.

Amit Kumar Dwivedi and D. Kumara Charyulu (2011) Their research concluded that public sector banks in India are more efficient when it comes to social banking. Investment decisions based on these banks are generally more profitable, according to their study.

Dr. Virender Koundal (2012) Dr. Koundal explored the profitability of private and **foreign banks in India**, noting that profitability has improved due to various financial reforms and changes in banking parameters. His analysis provides insight into how reforms have influenced banking performance.

Karan Walia (2012) investigated the operational differences among public sector, private sector, and foreign banks in India. He particularly studied the impact of changes in the credit-deposit ratio, credit-to-GDP ratio, and investments in government securities, highlighting how these factors influence bank performance.

Nishit V. Davada (2012) Nishit V. Davada conducted a financial analysis of selected private banks in India. The study evaluates and highlights the rate of returns on specific investments, offering insights into the financial performance of these banks.

Objectives

1. To assess the financial performance of banking companies listed under the Nifty Bank Index using fundamental analysis indicators.
2. To Analyse the Profitability of selected companies for Investment

Hypothesis

1. There is no significant difference in profit ratios between selected Banking Companies.
2. There is no significant difference in profit ratios between selected years.

Research Methodology

Descriptive and analytical research used to analyse the data for the performance of selected banks.

Data Collection

The secondary data used to analyse the data. Data are collected from the annual report of concern banks.

Sample Selection

The study employs a purposive sampling technique to select banking companies listed under the Nifty Bank Index. This index comprises leading banks that significantly influence the Indian stock market, making it an ideal benchmark for stock price forecasting. As of March 2024, the Nifty Bank Index includes 10 banking companies, which are:

- Axis Bank Ltd.,Bank of Baroda, Federal Bank Ltd, HDFC Bank Ltd, ICICI Bank Ltd, IDFC First Bank Ltd, IndusInd Bank Ltd, Kotak Mahindra Bank Ltd, Punjab National Bank, State Bank of India.

Reason for Sector Selection

The banking sector has been selected for this study due to its critical role in the Indian economy and its significant contribution to the Nifty Index. Banks serve as the backbone of financial markets, facilitating credit flow, economic growth, and investment activities. The Nifty Bank Index, which comprises the leading banking stocks in India, acts as a benchmark for assessing the overall performance of the banking sector, making it an ideal choice for stock price forecasting.

Study Period

The study covers a 10-year period, from April 2014 to March 2024, This period is selected to capture long-term trends, market cycles, and economic fluctuations, providing a robust dataset for evaluating both fundamental and technical indicators.

Tools and Techniques of Analysis

Fundamental Analysis – Ratio Analysis

Gross profit Ratio, Net Profit Ratio, Return on Asset, Return on Equity

Limitations of the Study

1. This study focuses solely on banking companies listed under the Nifty Bank Index
2. The study considers a ten-year period for fundamental analysis.
3. The study relies entirely on secondary data from sources such as NSE, Bloomberg, RBI, Moneycontrol, and company annual reports.
4. This study evaluates a company’s financial health using ratio analysis only.

Analysis and Interpretation

Operating Profit Ratio

The Operating Profit Ratio is a financial metric that measures a company's operational efficiency by determining the percentage of revenue that remains after covering operating expenses, excluding interest and taxes. It helps assess how well a company manages its core business operations.

Formula : $= \text{Operating Profit Ratio} = \frac{Operation\ Profit}{Net\ Sales} \times 100$

Table No. 1

Operating Profit Ratio of Nifty Bank Index Companies from 2014 to 2024

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Average	SD
Axis	59.25	61.46	59.04	52.71	54.55	55.69	55.73	51.17	54.24	51.32	55.52	3.48
BOB	17.21	17.97	23.78	25.09	25.53	22.47	25.41	27.52	26.97	24.36	23.63	3.50
FEDERAL	19.54	16.77	19.88	21.16	21.64	21.16	24.18	23.86	25.06	20.48	21.37	2.48
HDFC	30.29	30.10	31.53	34.18	34.09	35.31	39.27	40.75	36.52	30.69	34.27	3.75
ICICI	25.82	17.92	15.31	10.27	4.85	15.40	20.58	29.18	32.87	32.85	20.50	9.54
IDBI	17.8	17.0	14.8	26.4	15.9	20.2	28.7	32.6	64.9	68.0	30.68	19.8

	1	7	4	8	7	1	2	1	8	7		0
IDFC	0.00	1.52	1.60	1.02	5.97	11.01	13.74	16.10	18.14	17.17	8.63	7.38
INDUS	32.03	25.01	11.16	21.64	28.98	30.15	33.44	34.26	32.37	28.77	27.78	7.01
Kodak	25.51	21.27	71.50	74.92	25.32	27.79	28.46	28.40	29.48	27.41	36.00	19.76
PNP	23.20	22.67	26.18	18.11	22.13	23.57	24.26	23.80	23.14	20.47	22.75	2.19
Average	25.07	23.18	27.48	28.56	23.90	26.28	29.38	30.76	34.38	32.16		
SD	14.99	15.36	21.78	21.30	14.26	12.47	11.55	9.78	14.52	15.82		

Interpretation

The analysis of operating profit from 2015 to 2024 across selected Nifty Bank Index companies reveals significant variation in financial performance. Axis Bank and HDFC Bank exhibit consistent and stable profits over the years, reflected by their relatively high averages (55.52 and 34.27 respectively) and low standard deviations (3.48 and 3.75), indicating steady operational efficiency. In contrast, IDBI Bank and Kodak Mahindra Bank show high fluctuations with averages of 30.68 and 36.00 but with large standard deviations (19.80 and 19.76), suggesting volatile profitability. ICICI Bank, although improving in recent years, had low profits in earlier years, leading to a moderate average (20.50) and relatively high variability (SD 9.54). Smaller banks like IDFC First Bank started with negligible profits but demonstrated consistent growth, reflecting strategic improvement. The overall industry trend shows an increase in average operating profits from 2015 (25.07) to 2024 (32.16), suggesting positive growth in the banking sector's operational performance post-2020, possibly driven by recovery measures and digital transformation. However, the variation across banks and years highlights the need for cautious stock selection based on individual bank fundamentals.

Net Profit Ratio

The Net Profit Ratio (also called the Net Profit Margin) is a key financial metric that measures the percentage of net profit earned from total revenue. It indicates how efficiently a company converts sales into actual profit after deducting all expenses, including operating costs, interest, and taxes.

$$\text{Net Profit Ratio} = \frac{Net\ Profit}{Net\ Sales} \times 100$$

Table No. 2 Net Profit Ratio of Nifty Bank Index Companies from 2013 to 2024

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Average	SD
Axis	32.57	31.38	12.35	0.93	13.42	4.17	15.88	26.94	37.12	34.37	20.91	13.17
BOB	-	-	3.46	-3.49	1.81	1.01	0.99	8.94	14.1	14.0	2.39	8.20

	5.97	11.00						6	0		
FEDERAL	12.10	5.67	8.65	8.21	9.74	10.19	10.12	12.00	15.73	14.72	10.71	3.03
HDFC	17.78	17.33	17.83	18.32	18.08	19.02	21.30	23.50	22.88	19.77	19.58	2.23
ICICI	18.24	14.29	13.31	9.36	4.32	8.69	16.51	15.44	24.71	24.65	14.95	6.58
IDBI	2.72	-11.65	-15.67	-26.85	-59.58	-50.95	9.67	15.70	14.61	18.76	-10.32	28.08
IDFC	0.00	11.52	10.62	8.61	-15.19	-16.28	2.49	0.71	8.96	8.14	1.96	10.17
INDUS	25.92	25.92	16.77	21.67	11.83	12.36	8.25	12.57	16.71	16.28	16.83	6.01
Kodak	15.88	11.00	42.73	45.22	18.75	14.15	17.59	20.26	21.69	19.07	22.64	11.68
PNP	6.19	-6.39	2.07	-21.06	-16.85	0.57	2.29	4.16	3.10	6.80	-1.91	9.73
Average	12.54	8.81	11.21	6.09	-1.37	0.29	10.51	14.02	17.97	17.66		
SD	11.96	14.79	14.71	20.78	23.95	20.47	7.15	8.21	9.34	7.95		

Interpretation

The net profit ratio data over a 10-year period shows wide disparity among Indian banking companies in terms of profitability. HDFC Bank consistently maintained the highest and most stable profitability (Average: 19.58%, SD: 2.23), indicating strong operational efficiency and low volatility. ICICI Bank also performed well with an improving trend post-2020 (Average: 14.95%, SD: 6.58), suggesting recovery and profitability strengthening. Axis Bank, though showing significant improvement in later years (2022–2024), recorded a relatively higher standard deviation (13.17), reflecting prior volatility and uneven performance.IDBI Bank had the lowest average net profit ratio (-10.32%) and highest variability (SD: 28.08), reflecting years of deep losses and recent turnaround attempts. PNB also showed poor profitability (Average: -1.91%, SD: 9.73), struggling with losses in several years. Federal Bank and IndusInd Bank demonstrated stable and moderate profitability (Averages: 10.71% and 16.83%) with acceptable volatility. Kotak Mahindra Bank showed a strong spike in 2017–2018 and remained profitable (Average: 22.64%, SD: 11.68), although with some fluctuations. BOB and IDFC FIRST Bank had inconsistent performance, reflecting the challenges faced by public sector banks and newer private entities.

Return on Asset

Return on Assets (ROA) is a financial metric that measures how efficiently a company uses its assets to generate profit. A higher ROA indicates efficient asset utilization, meaning the company generates more profit per rupee of assets. A lower ROA suggests inefficiency or high asset investment without sufficient returns. This metric is particularly important in asset-heavy industries like banking, where companies manage large financial resources. It is expressed as a percentage and calculated using the formula,

$$\text{Return on Asset} = \frac{Net\ Income}{Total\ Assets} \times 100$$

Table No.3 The Table shows that the Return of Asset of Banking Companies

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Average	SD
Axis	1.83	1.72	0.65	0.04	0.63	0.2	0.7	1.21	0.8	1.83	0.96	0.66
BOB	0.49	-0.78	0.2	-0.34	0.06	0.06	0.07	0.6	1.03	1.17	0.26	0.59
FEDERAL	1.32	0.57	0.84	0.75	0.88	0.94	0.85	0.94	1.28	1.32	0.97	0.26
HDFC	2	1.9	1.88	1.93	1.9	2.01	1.97	2.03	2.07	1.98	1.97	0.06
ICICI	1.86	1.49	1.2	0.8	0.39	0.81	1.42	1.84	2.16	2.37	1.43	0.64
IDBI	0.27	-1.07	-1.42	-2.35	-4.71	-4.29	0.45	0.8	1.1	1.55	-0.97	2.22
IDFC	-5.08	0.63	0.9	0.7	-1.2	-1.79	0.28	0.08	1.13	1.1	-0.33	1.93
INDUSIND	1.64	1.63	1.6	1.62	1.18	1.43	0.78	1.14	1.61	1.73	1.44	0.31
Kodak	13.39	8.72	12.35	10.89	11.47	12.25	11.01	11.9	13.17	14.24	11.94	1.55
PNP	0.53	-0.61	0.19	-1.6	-1.25	0.04	0.15	0.26	0.18	0.54	-0.16	0.74
Average	1.83	1.42	1.84	1.24	0.94	1.17	1.77	2.08	2.45	2.78		
SD	4.57	2.79	3.80	3.64	4.14	4.29	3.30	3.51	3.81	4.06		

Interpretation

The Return on Investment (ROI) data across selected banking companies over a decade highlights substantial differences in performance, financial health, and strategic success. HDFC Bank stands out with the highest consistency and stability in ROI (Average: 1.97, SD: 0.06), reflecting its strong and predictable earnings capability, efficient capital use, and well-managed risk. IndusInd Bank and Federal Bank also delivered consistent returns (Averages: 1.44 and 0.97) with low standard deviations (SDs: 0.31 and 0.26), making them reliable for moderate-risk investors.

ICICI Bank shows improving performance over the years (Average: 1.43, SD: 0.64), reflecting its turnaround strategy and improved profitability, especially post-2020. Axis Bank too exhibited a recovery trend with ROI rising in recent years, despite earlier dips (Average: 0.96, SD: 0.66). BOB and PNB, both public sector banks, show weak average ROIs (0.26 and -0.16) and moderate fluctuations, pointing to unstable returns and lower efficiency in capital deployment.

On the negative end, IDBI Bank and IDFC FIRST Bank had highly volatile and mostly negative ROIs (Averages: -0.97 and -0.33, with very high SDs of 2.22 and 1.93 respectively), highlighting years of losses and slow recovery. However, both show signs of rebound in the most recent years.

Return on Equity

Return on Equity (ROE) is a key financial ratio that measures a company's profitability relative to shareholders' equity. It indicates how effectively a company uses its equity base to generate profits. A higher ROE suggests that a company is efficiently generating profits from its equity, making it attractive to investors. A lower ROE may indicate inefficiency or financial instability. The formula for ROE is:

$$\text{Return on Equity} = \frac{Net\ Income}{Shareholders'Equity} \times 100$$

Table no.4 Return on Equity Ratio of Nifty Banking Companies from 2014 to 2024

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Average	SD
Axis	18.57	17.49	7.22	0.53	8.09	2.34	7.55	12.91	18.36	18.86	11.19	6.98
BOB	8.53	-13.42	3.43	-5.6	0.94	0.76	1.07	8.46	14.36	15.85	3.44	8.88
FEDERAL	13.14	6.05	9.53	7.41	9.37	10.62	9.86	10.05	13.99	12.78	10.28	2.50
HDFC	16.47	16.91	16.26	16.45	14.12	15.35	15.27	15.39	15.74	14.62	15.66	0.88
ICICI	13.89	11.19	10.11	6.63	3.19	6.99	11.21	13.94	16.13	17.37	11.07	4.48
IDBI	3.85	-16.57	-30.08	-50.99	-48.94	-46.82	4.45	7.34	9.82	13.43	-15.45	26.55
IDFC	0	3.42	7.2	5.7	-10.7	-18.66	2.53	0.69	9.47	9.19	0.88	9.02
INDUSIND	17.49	13.2	14.14	15.35	12.52	12.84	6.58	9.73	13.6	14.31	12.98	3.00
Kodak	13.19	8.72	12.35	10.89	11.47	12.25	11.01	11.9	13.17	14.24	11.92	1.53
PNP	8.12	-11.2	3.47	-32.85	-24.2	0.58	2.41	3.9	2.74	8.39	-3.86	14.21
Average	11.33	3.58	5.36	-2.65	-2.41	-0.38	7.19	9.43	12.74	13.90		
SD	6.08	12.77	13.14	22.10	20.25	19.02	4.63	4.56	4.43	3.25		

Interpretation

The Return on Equity (ROE) data across Nifty Bank Index companies highlights notable contrasts in shareholder profitability. HDFC Bank consistently leads with the highest average ROE (15.66%) and lowest volatility (SD: 0.88), reflecting strong capital efficiency and stable earnings. Similarly, IndusInd Bank and Kotak Mahindra Bank maintain healthy and steady ROEs around 13%, indicating reliable returns to investors. In contrast, public sector banks like IDBI and PNB show prolonged negative ROEs in early years due to high NPAs and capital erosion, resulting in poor averages (-15.45% and -3.86%) and extreme volatility. ICICI Bank and Axis Bank exhibit improving trends post-2020, with average ROEs of 11.07% and 11.19%, indicating successful restructuring and recovery. The overall industry average turns positive after 2020, rising from -0.38% (2020) to 13.90% (2024), signaling strong post-pandemic recovery. This suggests private banks outperform public ones in delivering consistent shareholder value.

Conclusion

Based on the analysis of profitability ratios such as Operating Profit Margin, Net Profit Margin, ROCE, EPS, and P/E ratio, it is evident that private sector banks like HDFC and ICICI consistently outperform public sector banks in terms of financial efficiency and shareholder returns. Their stable earnings and better capital utilization highlight stronger management practices. Public sector banks, while improving, still face profitability challenges. These findings guide investors toward favoring fundamentally stronger private banks for better long-term returns.

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