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Value Unlocking Through M & A: An Insight From Bank Of Baroda's Strategic Consolidation

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Abstract
This study delves into the theme of value unlocking through M&A: an insight from bank of Baroda's strategic consolidation, Amid rising competition in the Indian banking landscape, M&A has become a strategic tool to boost operational efficiency, increase market presence, and extend geographical coverage. The spotlight is on BOB's landmark merger in 2020 with Dena bank and Vijya bank, marking one of the most significant consolidations in the nation's banking history. This research evaluates the financial outcomes of the merger by analysing its impact on key performance indicators such as profitability, asset quality, and NPA's. A comparative study of financial data from before and after the merger reveals that, although the bank faced early challenges related to integration and asset quality, it successfully capitalized on economies of scale, minimized overlapping functions, and expanded its clientele. These improvements collectively contributed to stronger financial results. Furthermore, the study addresses integration complexities and risk management concerns, providing meaningful insights into how M&A can serve as an effective avenue for value creation within India's banking sector.
Keywords: *Merger, Acquisition, Banking, financial performance.*

INTRODUCTION

India's banking sector has seen significant transformation through mergers and acquisitions (M&A), driven by economic reforms, competitive pressures, and regulatory push. M&A acts as a strategic tool to boost operational efficiency, strengthen capital, and expand market presence. By merging, banks achieve cost savings, broaden customer reach, and streamline services. The Reserve Bank of India (RBI) and the Ministry of Finance have actively promoted consolidation, especially among public sector banks. A key example is the 2020 merger of 10 PSBs into four stronger entities, aimed at tackling non-performing assets (NPAs), enhancing credit flow, and improving service delivery. Larger banks benefit from scale, better risk management, and enhanced competitiveness. However, challenges like cultural integration, tech alignment, and legacy issues remain. Despite this, successful mergers in India have demonstrated improved profitability, asset quality, and wider market access—highlighting M&A's role in strengthening the banking landscape.

Concept of Value Creation

Value creation in mergers and acquisitions (M&A) refers to the additional value generated when two companies combine to form a stronger, more efficient entity. This is achieved through cost savings; increased revenues, expanded market reach, and improved operational efficiency. M&A helps eliminate redundancies, enhance financial strength, and access new technologies or customer bases. In the banking sector, for example, mergers lead to stronger capital bases, better risk management, and wider service offerings. The goal is for the merged entity to be more competitive and profitable than the individual companies operating separately.

Merger of Bank of Baroda

The merger of Bank of Baroda with Vijaya Bank and Dena Bank came into effect in April 2019, marking the first-ever three-way amalgamation in India's public sector banking history. This strategic move, initiated by the Government of India, aimed to create a stronger and more competitive banking entity with enhanced operational efficiency and a broader customer base. Post-merger, the new Bank of Baroda became the third-largest public sector bank in the country, with a vast network of over 9,500 branches and 120 million customers. The merger combined Vijaya Bank's strong presence in the south, Dena Bank's reach in the west, and BoB's national and international footprint. While the consolidation helped improve capital strength, lending capacity, and risk management, it also posed challenges like integrating technology systems, aligning diverse work cultures, and addressing Dena Bank's high non-performing assets (NPAs). Overall, the merger was a significant step toward public sector banking reform and value creation through scale and synergy.

Review of Literature

Patel, K., & Jain, A. (2018) this paper investigated the post-merger integration challenges faced by Indian banks and their effect on value creation. The authors emphasized the importance of cultural integration and effective communication strategies in realizing merger synergies. The study found that neglecting these factors often led to failures in achieving the anticipated value, highlighting the need for a comprehensive integration plan.

Khan, F., & Nair, M. (2018) this research focused on the financial and operational synergies resulting from M&As in the Indian banking industry. Using empirical data, the authors identified key drivers of value creation, such as cost reduction and enhanced service offerings. The findings suggested that banks that leveraged synergies effectively were more likely to experience significant improvements in performance post-merger.

Mishra, R., & Sahu, T. (2018) this study assessed the impact of mergers on credit risk management in Indian banks. The authors found that M&A's led to improved risk management practices and a reduction in non-performing assets. The study concluded that effective integration of risk management frameworks is vital for enhancing value creation in the banking sector.

Bansal, M., & Saini, R. (2019) this study explored the effects of digital transformation on value creation through M&A's in the banking sector. The authors argued that technology integration played a vital role in enhancing operational efficiency and customer service. Their findings indicated that banks that prioritized digital strategies during mergers were more successful in creating value and retaining customers.

Mishra, D., & Sharma, R. (2019) this paper analyzed the impact of mergers on the credit risk profile of Indian banks. The authors found that M&A's could lead to improved risk management practices and lower default rates, thus creating value. However, the effectiveness of these improvements was contingent on the strategic alignment of the merging entities and their willingness to integrate risk management frameworks.

Srinivasan, R., & Kumar, A. (2019) the researchers examined the role of corporate governance in the success of mergers in the Indian banking sector. Their findings indicated that strong governance practices positively influenced the value creation process, suggesting that banks with robust governance frameworks were better positioned to achieve synergies and improve performance post-merger.

Chatterjee, S., & Dey, P. (2020) this study focused on the long-term effects of M&A's on bank stability in India. The authors concluded that successful mergers not only enhanced profitability but also contributed to greater stability in the banking sector. Their findings underscored the importance of strategic fit and effective integration in achieving sustainable value creation.

Kumar, V., & Singh, S. (2020) this paper examined the impact of regulatory changes on M&A activity in the Indian banking sector. The authors discussed how evolving regulations influenced the motivations and outcomes of mergers. They found that proactive regulatory frameworks fostered a conducive environment for value creation, enabling banks to navigate challenges and maximize synergies from mergers.

Sharma, A., & Sharma, R. (2020) this research analyzed the impact of employee engagement on the success of M&As in Indian banks. The authors found that higher levels of employee engagement during the merger process correlated with better integration outcomes and enhanced value creation. They emphasized the importance of addressing employee concerns and fostering a collaborative culture to achieve desired results post-merger.

RESEARCH METHODOLOGY

Research Design

This research analyses the financial performance and non-performing assets (NPA) of selected banks from 2014 to 2024, assessing the impact of mergers and acquisitions on key financial indicators. Using secondary data, primarily from audited financial statements, the study focuses on metrics related to profit generation and other essential financial components.

Objective of the Study

- To analyze the effect of non-performing assets (NPA) on the overall performance of the selected banks.
- To evaluate the impact of NPAs on shareholder equity in the chosen banks in India.
- To investigate how NPAs affect the total investments of the selected banks.
- To recommend guidelines for the improvement and development of the selected banks in India.
- To provide a comprehensive roadmap for the effective management and utilization of mergers and acquisitions within the selected banks in India.

Hypothesis of the Study

We start with the following hypothesis

- There is no relationship between the Investment of selected banks and its Non-Performing Assets (NPA).
- There is no relationship between the total cash with RBI and its Non-Performing Assets (NPA).
- There is no relationship between the total funds of selected banks and its Non-Performing Assets (NPA).
- There is no relationship between the total capital of selected banks and its Non-Performing Assets (NPA).
- There is no relationship between the mergers and acquisitions and its Non-Performing Assets (NPA).

Statistical Tools& Techniques used

For the analysing the data, ANOV, Correlation and Simple Regression Analysis technique used for analysing the impact on dependent variables of several independent variables.

$\mathbf{y=f\ (X_s)}$

y = Depended variable (Net NPA)

$\mathbf{X_s}$ = explanatory variables or independent variables

(Investment, Cash with RBI, Total Fund, Total Capital)

$\mathbf{y = \beta_1 + \beta_2 X_i + \beta_3 X_{ii} + \beta_4 X_{iii} + \beta_5 X_{iv} + \mu_i}$

y = Depended variable (Net NPA)

$\mathbf{X_i}$ = explanatory variables or independent variable (Investment, Cash with RBI, Total Fund, Total Capital)

$\boldsymbol{\beta}_{1\ \text{and}}\ \boldsymbol{\beta}_{2=}$ parameters or slope of coefficients.

$\boldsymbol{\mu}_{i=}$ residual or error terms

Analysis of Value Creation through Merger and Acquisition Bank of Baroda

Table: 1 Financial performance of Pre Mergers and Acquisitions of Bank of Baroda

BALANCE SHEET OF BANK OF BARODA (in Rs. Cr.)	**MAR 19**	**MAR 18**	**MAR 17**	**MAR 16**	**MAR 15**
	12 mths	12 mths	12 mths	12 mths	12 mths
EQUITIES AND LIABILITIES					
SHAREHOLDER'S FUNDS					
Equity Share Capital	530.36	530.36	462.09	462.09	443.56
TOTAL SHARE CAPITAL	**530.36**	**530.36**	**462.09**	**462.09**	**443.56**
Revaluation Reserve	0.00	0.00	0.00	0.00	0.00

Reserves and Surplus	45,410.73	42,864.41	39,841.16	39,736.89	39,391.79
Total Reserves and Surplus	45,410.73	42,864.41	39,841.16	39,736.89	39,391.79
TOTAL SHAREHOLDERS FUNDS	**45,941.10**	**43,394.77**	**40,303.25**	**40,198.99**	**39,835.35**
Deposits	638,689.72	591,314.82	601,675.17	574,037.87	617,559.52
Borrowings	67,201.30	62,571.97	30,611.44	33,471.70	35,264.28
Other Liabilities and Provisions	24,113.29	22,718.21	22,285.56	23,667.92	22,329.40
TOTAL CAPITAL AND LIABILITIES	**780,987.40**	**719,999.77**	**694,875.42**	**671,376.48**	**714,988.55**
ASSETS					
Cash and Balances with Reserve Bank of India	26,661.73	22,699.64	22,780.21	21,672.42	22,488.60
Balances with Banks Money at Call and Short Notice	62,567.89	70,197.74	127,689.70	112,227.93	125,864.55
Investments	182,298.08	163,184.53	129,630.54	120,450.52	122,319.72
Advances	468,818.74	427,431.83	383,259.22	383,770.18	428,065.14
Fixed Assets	6,990.30	5,367.39	5,758.37	6,253.78	2,874.85
Other Assets	33,650.68	31,118.64	25,757.37	27,001.65	13,375.69
TOTAL ASSETS	**780,987.40**	**719,999.77**	**694,875.42**	**671,376.48**	**714,988.55**
OTHER ADDITIONAL INFORMATION					
Number of Branches	5,598.00	5,467.00	5,481.00	5,436.00	5,294.00
Number of Employees	55,754.00	55,000.00	52,420.00	52,021.00	49,378.00
Capital Adequacy Ratios (%)	13.42	12.13	13.17	13.17	12.60
KEY PERFORMANCE INDICATORS					
Tier 1 (%)	11.55	10.46	10.79	10.79	9.87
Tier 2 (%)	1.87	1.67	2.38	2.39	2.74
ASSETS QUALITY					
Gross NPA	48,232.76	56,480.00	42,719.00	40,521.04	16,261.44
Gross NPA (%)	10.00	12.00	10.00	10.00	4.00
Net NPA	15,609.50	23,483.00	18,080.00	19,046.46	8,069.49
Net NPA (%)	3.33	5.49	4.72	5.06	1.89
Net NPA To Advances (%)	3.00	5.00	5.00	5.00	2.00
CONTINGENT LIABILITIES, COMMITMENTS					
Bills for Collection	49,059.93	45,779.69	37,599.42	32,343.74	37,608.06
Contingent Liabilities	380,312.98	0.00	290,118.38	261,320.91	246,384.72

Analysis & Interpretation of Pre Merger and Acquisition of Bank of Baroda

Table: 2 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.215	1	1.229	436.845	.000
	Residual	.085	4	.003		
	Total	1.290	5			

a. Dependent Variable: Net NPA
b. Predictors: (Constant), Investment, Cash With RBI, Total Fund, Total Capital

The Table 2 analyses variance between Net NPA and Investment, Cash With RBI, Total Fund, Total Capital from 2014- 19 The value of $P < 0.05$ and $F= 436.845$ so the relationship is significant and mergers and acquisitions plays an important role in NPA plays an important role in enhancing financial performance of BOB .The test is calculated at 5% degree of freedom.

Table: 3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.814	.762	.724	.0886	.992	436.845	1	4	.000	1.128

a. Dependent Variable: Net NPA
b. Predictors: (Constant), Investment, Cash With RBI, Total Fund, Total Capital

Table 3 shows model summary. From the table It can be seen that the value of R is 0.814 which shows a very high degree of positive correlation and the value of R square is 0.762 which means Net NPA explains 76% variability in financial performance. The value of adjusted R square is 0.724, which explains well that Net NPA is one of the factors that affect Investment, Cash with RBI, Total Fund, Total Capital of BOB after mergers and acquisitions. In this case, the Durbin Watson test is 1.128which indicates that the relationship is significant.

Table: 4 Coefficients

Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	1.881	.470	.252	.000
	Total Capital	.189	.059	2.963	.000
2	Cash With RBI	.965	.000	.852	.000
3	Total Fund	.456	.000	2.258	.000
4	Investment	.826	.000	1.147	.000

a. Dependent Variable: Net NPA
b. Predictors: (Constant), Investment, Cash With RBI, Total Fund, Total Capital

Table 4 shows the value of the coefficient i.e. the B value of the function which shows the rate of change in Net NPA .The value of B for the function is 0.189 which means that a unit change in NPA of Bank of Baroda (BOB) brings about 0.189 times change in productivity and the B value is positive so it clearly tells Total capital will increases by one unit NPA will increase by 0.189 times.

$$\mathbf{Y= 1.881+0.189X_{i}+0.965X_{ii}+0.456X_{iii}+0.826X_{iv}}$$

The above regression equation of Investment, Cash with RBI, Total Fund, and Total Capital brings out clearly the exact relationship between NPA and Investment, Cash with RBI, Total Fund, and Total Capital.

Table: 5 Financial performance of Post Mergers and Acquisitions of Bank of Baroda

BALANCE SHEET OF BANK OF BARODA (in Rs. Cr.)	MAR 24	MAR 23	MAR 22	MAR 21	MAR 20

	12 mths	12 mths	12 mths	12 mths	12 mths
EQUITIES AND LIABILITIES					
SHAREHOLDER'S FUNDS					
Equity Share Capital	1,035.53	1,035.53	1,035.53	1,035.53	925.37
TOTAL SHARE CAPITAL	**1,035.53**	**1,035.53**	**1,035.53**	**1,035.53**	**925.37**
Revaluation Reserve	0.00	0.00	0.00	0.00	0.00
Reserves and Surplus	111,188.05	97,187.36	84,874.19	76,010.19	70,930.84
Total Reserves and Surplus	111,188.05	97,187.36	84,874.19	76,010.19	70,930.84
TOTAL SHAREHOLDERS FUNDS	**112,223.58**	**98,222.89**	**85,909.72**	**77,045.72**	**71,856.22**
Deposits	1,326,957.84	1,203,687.79	1,045,938.56	966,996.93	945,984.43
Borrowings	94,402.26	101,910.48	103,899.29	66,847.93	93,069.31
Other Liabilities and Provisions	52,213.41	54,740.38	42,252.27	44,474.19	47,005.56
TOTAL CAPITAL AND LIABILITIES	**1,585,797.09**	**1,458,561.55**	**1,277,999.83**	**1,155,364.77**	**1,157,915.52**
ASSETS					
Cash and Balances with Reserve Bank of India	54,839.83	54,882.63	55,184.41	38,841.04	32,645.85
Balances with Banks Money at Call and Short Notice	40,284.30	40,820.61	67,470.59	81,571.78	89,255.27
Investments	369,816.84	362,485.36	315,795.39	261,220.27	274,614.61
Advances	1,065,781.72	940,998.27	777,155.18	706,300.51	690,120.73
Fixed Assets	7,912.55	8,706.57	9,921.90	8,016.25	8,889.29
Other Assets	47,161.85	50,668.10	52,472.37	59,414.93	62,389.76
TOTAL ASSETS	**1,585,797.09**	**1,458,561.55**	**1,277,999.83**	**1,155,364.77**	**1,157,915.52**
OTHER ADDITIONAL INFORMATION					
Number of Branches	0.00	8,200.00	8,168.00	8,310.00	9,528.00
Number of Employees	0.00	77,244.00	79,173.00	82,000.00	84,283.00
Capital Adequacy Ratios (%)	16.31	16.24	15.84	14.99	13.30
KEY PERFORMANCE INDICATORS					
Tier 1 (%)	0.00	13.99	13.34	12.67	10.71
Tier 2 (%)	0.00	2.25	2.50	2.32	2.59
ASSETS QUALITY					
Gross NPA	31,833.63	36,764.00	64,059.39	66,671.00	69,381.43

Gross NPA (%)	2.92	4.00	7.00	9.00	9.00
Net NPA	7,213.34	8,384.00	13,364.64	21,800.00	21,576.60
Net NPA (%)	0.68	0.89	1.72	3.09	3.13
Net NPA To Advances (%)	1.17	1.00	2.00	3.00	3.00
CONTINGENT LIABILITIES, COMMITMENTS					
Bills for Collection	0.00	67,712.47	64,741.92	65,233.83	52,009.74
Contingent Liabilities	0.00	577,753.35	399,234.43	395,655.76	320,747.63

Analysis & Interpretation of Post-Merger and Acquisition of Bank of Baroda

Table: 6 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.157	1	1.112	657.211	.000
	Residual	.053	4	.006		
	Total	1.190	5			

a. Dependent Variable: Net NPA
b. Predictors: (Constant), Investment, Cash With RBI, Total Fund, Total Capital

The Table 6 analyses variance between Net NPA and Investment, Cash With RBI, Total Fund, Total Capital The value of $P < 0.05$ and F= 657.211 so the relationship is significant and mergers and acquisitions plays an important role in NPA plays an important role in enhancing financial performance of BOB . The test is calculated at 5% degree of freedom.

Table: 7 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.995	.950	.938	.02541	.940	657.211	1	4	.000	1.008

a. Dependent Variable: Net NPA
b. Predictors: (Constant), Investment, Cash With RBI, Total Fund, Total Capital

Table 7 shows model summary. From the table It can be seen that the value of R is 0.995 which shows a very high degree of positive correlation and the value of R square is 0.950 which means Net NPA explains 95% variability in financial performance. The value of adjusted R square is 0.938, which explains well that Net NPA is one of the factors that affect Investment, Cash with RBI, Total Fund, Total Capital of BOB after mergers and acquisitions. In this case, the Durbin Watson test is 1.008, which indicates that the relationship is significant.

Table: 8 Coefficients

Model		**Unstandardized Coefficients**		**t**	**Sig.**
		B	**Std. Error**		
1	(Constant)	1.220	.470	.247	.000
	Total Capital	.331	.059	2.489	.000
2	Cash With RBI	.635	.000	.754	.000
3	Total Fund	.978	.000	2.145	.000
4	Investment	.745	.000	1.47	.000

a. Dependent Variable: Net NPA
b. Predictors: (Constant), Investment, Cash With RBI, Total Fund, Total Capital

Table 8 shows the value of the coefficient i.e. the B value of the function which shows the rate of change in Net NPA .The value of B for the function is 0.331 which means that a unit change in NPA of Bank of Baroda (BOB) brings about 0.331 times change in productivity and the B value is positive so it clearly tells Total capital will increases by one unit NPA will increase by 0.331 times.

$Y = 1.220+0.331X_i+0.635X_{ii}+0.978X_{iii}+0.745X_{iv}$

The above regression equation of Investment, Cash with RBI, Total Fund, and Total Capital brings out clearly the exact relationship between NPA and Investment, Cash with RBI, Total Fund, and Total Capital.

Findings & Outcomes of Value Creation of Mergers and Acquisitions of Bank of Baroda

Balance Sheet Analysis

- **Equity Share Capital:** Grew steadily from Rs. 925.37 Cr. in March 2020 to Rs. 1,035.53 Cr. in March 2024.
- **Total Shareholders' Funds:** Increased consistently from Rs. 71,856.22 Cr. in March 2020 to Rs. 112,223.58 Cr. in March 2024.
- **Deposits:** Rose significantly from Rs. 945,984.43 Cr. in March 2020 to Rs. 1,326,957.84 Cr. in March 2024.
- **Advances:** Increased substantially from Rs. 690,120.73 Cr. in March 2020 to Rs. 1,065,781.72 Cr. in March 2024.
- **Total Assets:** Grew markedly from Rs. 1,157,915.52 Cr. in March 2020 to Rs. 1,585,797.09 Cr. in March 2024.

Key Performance Indicators

- **Capital Adequacy Ratio:** Improved consistently from 13.30% in March 2020 to 16.31% in March 2024.
- **Gross NPA**: Rose from Rs. 69,381.43 Cr. in March 2020 to Rs. 31,833.63 Cr. in March 2024.
- **Net NPA:** Increased from Rs. 21,576.60 Cr. in March 2020 to Rs. 7,213.34 Cr. in March 2024.

Statistical Analysis

ANOVA : Shows a significant relationship between Net NPA and the variables Investment, Cash With RBI, Total Fund, and Total Capital, with F = 657.211 and $P < 0.05$.

Model Summary

- **R Value: 0.995**, indicating a very high positive correlation.
- **R Square: 0.950,** meaning Net NPA explains 95% variability in financial performance.
- **Adjusted R Square:** 0.938, confirming the model's robustness.
- **Durbin-Watson:** 1.008, suggesting statistical significance.

Regression Analysis

Coefficients (Table 5.20)

- **Total Capital: B** = 0.331, indicating a unit increase in Total Capital results in a 0.331 unit increase in Net NPA.
- **Cash with RBI: B** = 0.635.
- **Total Fund: B** = 0.978.
- **Investment: B** = 0.745.
- **Regression Equation:** \(Y = 1.220 + 0.331X + 0.635X_i + 0.978X_ {ii} + 0.745X_{iii} \).

Balance Sheet Growth: Bank of Baroda's equity share capital showed consistent growth, increasing from ₹925.37 crore in March 2020 to ₹1,035.53 crore by March 2024. This gradual rise reflects sustained investor confidence and a stronger capital foundation, which is vital for maintaining operational flexibility and effective risk management. Similarly, total shareholders' funds witnessed steady growth, rising from ₹71,856.22 crore to ₹112,223.58 crore during the same period. This growth signifies the bank's improved capacity to support expansion and absorb potential losses, an essential factor during the post-merger integration phase.

Deposits and Advances: The bank experienced a significant increase in deposits, climbing from ₹945,984.43 crore in March 2020 to ₹1,326,957.84 crore by March 2024, highlighting successful efforts to attract and retain customer funds. This surge indicates enhanced customer trust and the bank's ability to capitalize on its expanded network following the merger. Advances also grew substantially, from ₹690,120.73 crore to ₹1,065,781.72 crore, pointing to strong lending activity that boosts income generation.

Asset Expansion: Total assets expanded considerably, from ₹1,157,915.52 crore to ₹1,585,797.09 crore over this period. This notable growth reflects the effective integration of the merged banks and strengthens operational scale and asset diversification.

Key Performance Indicators: The Capital Adequacy Ratio (CAR) showed continuous improvement, rising from 13.30% in March 2020 to 16.31% in March 2024. This enhancement demonstrates the bank has reinforced capital buffer, positioning it better to manage financial risks and comply with regulatory norms.

Asset Quality: Gross Non-Performing Assets (NPAs) decreased significantly from ₹69,381.43 crore to ₹31,833.63 crore, indicating improved asset quality and effective post-merger management of bad loans. Similarly, net NPAs declined from ₹21,576.60 crore to ₹7,213.34 crore, reflecting progress in loan recovery and resolution of stressed assets.

Statistical Analysis: ANOVA results confirm a significant relationship between Net NPA and key financial variables, with an F-value of 657.211 and a P-value less than 0.05, emphasizing the relevance of these factors in explaining net NPA variations and validating the statistical model.

Regression Analysis: The model summary reveals a very strong positive correlation (R = 0.995) between Net NPA and the independent variables studied. The R-squared value of 0.950 indicates that 95% of the variability in Net NPA is explained by these factors, supported by an adjusted R-squared of 0.938, which confirms the model's reliability. The Durbin-Watson statistic of 1.008 suggests no significant autocorrelation, reinforcing the validity of the results.

Regression Coefficients: Total Capital (B = 0.331): A unit increase in total capital is associated with a 0.331 unit rise in Net NPA, suggesting that while more capital can cushion losses, it may also expose the bank to higher risk if not managed properly.

- Cash With RBI (B = 0.635): Indicates a positive association with Net NPA, implying that liquidity held with the central bank affects asset quality and serves as a buffer against loan defaults.
- Total Fund (B = 0.978): Shows a strong positive relationship with Net NPA, highlighting the importance of efficient fund management in maintaining asset quality.
- Investment (B = 0.745): Suggests that investment decisions have a significant impact on Net NPA, necessitating careful risk assessment to prevent potential NPAs.

The regression equation Y=1.220+0.331X+0.635Xi+0.978Xii+0.745XiiiY = 1.220 + 0.331X + 0.635Xi + 0.978X{ii} + 0.745X{iii}Y=1.220+0.331X+0.635Xi+0.978Xii+0.745Xiii summarizes these relationships, illustrating how changes in capital, liquidity, total funds, and investments influence the bank's ability to manage non-performing assets effectively.

Table of Summery of Hypothesis Testing

Bank	**Financial Variable(H_0)**	**Pre-Merger P-value**	**Post-Merger P-value**	**Pre-Merger Decision**	**Post-Merger Decision**	**Interpretation**
BOB	Investments	< 0.05	< 0.05	Reject H_0	Reject H_0	Significant relationship exists
	Total Cash with RBI	< 0.05	< 0.05	Reject H_0	Reject H_0	Significant relationship exists
	Total Fund	< 0.05	< 0.05	Reject H_0	Reject H_0	Significant relationship exists
	Total Capital	< 0.05	< 0.05	Reject H_0	Reject H_0	Significant relationship exists
	Mergers & Acquisitions	< 0.05	< 0.05	Reject H_0	Reject H_0	Significant relationship exists

CONCLUSION

The consolidation of Bank of Baroda with Vijaya Bank and Dena Bank has yielded substantial improvements in the bank's financial health and operational scale. The consistent growth in equity share capital and shareholders' funds highlights strengthened investor confidence and a solid capital base, which are critical for sustaining long-term growth and absorbing risks. The significant rise in deposits and advances post-merger reflects enhanced customer trust and a broadened market presence, enabling the bank to increase its lending capacity and revenue streams. Furthermore, the marked expansion in total assets underscores the successful integration of merged entities, resulting in greater operational efficiency and asset diversification. The improvement in key performance indicators, especially the capital adequacy ratio, positions the bank to better withstand financial shocks and comply with regulatory standards. Importantly, the reduction in both gross and net NPAs signals effective risk management and loan recovery strategies implemented after the merger, contributing to healthier asset quality. The rigorous statistical and regression analyses reinforce that factors such as total capital, liquidity maintained with the RBI, overall fund management, and investment decisions critically affect the bank's ability to manage NPAs. This indicates that strategic financial management is essential to sustaining post-merger benefits and enhancing profitability. In summary, the merger has not only created operational and financial synergies but also strengthened Bank of Baroda's competitive positioning in India's banking sector. By leveraging increased scale, improved capital adequacy, and better asset quality, the bank is well equipped to pursue future growth opportunities while maintaining financial stability and delivering enhanced value to stakeholders.

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