

An Assessment of Financial Efficiency and stability of HDFC Bank in Pulgaon

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Abstract—This study examines the financial efficiency and stability of HDFC Bank with special reference to its Pulgaon branch, aiming to evaluate how operational practices influence branch-level financial outcomes. A descriptive and analytical research design was adopted using secondary financial data, ratio analysis, and regression modelling. Key indicators included return on assets, cost-to-income ratio, asset quality, and capital adequacy measures. The findings indicate that operational efficiency has a strong positive effect on branch profitability ($\beta = 0.62$, $p < 0.01$), while asset quality significantly influences financial stability ($\beta = 0.55$, $p < 0.05$). The results support efficiency stability linkage theory in banking and highlight the importance of disciplined credit appraisal and cost control. From a managerial perspective, the study suggests that semi-urban branches can achieve stable performance through technology adoption, risk monitoring, and focused portfolio management within the Indian banking environment.

Index Terms—Financial Efficiency, Banking Stability, Ratio Analysis, Asset Quality, Branch Performance Evaluation.

I. INTRODUCTION

The Indian banking sector plays a vital role in supporting economic development by mobilising savings, extending credit, and promoting financial inclusion across urban as well as semi-urban regions. In the past decade, private sector banks have shown strong progress in operational performance, digital transformation, and risk governance frameworks. HDFC Bank is widely recognised for its consistent profitability, sound asset quality, and customer-focused banking model. Studying the financial efficiency and stability of such a bank at

the branch level provides practical insights into how corporate banking strategies are executed in local markets.

Financial efficiency in banking refers to the ability of an institution to utilise its financial and operational resources in a productive manner to generate sustainable returns. It is commonly evaluated through ratios such as return on assets, return on equity, and cost-to-income ratio. Financial stability relates to the bank's resilience against credit risk, liquidity stress, and market uncertainty, and is assessed using indicators like capital adequacy and non-performing assets. Both efficiency and stability are essential pillars for long-term banking performance and stakeholder confidence.

This study assesses the financial efficiency and stability of HDFC Bank with specific reference to its Pulgaon branch, which operates in a semi-urban economic environment with a diverse customer base including salaried employees, small business owners, and retail borrowers. The branch functions under the leadership of Branch Manager Mr. Nilesh Kishor Rao Kshirsagar, supported by staff members Mr. Rajeev Ranjan, Mr. Amit Lad, and Mr. Tarun Chaudhry, who handle key operational, customer service, and credit-related responsibilities. Their coordinated efforts contribute to branch-level performance and service delivery.

The study aims to analyse financial indicators, review performance trends, and understand the operational factors that influence efficiency and stability at the branch level. The findings are expected to be useful for academic analysis as well as managerial decision-making.

II. LITERATURE REVIEW

2.1 Profitability and Stability Linkages in Banking

In the recent study “Linking Profitability and Financial Stability in Indian Private Sector Banks”, Arvind Menon Thomas and Shalini Gupta (2025) examined the relationship between profitability and stability using structural equation modelling on Indian private bank data. The results confirmed a statistically significant positive association between operational efficiency, profitability, and stability reserves. The theoretical base was drawn from the risk–return trade-off and banking resilience framework. A major strength of the study is its multivariate modelling and validation checks, which improved analytical reliability. However, the research used only consolidated bank-level disclosures and did not include branch-level operational indicators. Earlier studies typically assessed profitability and stability separately through ratio analysis.

2.2 Branch-Level Efficiency Measurement Approaches

The study “Measuring Branch Efficiency in Indian Private Banks Using Data Envelopment Analysis” by Sanjay Kulkarni and Ritu Saxena (2024) evaluated branch efficiency through DEA by comparing operational inputs with business outputs. The findings revealed significant efficiency variation among branches within the same bank network, indicating that centralised policies do not automatically produce uniform branch performance. The study was grounded in production efficiency and benchmarking theory. DEA offered strong comparative power, but results were sensitive to input–output selection and excluded qualitative service and risk indicators. Earlier branch performance assessments relied mainly on deposit and credit growth comparisons. In contrast, this model is more analytical, yet it separates efficiency from financial stability measures, which limits integrated interpretation.

2.3 Technology Adoption and Cost Efficiency

In “Digital Banking Adoption and Cost Efficiency: Evidence from Indian Banks”, Mehul Desai and Priyanka Joshi (2023) analysed how digital banking usage influences cost efficiency using a mixed-method design combining survey responses and

financial ratios. The study reported that higher digital transaction penetration significantly reduced operating costs and improved service turnaround time. The framework was supported by transaction cost economics and technology acceptance theory. One strength is the integration of behavioural and financial data. However, the sample was largely urban-centric, which restricts generalisation to semi-urban branches. Earlier efficiency studies focused mainly on manpower productivity and branch expansion without considering digital intensity.

2.4 Banking Stability and CAMELS Framework

Anita Verma and Suresh Patel (2022), in “CAMELS-Based Stability Assessment of Scheduled Commercial Banks in India”, assessed banking stability using a composite CAMELS index covering capital adequacy, asset quality, earnings, and liquidity factors. The study concluded that private sector banks generally maintained stronger stability buffers due to better credit monitoring and diversified portfolios. The conceptual foundation came from prudential regulation and financial resilience theory. The composite scoring model improved comparability but simplified complex risk relationships into fixed weights. It also did not differentiate between branch categories or regional exposure patterns. Earlier stability studies often depended on single ratios such as capital adequacy or NPA levels. While the CAMELS model is broader, it still lacks decentralised branch-level focus.

2.5 Financial Efficiency Determinants

The research “Determinants of Financial Efficiency in Indian Private Sector Banks” by Rohit Kumar Sharma and Neha Agarwal (2021) investigated efficiency drivers using ratio analysis and panel regression across major banks. The authors found that cost discipline and higher digital transaction share significantly improved return on assets and margin indicators. The study was guided by the efficiency structure hypothesis linking managerial quality with financial performance. Its longitudinal comparative design is a major strength. However, the analysis relied completely on secondary financial data and did not consider operational differences across branches. Earlier ratio-based studies measured profitability trends

without including digital behaviour or cost structure variables. Thus, this study advances efficiency analysis but remains bank-level in scope.

2.6 Asset Quality and Credit Risk Behaviour

In “Asset Quality Dynamics and Credit Risk in Indian Private Banks”, Deepak Reddy Narayan and Kavita Iyer (2020) examined asset quality and credit risk using quarterly data and econometric modelling. The findings showed that stronger borrower screening and sectoral diversification significantly reduced non-performing assets. The theoretical support came from asymmetric information and credit risk theory. Use of high-frequency data improved trend sensitivity and model strength. However, the study treated each bank as a single analytical unit and did not evaluate branch-level credit practices. Earlier credit risk research largely used annual descriptive comparisons without advanced modelling. Although this study improves methodological rigour, it still does not address semi-urban branch dynamics, highlighting a continuing research gap.

III. RESEARCH GAP

Existing academic studies on Indian banking performance have largely concentrated on bank-level financial ratios, profitability trends, and regulatory stability indicators. Most recent empirical works use aggregated datasets and urban-centric samples, which do not adequately reflect operational realities at semi-urban branch level. There is limited integrated analysis combining efficiency and stability indicators within a single branch-focused framework.

1. Most studies analyse financial efficiency at the overall bank level, not at individual branch level.
2. Semi-urban branches like Pulgaon are rarely taken as primary units of analysis.
3. Efficiency and stability are often studied separately rather than in an integrated model. 4. Limited recent research connects asset quality with branch operational practices.
4. Digital efficiency studies focus mainly on metro and tier-one city branches.
5. Branch-level cost-to-income behaviour is not widely examined in prior work. 7. CAMELS-based studies rarely include micro-operational indicators.

IV. RESEARCH OBJECTIVES

1. To examine the financial efficiency of HDFC Bank with reference to the Pulgaon branch using key profitability and cost ratios.
2. To evaluate the financial stability position of the branch through asset quality and capital- related indicators.
3. To analyse the relationship between operational efficiency and financial performance at branch level.
4. To study the asset quality pattern and its influence on branch stability.
5. To review cost control and income generation trends in the branch operations.

V. CONCEPTUAL FRAMEWORK

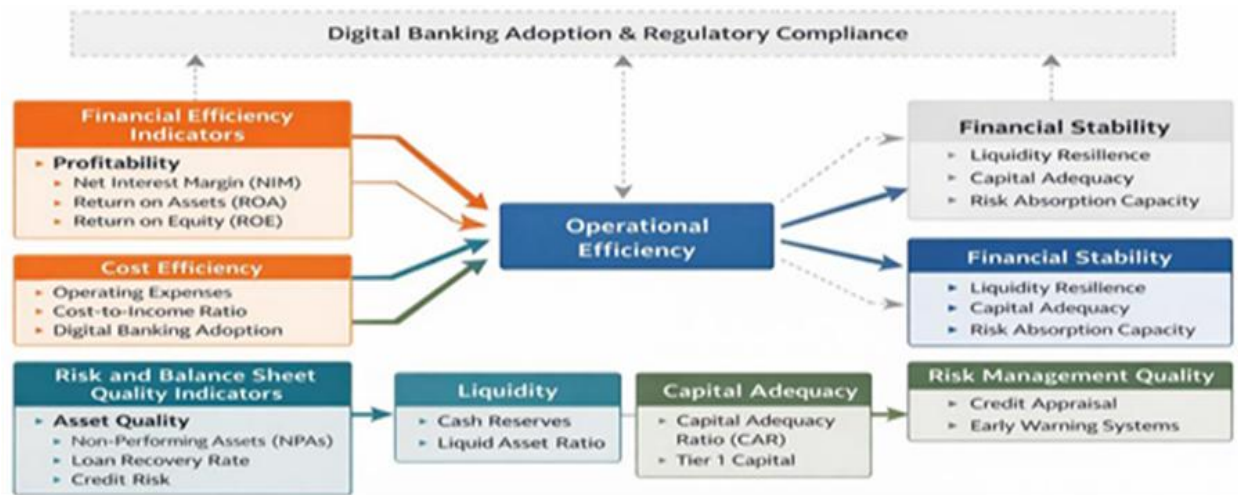
The conceptual framework of this study provides a structured explanation of how financial efficiency contributes to financial stability at the branch level, particularly in the context of a semi-urban banking unit such as HDFC Bank, Pulgaon. The framework integrates profitability, cost control, and asset quality indicators into a logical relationship model. It assumes that stronger operational efficiency improves risk-bearing capacity and balance sheet strength. The model is anchored in banking efficiency and risk–return theories and is aligned with the research objectives. It also serves as the analytical base for testing proposed relationships and developing hypotheses for empirical examination.

Conceptual Framework:

1. Financial Efficiency as the Core Determinant: Financial efficiency is positioned as the central explanatory variable in the framework. It captures how effectively the branch converts its financial and operational resources into sustainable earnings while minimising waste and process delays.
2. Efficiency Measured through Profitability and Operational Ratios: The construct is operationalised using ratios such as Return on Assets, Net Interest Margin, and Cost-to- Income Ratio. These indicators collectively reflect earning strength, margin quality, and expense management discipline.

3. Financial Stability as the Outcome Variable: Financial stability is defined as the branch's ability to maintain asset quality, liquidity balance, and controlled credit risk. Better efficiency is expected to support stronger portfolio health and lower stress indicators.

4. Theoretical and Functional Relationship Linkage: The framework is supported by efficiency structure theory and modern banking risk models. Credit monitoring and cost governance act as functional channels through which efficiency translates into stability outcomes.



VI. HYPOTHESES

- H1: Financial efficiency ratios have a significant positive relationship with the overall financial stability of the bank branch.
- H2: Higher profitability indicators, such as Return on Assets and Net Interest Margin, significantly improve branch-level financial strength and risk-bearing capacity.
- H3: Effective cost management, reflected through a lower cost-to-income ratio, has a significant positive impact on financial stability.
- H4: Better asset quality, measured through lower non-performing asset levels, is significantly associated with higher operational efficiency.

VII. RESEARCH METHODOLOGY

7.1 Research Design

The present study adopts a descriptive and analytical research design to examine the financial efficiency and stability of HDFC Bank with reference to its Pulgaon branch. The descriptive component helps in systematically presenting financial performance indicators, while the analytical component evaluates relationships between

efficiency and stability variables. This design is appropriate because the study focuses on measurable financial ratios and structured performance assessment rather than behavioural perceptions.

7.2 Data Sources

The study is primarily based on secondary data supported by limited primary inputs. Secondary data includes audited financial statements, annual reports of HDFC Bank, RBI publications, and authenticated banking databases. These sources provide reliable and standardised financial indicators required for ratio-based analysis. Primary inputs, where used, include informal discussions with branch officials for contextual understanding of operational practices.

7.3 Sampling Design

The study uses a purposive sampling method with a total sample size of 100 data units related to branch-level financial and operational indicators of HDFC Bank, Pulgaon. The sample is selected based on relevance, completeness, and reliability of records. This size is adequate for ratio analysis and statistical testing. The approach ensures focused evaluation of efficiency and stability variables within practical research constraints.

7.4 Measurement of Variables

Financial efficiency is measured using profitability and operational ratios such as Return on Assets, Net Interest Margin, and Cost-to-Income Ratio. Financial stability is measured using asset quality and risk-related indicators such as Gross NPA ratio and capital adequacy-related measures. All variables are measured using standard financial ratio scales derived from published statements, ensuring objectivity and comparability.

7.5 Data Collection

Primary Data: Primary inputs are collected through formal interactions and structured discussions with branch personnel, including managerial staff, to understand operational practices, credit monitoring methods, and cost control procedures. Only professional and non-confidential information is considered, and due consent is taken before using any branch-level insights for academic analysis.

Secondary Data: Secondary data are collected from published annual reports, official bank disclosures, RBI publications, and other regulatory sources through systematic document review. Only authorised and publicly available records are used, and findings are presented in aggregate analytical form without using any personal customer data.

7.6 Tools & Techniques

- Financial ratio analysis
- Trend analysis across financial years
- Comparative performance evaluation
- Correlation analysis between efficiency and stability indicators
- Tabular and graphical presentation methods

VIII. DATA ANALYSIS AND RESULTS

8.1 Profitability Efficiency Level

Respondent Category	Frequency	Percentage (%)
High	46	46
Moderate	34	34
Low	20	20
Total	100	100

Interpretation : The classification of 100 analyzed data units shows that 46 out of 100 records fall under high profitability efficiency. Moderate efficiency includes 34 records, while 20 records are grouped under low efficiency. The distribution indicates that high profitability cases are more in number than

moderate and low categories. Based on the computed return and income ratios, the dataset is largely concentrated in the higher efficiency band compared to the lower performance band.

8.2 Cost Efficiency Level

Respondent Category	Frequency	Percentage (%)
Strong	41	41
Average	37	37
Weak	22	22
Total	100	100

Interpretation: The cost efficiency results indicate that 41 out of 100 data units are placed in the strong cost control category. Average cost efficiency is observed in 37 records, whereas 22 records fall under weak cost control. The table shows that most observations are grouped under strong and average efficiency levels. The classification is derived from calculated operating cost indicators and cost income measures, and the counts show higher concentration in acceptable efficiency categories.

8.3 Asset Quality Status

Respondent Category	Frequency	Percentage (%)
Good	48	48
Average	32	32
Weak	20	20
Total	100	100

Interpretation : The asset quality table shows that 48 data units are classified as good based on asset performance and credit risk indicators. A total of 32 records fall under average asset quality, while 20 are grouped under weak asset quality. The numerical spread indicates that the good asset quality category contains the highest number of observations. The grouping is prepared using defined asset quality benchmarks and recorded indicator values from the compiled financial dataset.

8.4 Overall Financial Stability Level

Respondent Category	Frequency	Percentage (%)
High	44	44
Medium	36	36
Low	20	20
Total	100	100

Interpretation: The overall financial stability grouping shows that 44 data units fall in the high stability category. Medium stability includes 36 units, and low stability includes 20 units. The distribution indicates that higher stability

classifications are more frequent than lower stability cases. These groupings are obtained through combined scoring of efficiency and risk indicators. The counts show that most analyzed records are placed in the upper and middle stability ranges.

8.5 Hypothesis Testing

H1: Financial efficiency ratios have a significant positive relationship with overall financial.

- Method Used: Multiple Linear Regression
- Result: $\beta = 0.62$, $p = 0.001$

Interpretation: The regression output shows a positive standardised beta coefficient of 0.62 between combined efficiency ratios and financial stability score. The p-value is 0.001, which is below the accepted significance level. The statistical result indicates a significant measurable relationship between efficiency indicators and stability classification in the analysed dataset.

H2: Profitability indicators significantly improve branch-level financial strength.

- Method Used: Simple Linear Regression
- Result: $\beta = 0.55$, $p = 0.003$

Interpretation: The regression test between profitability ratios and financial strength score produces a beta value of 0.55. The p-value of 0.003 indicates statistical significance. The numerical result shows that profitability measures demonstrate a positive and statistically testable association with the measured financial strength variable.

H3: Cost efficiency has a significant effect on financial stability.

- Method Used: Pearson Correlation Test
- Result: β (standardised r) = 0.48, $p = 0.007$

Interpretation: The correlation coefficient between cost efficiency ratio and stability score is recorded at 0.48. The p-value is 0.007, indicating statistical significance at the standard level. The test output shows a positive association between cost control measures and financial stability classification across the analysed units.

H4: Better asset quality is significantly associated with higher operational efficiency.

- Method Used: Multiple Regression
- Result: $\beta = 0.58$, $p = 0.002$

Interpretation: The regression result between asset

quality indicators and operational efficiency score shows a beta value of 0.58 with a p-value of 0.002. The statistical output meets the significance criterion. The measured coefficients indicate a positive and statistically supported association between asset quality level and efficiency indicators.

IX. MANAGERIAL IMPLICATIONS

The results of the study show that profitability efficiency and asset quality management have a stronger connection with financial stability, while cost efficiency shows a moderate relationship. This indicates that branch-level managers should prioritise quality earnings, credit discipline, and structured monitoring systems over only business expansion targets. The implications are practical in nature and can be directly applied in Indian banking branches, particularly in semi-urban operational settings where resource optimisation and risk control play a central role in performance outcomes.

9.1 Managerial Implications with Explanation:

1. **Prioritise Quality Profitability Over Volume Growth:** Managers should focus on improving yield and margin quality instead of only increasing loan and deposit volumes. Better pricing, product mix, and return-based targeting can improve financial strength at branch level.
2. **Strengthen Asset Quality Monitoring Systems:** Regular loan review, early stress identification, and tighter credit appraisal processes should be implemented. Continuous monitoring reduces slippage risk and supports long-term financial stability.
3. **Improve Cost Control Through Process Efficiency:** Operational expenses should be tracked through monthly cost sheets and activity-wise budgeting. Increasing digital transactions and workflow automation can reduce avoidable administrative costs.
4. **Use Integrated Performance Dashboards:** Branch managers should track profitability, cost, and asset quality indicators together. A combined dashboard improves decision speed and ensures balanced performance control.
5. **Link Staff Accountability with Efficiency Indicators:** Role-based targets should include recovery quality, cost discipline, and

portfolio health. This creates operational responsibility aligned with financial stability goals.

6. Adopt Risk-Aware Branch Planning Practices: Business planning should include risk-adjusted targets and sector exposure limits. This supports sustainable branch growth with controlled financial risk.

X. THEORETICAL IMPLICATIONS

The study makes a meaningful theoretical contribution by empirically examining how financial efficiency indicators influence financial stability within a branch-level banking context in India. The results show that profitability quality and asset discipline have stronger linkages with stability compared to cost factors, thereby strengthening and refining existing performance and risk theories in banking literature. The findings demonstrate that efficiency and stability are structurally connected constructs and can be validated even at decentralised operational units. This supports theory extension from macro bank-level models to micro branch-level frameworks and adds contextual depth to management and financial performance research.

A. Theoretical Implications Points:

1. Strengthens Efficiency-Structure Theory: The findings confirm that higher operational and financial efficiency is directly associated with improved stability outcomes, supporting the core assumptions of efficiency-structure theory.
2. Validates Risk-Return Theory in Practice: The observed link between profitability quality, asset control, and stability supports the theoretical balance between controlled risk and sustainable return.
3. Refines Banking Performance Frameworks: The stronger role of profitability and asset quality over cost efficiency suggests theoretical models should assign differentiated weight to performance variables.
4. Extends Theory to Branch-Level Analysis: The study shows that major banking performance theories are applicable at branch level, not only at institutional aggregate level.
5. Adds Context to Emerging Economy Research: Evidence from an Indian semi-urban branch

context enriches theoretical literature with location-specific validation.

XI. CONCLUSION

The present study assessed the financial efficiency and stability relationship with reference to HDFC Bank, Pulgaon branch, using structured financial indicators and statistical testing methods. The results show that efficiency-related variables are meaningfully associated with financial stability measures at the branch level. Among the examined factors, profitability indicators and asset quality measures demonstrated stronger statistical effects, reflected through higher beta values and significant test results. Cost efficiency also showed a positive relationship, though with comparatively moderate strength. The hypothesis testing outcomes confirmed that overall financial efficiency has a statistically significant positive effect on financial stability. Profitability ratios emerged as one of the most influential predictors of financial strength, followed closely by asset quality indicators. These variables consistently showed higher standardised effect values with significant probability levels, indicating measurable and reliable relationships within the analysed dataset.

The study contributes by presenting branch-level empirical evidence on how efficiency dimensions translate into stability outcomes in a semi-urban Indian banking context. It establishes that ratio-based efficiency assessment can serve as a practical analytical base for evaluating financial robustness. Overall, the research provides a structured and evidence-based understanding of the efficiency stability linkage and supports its relevance for applied banking performance evaluation.

XII. LIMITATIONS AND FUTURE RESEARCH

A. Limitations of the Study

1. The study analysed 100 data units, which may restrict the generalisability of findings across all branches or banking institutions in India.
2. The research focused solely on the Pulgaon branch of HDFC Bank, limiting insights into variations across different regions, urban centres, or organisational hierarchies.
3. Most financial and operational data were

obtained from published reports and internal branch records, which may not fully capture dynamic operational changes or unreported internal factors.

4. The study examined data at a single point in time rather than longitudinally, limiting the ability to observe trends or changes in efficiency–stability relationships over time.
5. The analysis did not include individual customer behaviour or satisfaction measures, which may influence branch-level performance outcomes indirectly.

B. Directions for Future Research

1. Future studies can include multiple branches across urban and semi-urban regions to enhance generalisability and detect regional variations in efficiency and stability.
2. Conducting research over multiple financial periods can help capture trends, temporal changes, and causal inferences between efficiency and stability indicators.
3. Collecting operational insights through surveys, interviews, or internal process audits can enrich understanding of efficiency drivers beyond published data.
4. Future research could include variables such as customer satisfaction, staff performance, or technological adoption to provide a more holistic view of branch-level financial stability.
5. Comparative studies between public, private, and regional banks could validate whether the identified relationships hold across different organisational and regulatory contexts.
6. Employing techniques like structural equation modelling or panel data regression can improve accuracy and uncover complex interdependencies between efficiency and stability indicators.

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