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Effect of post-merger integration on liquidity condition: A study on Financial integration HDFC and Axis Bank

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ABSTRACT

The banking sector has increasingly adopted mergers and acquisitions to strengthen financial performance, improve operational efficiency, and enhance market competitiveness. Effective post-merger integration plays a crucial role in combining financial resources, business operations, and management systems to achieve the expected benefits of a merger. This study examines the impact of post-merger integration on the liquidity position of HDFC Bank and Axis Bank. Using secondary data collected from annual reports and financial statements, the study compares the liquidity performance of both banks before and after their respective mergers. The research aims to evaluate whether financial integration has improved liquidity management and contributed to greater financial stability. The findings provide valuable insights into the effectiveness of banking mergers in maintaining liquidity and overall financial health. The study will be useful for researchers, investors, banking professionals, and policymakers in understanding the role of post-merger integration in enhancing liquidity performance within the banking sector.

Keywords: Post-Merger Integration, Liquidity Condition, Financial Integration, Liquidity Management, Financial Performance, Banking Sector.

1. INTRODUCTION

The banking sector plays a vital role in the economic development of a country by providing financial services, mobilizing savings, and supporting business activities. The Indian banking sector has witnessed significant growth due to economic reforms, technological advancements, and increasing competition. To enhance financial performance, operational efficiency, and market competitiveness, banks have increasingly adopted mergers and acquisitions as strategic decisions. Post-merger integration is an essential process that combines financial resources, operational systems, and management practices to achieve the objectives of the merger. Effective integration helps banks improve efficiency, reduce costs, and strengthen their overall performance.

Liquidity is a key indicator of a bank's financial stability, as it reflects the ability to meet short-term financial obligations and maintain smooth operations. The success of a merger largely depends on how effectively financial integration and liquidity management are handled after the merger. This study focuses on the effect of post-merger integration on the liquidity condition of HDFC Bank and Axis Bank. It analyses the changes in liquidity performance before and after the integration period using financial data from annual reports and financial statements. The study aims to evaluate whether post-merger integration has improved liquidity management and enhanced the financial stability of these banks.

2. THEORETICAL BACKGROUND

The theoretical framework of this study is based on financial and management theories that explain the relationship between post-merger integration and liquidity management in banks. Post-Merger Integration Theory states that successful integration of organizational resources, operations, and systems improves efficiency and financial performance. Synergy Theory explains that mergers create additional value through cost savings, better resource utilization, and improved financial strength. These theories highlight the importance of effective integration in achieving the expected benefits of mergers.

Liquidity Preference Theory emphasizes that banks must maintain sufficient liquid assets to meet customer withdrawals and financial obligations. Financial Integration Theory explains that the combination of financial resources, technology, and management practices enhances liquidity management and banking performance. Together, these theories provide a strong foundation for studying the impact of post-merger integration on the liquidity position of HDFC Bank and Axis Bank.

3. REVIEW OF LITERATURE

Manoj Panda, Pankaj Sharma, Manohar Kapse, and Vinod Sharma (2025) found that fintech acquisitions improved liquidity and market value but reduced profitability. Nwankwo, Akinrinola, and Onyeka-Iheme (2025) found that mergers improved profitability through better revenue growth, cost efficiency, and asset utilization. Setiawan and Amelia (2024) found that mergers alone did not improve company performance and emphasized the importance of effective post-merger integration. Nazim Ullah et al. Eunike Rosni Bohalima, Erlina, and Firman Syarif (2024) found that mergers did not significantly improve financial performance and stressed the need for effective integration. Sumeet Gupta, Sunil Kadyan, and Narinder Kumar Bhasin (2021) highlighted that digitalization and proper integration improve customer service and financial performance after mergers. Vandana Gandhi, Prashant Chhajer, and Vishal Mehta (2020) observed that mergers improved some financial indicators but did not significantly enhance overall financial performance. . Sulagna Bhattacharya (2019) concluded that distressed mergers help firms survive, but post-merger financial performance remains mixed. Madiwalar (2019) reported that mergers strengthened competitiveness and supported long-term financial growth in the Indian banking sector. Farhan Ahmed, Aneeta Manwani, and Shafique Ahmed (2018) reported that mergers mainly increased market share and reduced costs rather than significantly improving financial performance. Pushpitha, Bharadwaj, and Aruna (2018) found no significant immediate improvement in the financial performance of SBI after its mega merger.

Han Bao (2017) reported that the merger of ABN AMRO Bank did not significantly improve financial performance, showing that mergers do not always produce immediate benefits. Lakhwani, Tiwari, and Jauhari (2017) concluded that mergers and acquisitions enhance financial performance over time when supported by effective post-merger integration. Bari, Fanchen, and Baloch (2016) stated that effective management practices are essential for improving post-merger financial and operational performance. Ayako, Musyoki, and Murungi (2015) found that bank mergers improved financial performance only in the long run, while short-term improvements were insignificant. Abdul Ghafoor Awan and Usman Bin Mahmood (2015) concluded that mergers improved profitability, operational efficiency, and business expansion in commercial banks Ravichandran and Alkhathlan (2010) observed that mergers improved profitability but had little impact on operational efficiency. Okpanachi Joshua (2011) found that mergers enhanced financial efficiency, profitability, and stability in Nigerian banks. Tariq H. Ismail, Abdulati A. Abdou, and Radwa M. Annis (2011) concluded that merger success depends on effective management and favourable market conditions.

4. PROBLEM STATEMENT

Mergers and acquisitions have become significant strategies for banks to enhance efficiency, financial strength, and market competitiveness. However, the success of a merger largely depends on effective post-merger integration, including the proper management of financial resources, operational systems, and organizational processes. Poor integration may negatively affect liquidity management and financial stability. This study examines the impact of post-merger integration on the liquidity condition of HDFC Bank and Axis Bank by analysing changes in their liquidity performance before and after financial integration. It aims to determine whether post-merger integration has contributed to improved liquidity management and strengthened the overall financial position of these banks.

5. OBJECTIVES OF THE STUDY

To analyze the liquidity condition of HDFC Bank and Axis Bank after integration

6. RESEARCH METHODOLOGY

6.1 Research Method

The study uses a descriptive and analytical research approach to examine the impact of post-merger integration on the liquidity condition of HDFC Bank and Axis Bank. It focuses on analysing the changes in liquidity performance before and after the merger period. The study is based on secondary data collected from annual reports, financial statements, and other published sources. Various liquidity indicators are evaluated using descriptive statistics and paired sample t-test to determine the effectiveness of financial integration. The research aims to understand whether post-merger integration has improved liquidity management and enhanced the financial stability of the selected banks.

6.2 Sampling Design – Purposive Sampling

Purposive sampling method is used to select HDFC Bank and Axis Bank for this study, as they are relevant to analysing the impact of post-merger integration. These banks were selected based on their significant merger activities and the availability of reliable financial data. The method enables the researcher to collect appropriate information for evaluating changes in liquidity performance before and after integration. The selected banks provide valuable insights into the effect of financial integration on liquidity condition and overall financial stability.

6.3 Selected Sample:

Table 1 Selected Sample

Sector	Company	Type of study	Period of analysis
Banking sector	HDFC Bank And Axis Bank	PRE MERGER AND POST M	Before and after merger/ Acquisition

6.4 Sample Size:

The study considers the annual financial data of HDFC Bank and Axis Bank for three years before and three years after the merger/acquisition. The observations are based on yearly financial data used for calculating liquidity ratios.

Table 2 Details of sampling and study variables

Particulars	Details
Sampling method	Purposive sampling
Seleted companies	HDFC Bank and Axis Bank
Industry sector	Banking
Study period	Three years before and three years after the merger / acquisition
Sample unit	Annual financial statements
Sample size	Financial year- wise observations
Purpose of sampling	To analyse the impact of post merger integration on liquidity condition

6.5 Tools for the Study

Descriptive Statistics

Descriptive statistics are used to summarize and present the liquidity data of HDFC Bank and Axis Bank. It includes measures such as mean, standard deviation, minimum, and maximum values to understand the overall liquidity performance before and after the merger.

Paired Sample t-test

The paired sample t-test is used to compare the liquidity condition of HDFC Bank before and after the merger. It helps to determine whether there is a significant difference in the liquidity performance between the pre-merger and post-merger periods.

6.6 Hypotheses

H_0: Post-merger integration has no significant impact on the liquidity condition of HDFC Bank and Axis Bank.

7. DATA ANALYSIS AND INTERPRETATION

The collected financial data of HDFC Bank and Axis Bank were analyzed to examine the impact of post-merger integration on liquidity condition. Descriptive statistics and the paired sample t-test were used to evaluate the changes in liquidity before and after the merger. The results are interpreted to determine whether the merger significantly influenced the liquidity condition of the selected banks.

Table 3 Descriptive Statistics

Statistics	Revenue	Net profit	Deposit	Borrowings	Operating cashflow
N	6	6	6	6	6
Missing	2	2	2	2	2
Mean	307171	55710	2.16E+06	435820	51858
Median	342491	55798	2.13E+06	422517	31645
Standard Deviation	71721	19649	686367	241707	56005
Minimum	170754	31857	1333721	177697	-11960
Maximum	351819	79219	3099638	730615	127242

Source: Survey Data -SPSS output

The descriptive statistics show that the financial variables have different levels of variation. Revenue has an average value of 307,171 with moderate fluctuations. Net profit is relatively stable, with a mean of 55,710 and a small difference between mean and median. Deposits show the highest average value (2.16 million) and the greatest variation among all variables. Borrowings also show considerable differences across observations. Operating cash flow has significant variation, including negative values, indicating fluctuations in cash generation. Overall, the data reflects differences in financial performance and stability among the observations.

Table 4 Paired Sample T- test Analysis

YEAR	Statistic	Df	p
2021	1.42	4	0.229
2022	1.44	4	0.222
2023	1.46	4	0.219
2024	1.62	4	0.18
2025	1.58	4	0.189
2026	1.48	4	0.212

Note: H_a $\mu \neq 0$

Source: Survey Data -SPSS output

The student's t-test analysis conducted for the years 2021 to 2026 showed that there was no statistically significant difference among the observed values during the study period. The t-values ranged from 1.42 **to** 1.62 with 4 degrees of freedom, and the corresponding p-values ranged from 0.180 to 0.229, which were higher than the significance level of 0.05. This indicates that the variations observed between years were not statistically meaningful and may be due to normal experimental or natural fluctuations. Although slight variations were observed, particularly the higher t-value in 2024 ($t = 1.62$, $p = 0.180$), these changes were not sufficient to indicate a significant trend. Therefore, the null hypothesis was accepted, confirming that the measured parameter remained statistically consistent and stable from 2021 to 2026.

8. DISCUSSION OF RESULTS

- The study analysed five financial variables: Revenue, Net Profit, Deposits, Borrowings, and Operating Cash Flow using descriptive statistics and paired sample t-test.
- Revenue showed consistent growth with an average value of ₹307,171 crore, indicating improvement in business performance after integration.
- Net Profit recorded a mean value of ₹55,710 crore, reflecting stable profitability and financial strength of the banks.
- Deposits maintained the highest average value of ₹2.16 million, indicating a strong deposit base and customer confidence.

- Borrowings and Operating Cash Flow showed variations during the study period, reflecting changes in funding requirements and cash management.
- The paired sample t-test results from 2021 to 2026 showed p-values above 0.05, indicating no statistically significant difference in financial performance.
- Overall, the study found that post-merger integration did not create a significant impact on the selected financial variables during the study period.

9.CONCLUSION

The study examined the effect of post-merger integration on the liquidity condition of HDFC Bank and Axis Bank using descriptive statistics and the paired sample t-test. The descriptive analysis showed changes in revenue, net profit, deposits, borrowings, and operating cash flow after the merger, indicating stable financial performance. However, the paired sample t-test results showed that all p-values were greater than 0.05, indicating that the differences between the pre-merger and post-merger periods were not statistically significant. Therefore, the null hypothesis was accepted. The study concludes that post-merger integration did not have a statistically significant impact on the liquidity condition of HDFC Bank and Axis Bank during the study period. Overall, the findings suggest that both banks maintained stable liquidity and financial performance after integration, reflecting effective liquidity management and operational stability.

The study provides scope for further research by including more banks and extending the study period to evaluate the long-term effects of post-merger integration. Future researchers can analyse additional factors such as profitability, risk management, operational efficiency, and customer satisfaction. Comparative studies between merged and non-merged banks can also provide broader insights into the effectiveness of mergers in the banking sector.

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