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The Impact of Portfolio Management on HDFC Bank's Financial Performance

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ABSTRACT:

This study examines the impact of portfolio management on HDFC Bank’s financial performance. It explores how investment strategies, risk management, and diversification influence the bank’s profitability. Using financial indicators like ROA, ROE, and NPA, the research evaluates the bank’s portfolio effectiveness over five years. The findings highlight that efficient portfolio strategies contribute to profitability and financial stability.

Keywords: portfolio, risk management, diversification, financial performance, investment strategy.

INTRODUCTION:

Portfolio management involves selecting and overseeing a mix of investment assets to achieve desired financial objectives while managing risk. It is critical in banking institutions, where effective asset allocation can influence profitability and risk exposure. HDFC Bank, one of India’s premier private banks, uses diverse portfolio strategies to balance risk and return. This study investigates the bank’s methods and their impact on its financial health.

REVIEW OF LITERATURE:

- Mascarenhas, Rajesh (18 July 2023). "HDFC Bank becomes the world's 7th largest lender following the merger". The Economic Times. Retrieved 27 December 2023.
- Kumar, M. and Singh, S. (2014) performed an analysis on the financial outcomes of private sector banks in India and observed that elevated ROA and ROE reflect efficient use of assets and adept capital management. Their results bolster the perspective that steady performance in these indicators, as seen with HDFC Bank, signifies robust banking operations.
- Rao, K. and Lakew, T. (2012) examined the factors affecting profitability in Indian banking institutions and determined that operational efficiency, management of interest rates, and asset quality play significant roles in a bank’s financial success. Their findings are consistent with HDFC Bank’s performance, particularly in its management of non-performing assets (NPAs) and maintaining a competitive Net Interest Margin (NIM).
- Mishkin (2018), an effective loan portfolio lowers a bank's exposure to both systematic and unsystematic risks. HDFC Bank's financial stability is a result of its robust retail loan portfolio and minimal reliance on high-risk assets.

RESEARCH METHODOLOGY:

RESEARCH GAP:

Past studies have addressed aspects of banking profitability or investment strategies, but few have directly linked comprehensive portfolio management to financial performance in a private Indian bank context. This study addresses that gap using empirical data from HDFC Bank.

NEED FOR THE STUDY:

Understanding how portfolio management affects financial performance is valuable for investors, policymakers, and banks. With increasing market volatility and financial complexities, analyzing a leading institution like HDFC Bank provides insights that could guide more robust financial decision-making.

PROBLEM STATEMENT:

Despite HDFC Bank's strong performance, it is unclear how much of its financial success is attributed to effective portfolio management. This study aims to clarify the relationship between strategic investment practices and profitability indicators.

OBJECTIVES OF THE STUDY:

- To analyze the portfolio management approach of HDFC Bank.
- To study its impact on profitability indicators like ROA, ROE, and NPA.
- To evaluate the role of diversification and risk control in sustaining financial performance.

RESEARCH DESIGN:

This is a descriptive and analytical study based on secondary data from HDFC Bank's annual reports and financial disclosures. Data from the financial years 2019 to 2023 was used for trend analysis and performance evaluation.

SCOPE OF THE STUDY:

The study focuses on HDFC Bank's portfolio and its effect on financial indicators over a 5-year period. It considers the bank's investment mix, returns, and risk management practices.

RESEARCH TYPE:

Descriptive in nature Sampling Technique: Purposive sampling of financial years 2019-2023

DATA COLLECTION:

Secondary Data: - HDFC Bank Annual Reports - Financial statements - Market reports - Previous research studies

DATA INTERPRETATION OF HDFC BANK:

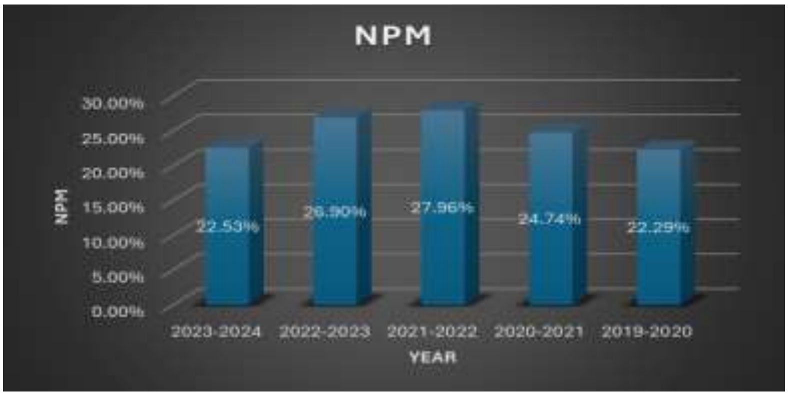
Indicators used: - Net Profit Margin - Return on Assets (ROA) - Return on Equity (ROE) - Gross NPA Ratio - Net Interest Margin (NIM)

Calculation of Net Profit Margin of HDFC Bank:

YEAR	NET INCOME	TOTAL REVENUE	NPM
2023-2024	65,446.50	2,83,649.02	22.53%
2022-2023	46,148.70	1,70,755.05	26.90%
2021-2022	38,150.90	1,35,936.41	27.96%
2020-2021	31,856.77	1,28,552.39	24.74%
2019-2020	27,296.27	1,22,189.29	22.29%

Table 1

NET PROFIT MARGIN = NET INCOME / TOTAL REVENUE * 100



Graph: 1

Interpretation: Over the last five years, HDFC Bank has shown strong and steady profitability, as indicated by its Net Profit Margin (NPM), which varied from 22.29% in 2019–20 to a high of 27.96% in 2021–22. The consistent rise in NPM until 2021–22 suggests successful cost management, robust revenue growth, and effective operations. While the margin slightly decreased to 26.90% in 2022–23 and further to 22.53% in 2023–24, this was accompanied by considerable growth in total revenue and net income, likely due to the merger with HDFC Ltd. The recent decline can be linked to rising operational costs or integration expenses, yet the bank's profitability remains strong. These patterns underscore HDFC Bank's resilience, prudent financial strategy, and capacity to maintain healthy margins in a changing economic landscape.

Calculation of ROA on HDFC Bank:

YEAR	NET INCOME	TOTAL ASSETS	ROA
2023-2024	65,446.50	4,030,194.26	1.62%
2022-2023	46,148.70	2,530,432.43	1.82%
2021-2022	38,150.90	2,122,934.30	1.79%
2020-2021	31,856.77	1,799,506.64	1.77%
2019-2020	27,296.27	1,580,830.41	1.72%

Table 2

ROA = NET INCOME / TOTAL ASSETS * 100

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Graph: 2

Interpretation:

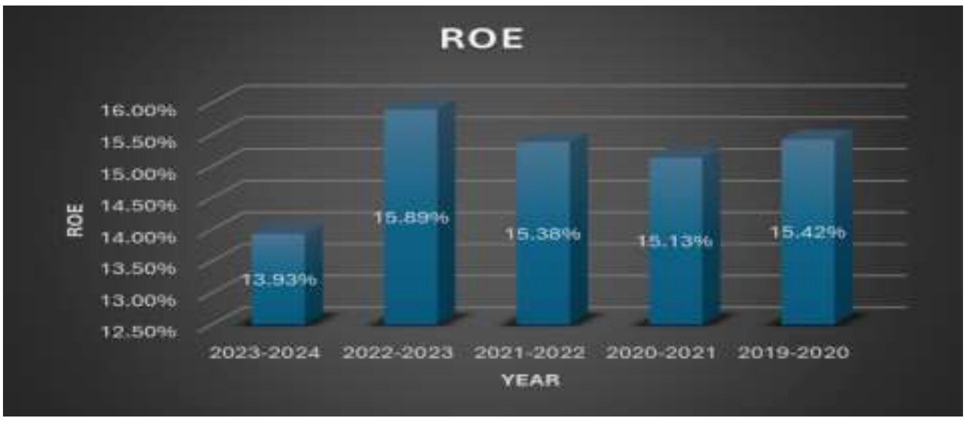
Over the last five years, HDFC Bank's Return on Assets (ROA) has been fairly consistent, indicating steady effectiveness in using its asset base to produce earnings. The ROA fluctuated from 1.72% in 2019–20 to a high of 1.82% in 2022–23, signifying robust profitability concerning total assets. Despite a significant increase in assets after the merger with HDFC Ltd in 2023–24, the ROA slightly fell to 1.62%, implying that while net income rose considerably, the asset base grew at a quicker pace, marginally reducing asset profitability. In summary, HDFC Bank has preserved a strong ROA, showcasing efficient asset management and operational effectiveness even in the face of structural adjustments.

Calculation of ROE on HDFC Bank:

YEAR	NET INCOME	SHAREHOLDER EQUITY	ROE
2023-2024	65,446.50	4,69,779	13.93%
2022-2023	46,148.70	2,90,298	15.89%
2021-2022	38,150.90	2,48,047	15.38%
2020-2021	31,856.77	2,10,443	15.13%
2019-2020	27,296.27	1,76,935	15.42%

Table 3

ROE = NET INCOME / SHAREHOLDER EQUITY * 100



Graph: 3

Interpretation:

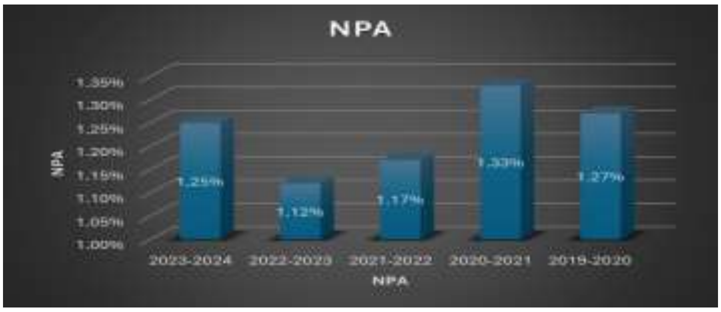
HDFC Bank's Return on Equity (ROE) has displayed robust and steady performance over the last five years, signifying its capability in generating profits from shareholders' equity. Between 2019–20 and 2022–23, the ROE stayed above 15%, reaching a high of 15. 89% in 2022–23, highlighting effective capital use and strong profitability. Nonetheless, in 2023–24, the ROE fell to 13. 93%, even with a considerable increase in net income, mainly due to a sharp rise in shareholder equity following the merger with HDFC Ltd. This suggests that although earnings have increased, the return on the larger equity base has temporarily slowed. In summary, HDFC Bank has illustrated solid value creation for its shareholders, with a slight recent decrease linked to structural growth.

Calculation of NPA on HDFC Bank:

YEAR	GROSS NPA	GROSS ADVANCES	NPA
2023-2024	31,173.32	2,484,861.52	1.25%
2022-2023	18,019.03	1,600,585.90	1.12%
2021-2022	16,140.96	1,368,820.93	1.17%
2020-2021	15.086.00	1,132,836.63	1.33%
2019-2020	12,649.97	993,702.88	1.27%

Table 4

NPA = GROSS / GROSS ADVANCES *100



Graph: 4

Interpretation:

Over the last five years, HDFC Bank has upheld a consistent and low level of Gross Non-Performing Assets (NPA), showcasing robust asset quality and efficient credit risk management. The NPA ratio fluctuated between 1.12% and 1.33%, reflecting minor variations and a reliable capacity to handle bad loans. Although the total amount of NPAs rose considerably in 2023–24 to ₹31,173.32 crore due to the larger loan portfolio following the merger, the NPA ratio stayed low at 1.25%, a bit higher than the previous year but still within a healthy range. This indicates that even with the bank's increasing advances and size, it continues to exert strong control over asset quality, positioning itself favorably for sustainable long-term growth.

Calculation of NIM of HDFC Bank:

YEAR	NET INTEREST	AVERAGE EARNING ASSETS	NIM
2023-2024	129,510.5	3,571,573.04	3.62%
2022-2023	92,974.1	2,173,527.10	4.27%

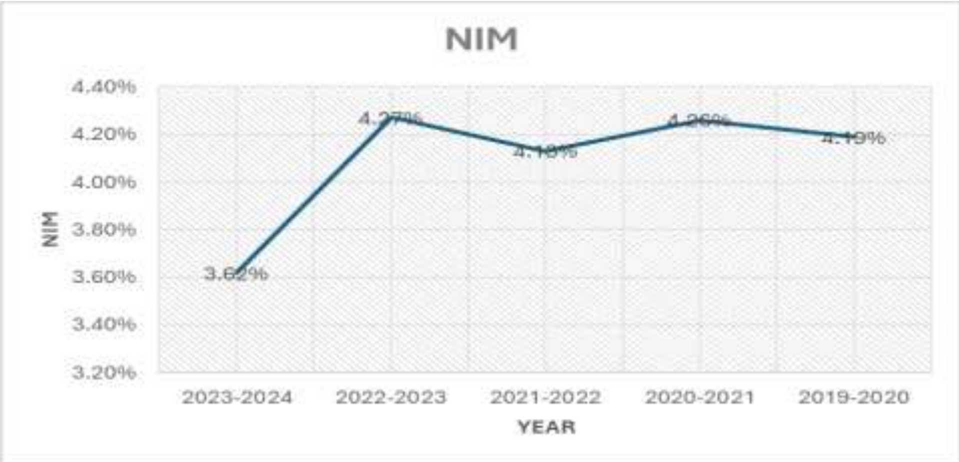
2021-2022	77,352.1	1,870,206.14	4.13%
2020-2021	69,304.8	1,624,106.63	4.26%
2019-2020	60,051.9	1,432,975.83	4.19%

Table 5

NIM = NET INTEREST / AVERAGE EARNING ASSETS * 100

Net Interest = Interest Earned – Interest Paid

Average Earning Assets = Advances + Loans + Investments



Graph: 5

Interpretation:

HDFC Bank's Net Interest Margin (NIM) has demonstrated remarkable consistency over the years, showcasing its capability to generate interest income from its earning assets effectively. Between 2019–20 and 2022–23, the NIM stayed stable within the 4.13%–4. 27% range, reflecting a healthy difference between interest income and interest expenses. Nevertheless, in 2023–24, the NIM dropped to 3.62%, mainly due to a considerable rise in average earning assets after the merger with HDFC Ltd, which likely resulted in modifications to the asset-liability mix and initial integration-related changes. Despite this decline, the NIM continues to be competitive, and the bank's capacity to sustain robust interest income on a much larger asset base highlights its strong lending strategy and resilience in a fluctuating interest rate landscape.

Analysis of portfolio management:

Absolute returns:

ABSOLUTE RETURNS (%) = ENDING PRICE - BEGINNING PRICE / BEGINNING PRICE *100

Beginning price = 923.48

Ending price = 1806.75

Absolute returns = 1,806.75 – 923.48 / 923.48 *100

= 883.27 / 923.48 * 100

= 0.956 *100

= 95.65%

Interpretation:

The calculated absolute returns indicate strong financial performance over the periods analyzed. In the first case, with a beginning price of ₹923.48 and an ending price of ₹1,806.75, the absolute return is approximately 95.65%, suggesting that the investment nearly doubled, reflecting highly effective portfolio management and favorable market conditions. In the second case, with a beginning price of ₹1,204.24 and an ending price of ₹1,658.55, the absolute return is around 37.73%, still indicating significant capital appreciation. These results highlight the positive impact of portfolio management on HDFC Bank's financial performance, demonstrating its ability to generate substantial investor returns.

Annualized Returns (CAGR):

ANNUALIZED RETURN (%) = (ENDING PRICE / BEGINNING PRICE) ^1/N−1

= (1,658.55 / 923.48) ^1/5 – 1

= (1.795) ^0.2 – 1

= 1.999 -1

= 99.9%

Interpretation:

The Compound Annual Growth Rate (CAGR) is calculated, which is a helpful metric for determining the average annual return on an investment over a given period, such as five years in this instance. The investment in HDFC Bank's shares has almost doubled every year on average over the five years, as shown by the 99.9% CAGR. Due to effective portfolio management, wise choices, and positive market trends, this exceptionally high growth rate may be a reflection of continuous and robust financial performance. Such a high CAGR is unusual and indicates that throughout the time analyzed, HDFC Bank performed much better than average market benchmarks.

Sharpe Ratio:

Sharpe Ratio = RP−RF / ΣP

Rp = (**(ENDING PRICE / BEGINNING PRICE) ^1/N−1**

= (1,658.55 / 923.48) ^1/5 – 1

= (1.795) ^0.2 – 1

= 1.999 -1

= 99.9%

Rf = 6.440%

σp = 19.05%

Sharpe Ratio = 6.611% - 6.440% / 19.05

= 0.171 / 19.05

= 0.0089

Interpretation:

With a Sharpe Ratio of merely 0.0089, this investment has provided minimal excess return relative to the risk involved. In practical terms, the investment has just slightly exceeded the risk-free rate, and its risk-adjusted performance is inferior. Investors may look for alternatives that offer a more favorable combination of return and volatility.

Calculation of Beta:

YEAR	HDFC RETURNS(Rs)	NIFTY RETURNS(Rm)	(Rs – R̄s)	(Rm–R̄m)	(Rs – R̄s) (Rm – R̄m)	(Rm–R̄m) ^2
2023-	1,658.55	23,745.9	230.774	4.360.02	1,006,179.25	19,009,774.40

24						
2022-23	1,676.99	23,742.4	249.214	4,356.52	1,085,705.77	18,979,266.51
2021-22	1,451.22	18,105.3	23.444	-1,280.58	-30,021.91	1,639,885.13
2020-21	1,428.64	17.354.05	0.864	-2,031.83	-1,755.50	4,128,333.14
2019-20	923.48	13,981.75	-504.2960	-5,404.13	2,725,281.14	29,204,621.05
1,427.776		19,385.88			**4,785,388.75**	**72,961,880.23**

Table 6

Cov (Rs - $\bar{R}$s) (Rm – $\bar{R}$m) = 4,785,388.75 / 5
= 957,077.75
Var (Rm – $\bar{R}$m) ^2 = 72,961,880.23 / 5
= 14,592,376.046
BETA = Cov (Rs - $\bar{R}$s) (Rm – $\bar{R}$m) / Var (Rm – $\bar{R}$m) ^2
= 957,077.75 / 14,592,376.046
= 0.065

Interpretation:

HDFC Bank's calculated beta value of 0.065 for 2019 to 2024 suggests that its stock has shown minimal responsiveness to market changes compared to the benchmark Nifty index. A beta of less than 1 usually indicates that the stock is less volatile than the overall market. In this instance, a beta of only 0.065 indicates that the returns of HDFC Bank have been mostly unaffected by market changes. This may suggest a very steady and cautious investment profile, potentially as a result of the bank's reliable performance, solid fundamentals, or risk-averse portfolio management approaches. Although a low beta may indicate lower potential upside during bullish market conditions, it may attract investors seeking stability and reduced risk.

Calculation of Alpha:

Alpha=Rs−[Rf+β×(Rm−Rf)]

Alpha = 95.65% - (7% + 0.065 * (12% - 7%))
= 95.65% - (7% + 0.065* 5%)
= 95.65% - (7% + 0.325%)
= 95.65% - 7.325%
= 88.325 %

Interpretation:

The calculated alpha of 88.325% suggests that HDFC Bank's stock or portfolio has significantly outperformed the expected return, considering market risk and the risk-free rate. This high alpha is evidence of outstanding portfolio management and indicates that the bank's financial strategies have produced outstanding returns that are far higher than what would normally be predicted by its beta and market trends. A positive alpha of this magnitude suggests that the performance is a result of sound decision-making and possible special skills within the bank, rather than simply the result of market fluctuations. Nevertheless, in real-world circumstances, such a high alpha is unusual, and it may be necessary to thoroughly analyze the assumptions and inputs used in the computation.

MEAN:

YEAR	CLOSING AMOUNT	(CLOSONG AMOUNT – MEAN) ^2
2023-2024	1,658.55	53,256.63
2022-2023	1,676.99	62,107.61
2021-2022	1,451.22	549.62
2020-2021	1,428.64	0.746
2019-2020	923.48	2,54,314.45

Table 7

MEAN = 1,658.55 + 1,676.99 + 1,451.22 + 1,428.64 + 923.48 / 5
= 1,427.776
VARAINCE = 53,256.63 + 62,107.61 + 549.62 + 0.746 + 2,54,314.45 / 5
= 3,70,229.056
= 74,045.811
STANDARD DEVIATION = sqrt {VARAINCE}
= sqrt {74,045.811}
= 272.11
SD (%) = (SD / MEAN) * 100
= (272.11 / 1,427.776) * 100
= 19.05 %

Interpretation:

Mean:

During the last five years, the average closing price of HDFC Bank shares was around ₹1,427.78, indicating the average price of the shares during that time. This figure is used as a reference point to determine if a year's stock prices were above or below average. It aids investors in identifying the stock's historical performance's overall trend or average tendency.

Variance:

The variance of 74,045.81 indicates how far the stock prices deviate from the average. A high variance suggests that prices have varied significantly over the years, indicating greater inconsistency or volatility. In this instance, the variance indicates that although the stock was stable for several years, some years, particularly 2019–2020 and 2023–2024, had prices that deviated greatly from the mean, suggesting higher market activity or external economic influence during those times.

Standard Deviation:

The standard deviation, which is ₹272.11 or 19.05%, measures how far the stock price typically deviates from its average. This figure suggests that HDFC Bank's share price has deviated around 19% on average from its five-year average. This provides a direct assessment of risk or volatility: a higher standard deviation indicates a higher level of return uncertainty. A 19% deviation indicates moderate volatility, implying that the stock offers a compromise between risk and return; it is neither excessively volatile nor entirely stable.

FINDINGS:

- The bank maintained a strong Net Profit Margin (22%-28%) with occasional declines due to mergers or operational adjustments.
- ROA and ROE remained stable, indicating efficient asset utilization and equity management.
- NPA ratio stayed below 1.3%, showing strong credit risk practices. - Despite increased assets post-merger, NIM remained competitive at around 3.6%-4.2%.

Conclusion:

Efficient portfolio management practices at HDFC Bank have led to improved financial outcomes. The research supports that diversification, prudent asset selection, and strategic risk control contribute directly to financial performance. These insights can aid other banking institutions in refining their investment approaches.

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