Unraveling the Collapse of Private Sector Banks in India : Evidence from the Lakshmi Vilas Bank's Financial Performance

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Abstract

Purpose : The banking sector faced a significant jolt when the RBI merged Lakshmi Vilas Bank (LVB) with the Development Bank of India Ltd. (DBIL). Thus, this study aimed to analyze the financial performance of LVB to understand the reasons that led to its collapse. Additionally, this study aimed to evaluate the current financial performance of the DBIL to examine the post-merger effects on the bank.

Methodology : The study delved into a comprehensive 10-year analysis of LVB's financial performance, stretching from 2011 to 2020, employing trend analysis, common-size balance sheets, and financial ratios to find out the reasons that led to the failure of the LVB bank.

Findings : The study, in particular, showed that LVB was facing the issue of asset-liability mismatch, which led to increased non-performing assets (NPAs), declining asset quality, weak corporate governance, unsound lending practices, and insufficient regulatory oversight. Moreover, the data suggested that the merger significantly impacted DBIL's financial performance, with improvements in return on assets and return on equity but challenges like increased gross and net NPA and a decline in business and profit per employee ratios.

Practicality : Moreover, this study would contribute to the existing body of knowledge by providing a detailed case study of LVB, offering insights into the specific causes of its failure. It will also suggest policy implications for preventing similar occurrences in the future and enhancing the stability of the Indian banking sector.

Originality : This study's uniqueness lies in its potential to identify measures that could prevent similar failures in the future.

Keywords : Banking sector, private banks, non-performing assets (NPA), bank's failure, financial performance, bank run

JEL Classification Codes : G21, G28, G34

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The most important pillar of the Indian financial system is the banking industry, which is its core and provides for the financial needs of all societal divisions. As a result, an efficient and solid financial system is the foundation for a robust economy. In India, the Reserve Bank of India (RBI) is vested with the responsibility of regularly monitoring the banks' health. The banking sector has faced serious difficulties recently despite this regulatory oversight, as demonstrated by actions such as the Punjab and Maharashtra Cooperative (PMC) Bank moratorium that was imposed on September 24, 2019, and the provision of an 11,200 crore ₹ bailout

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package for Yes Bank. The potential failure of banks not only endangers their reputation but also undermines the confidence of depositors in the entire banking system (Mohan, 2020). Furthermore, the failure of one of these institutions would start a domino effect that would cause defaults and shortages of liquidity, raising questions about the stability and safety of the financial system as a whole. As a result, mergers and acquisitions are frequently used by governments and authorities as a strategy[1]. In the Indian banking sector, distressed mergers of this kind are not new; in 2004, for instance, the Oriental Bank of Commerce acquired Global Trust Bank, preventing millions of depositors' hard-earned money from being lost. IDBI entered the acquisition of a financially troubled United Western Bank in 2013.

The banking landscape faced another jolt when RBI put a moratorium on the 93-year-old private bank, Lakshmi Vilas Bank (LVB), in November 2020 under Section 45 sub-sec (2) of the Banking Regulation Act, 1949 and capped the depositor's withdrawal at ₹ 25,000 per depositor. Considering the problems faced by LVB, the RBI intervened in 2019 and placed the bank under Prompt Corrective Action (PCA) and later devised a rescue plan in which LVB was merged with the Development Bank of India Ltd. (DBIL), a subsidiary of the Development Bank of Singapore (DBS) and this marked a history in the banking sector where an Indian private bank merged with a foreign bank (Reserve Bank of India, 2020).

In light of this, the study attempted to respond to the following queries: Using financial statement analysis, what variables led to the LVB's failure? In the second section, the reasoning behind choosing a foreign bank for the merger is examined. Third, if the RBI is successfully carrying out its mandate to protect banks, finally, it evaluates how these changes have affected DBIL's performance.

While extensive research has been conducted on the general causes and impacts of banking crises, there is a gap in the literature regarding the specific factors leading to the collapse of individual private sector banks in India, such as LVB. Previous studies have not thoroughly examined the internal dynamics and external pressures that contributed to LVB's downfall, highlighting a need for focused research in this area. This study will also add to the body of knowledge already in existence by giving a thorough case study of LVB and illuminating the precise reasons behind its failure. Along with policy recommendations, it will also highlight how to improve the stability of the Indian banking industry and stop such incidents from happening again.

Review of Literature

It is crucial to comprehend the larger background of banking and financial crises as well as particular bank failures in order to analyze the collapse of private sector banks in India, especially the LVB. The body of existing research offers insightful information about the causes of bank failures and the consequences they have on the economy.

First, the causes of bank crises have been multifaceted, encompassing bank runs and liquidity issues (Diamond & Dybvig, 1983), moral hazard, and excessive risk-taking spurred by safety nets (Stiglitz, 1983). Financial liberalization and deregulation have also played significant roles in precipitating crises (Demirgüç-Kunt & Detragiache, 1998). According to Bernanke, financial crises were often triggered by problems in the credit market, examining how external shocks could impact credit availability and, consequently, the overall economy. However, Kindleberger argued that financial crises were an inevitable part of the financial system's internal dynamics and cycles rather than being solely caused by external, unexpected factors (Carré & Le Maux, 2024).

[1] This technique of merger is not limited to countries like India but was adopted by different countries including the USA, Poland, Italy, China, Croatia, Indonesia, Germany, Philippines, and Japan. For instance, following the Global Financial Crisis, the U.S. market witnessed several key deals aimed at averting the collapse of financial institutions and preventing the spread of a contagion in both U.S. and global financial markets. Notable examples include JP Morgan's acquisition of Bear Stearns, Bank of America's acquisition of Merrill Lynch, and Wells Fargo's acquisition of Wachovia Bank.

The literature has identified major reasons for bank crises, including the problem of non-performing assets (NPAs), weak corporate governance, inefficient financial supervision, macroeconomic shocks, inadequate regulatory capital, improper credit evaluation, excessive exposure to the real estate sector, political interventions, insufficient provisioning, and management frauds (Nayak & Chandiramani, 2022).

Second, the effects of financial crises have been profound, impacting economic growth and stability and imposing substantial social and economic costs (Laeven & Valencia, 2013). Further, they have disrupted financial markets, leading to significant macroeconomic consequences (Brunnermeier & Sannikov, 2014). In the Indian context, Cheshti and Khan (2020) analyzed the impact of the global financial crisis on the efficiency of public sector banks (PSBs) in India using DEA analysis. Their findings indicated that PSBs were resilient to the shocks and that the efficiency of banks remained unaffected before and after the crisis period due to reforms initiated in the economy. On the other hand, Gupta (2021) and Singhal and Chauhan (2021) examined the cases of Yes Bank and PMC Bank, emphasizing that the banks' failures were not caused by external factors but rather by issues such as soaring NPAs, poor governance practices, underreporting of lending operations, financial irregularities, and failure of their internal control system. Singh et al. (2022) highlighted the critical role of corporate governance, noting its significant impact on the financial performance of banks.

Furthermore, Akhtar et al. (2021) discovered that the poor performance of the stock of Yes Bank, increased withdrawals, and losses from operating activities were the other financial factors that led to the failure of Yes Bank. Sarkar (2020) demonstrated that investors responded favorably to the RBI's proposal to revive Yes Bank, which is why, on March 16, 2020, share prices increased to 40.4. Moreover, Jayaraman et al. (2014) inspected the post-merger performance of banks and concluded that banks took a longer period, around three to five years, to gain the synergy benefits as there was no immediate improvement in the performance parameters.

Research Methodology

The empirical study is based on data primarily culled out from annual reports of LVB over an extensive period of 10 years, ranging from 2011 to 2020. Several financial ratios, including the capital adequacy ratio, profitability ratios, operating efficiency ratios, and asset quality ratios (details of which are stated in Table 1), were used to

Table 1. ***Indicators for the Measurement of Financial Ratios of Banks***

Variables	Indicator/Ratio	Formula
1. Capital Adequacy Ratios	Capital Adequacy Ratio	Tier I and Tier II CRAR
	Advances to Asset Ratio	Total Advances/Total Asset
2. Profitability Ratios	Return on Asset	Net Income/Total Asset
	Return on Equity	Net profit to Shareholders Funds, i.e., Capital + Reserves and Surplus
	Net Interest Margin	Net Interest Income/Total Asset
	Profit Margin Ratio	Net Profit/Total Revenue
3. Liquidity Ratios	Credit-to-Deposit Ratio	Total Credit/Total Deposit
	Deposit to Total Asset Ratio	Total Deposit/Total Asset
4. Operating Efficiency Ratios	Cost-to-Income Ratio	(Operating Expenses-Other Income)/ Interest Income
	Total Advances to Total Deposit Ratio	Total Advances/Total Deposit
	Business per Employee	Total Business (Deposit plus Advances) by Total Number of Employees

	Profit per Employee	Profit after Tax with Total Number of Employees
5. Asset Quality Ratios	NNPA Ratio	Net Non-Performing Asset to Total Asset
	GNPA Ratio	Gross Non-Performing Asset to Total Asset

examine the bank's financial performance. Numerous research, including those conducted by Abbas et al. (2014), Bishnoi and Devi (2015), Gandhi et al. (2020), Kumar (2009), Patel (2018), Sahota and Dhiman (2017), and Shanmugam and Nair (2004), have already employed these ratios. Following the methodology of Kaur and Bala (2024), trend analysis and common size statements have been used to fulfill the following objectives:

- To analyze the financial performance of LVB to understand the reasons that led to its collapse.
- To evaluate the current financial performance of the DBIL to examine the post-merger effects on the bank.

Analysis and Results

It has been determined which changes in the bank's financial performance led to LVB's failure by analyzing the income statement and balance sheet.

Table 2. ***Trend Analysis of the Balance Sheet of LVB (% Change)***

Particulars	2011–2012	2011–2013	2011–2014	2011–2015	2011–2016	2011–2017	2011–2018	2011–2019	2011–2020
I. Capital and Liability									
1. Capital	100.00	100.01	100.03	183.71	184.00	196.30	262.47	328.00	345.24
2. Reserve and Surplus	109.44	117.48	123.16	181.82	197.77	248.59	266.66	194.78	100.01
3. Deposits	126.59	140.09	166.58	197.00	228.09	274.03	298.75	262.61	192.32
4. Borrowings	79.99	66.20	63.18	63.18	99.71	244.53	553.40	127.05	104.22
5. Other Liabilities and Provision	110.66	103.60	106.43	136.11	152.51	146.39	145.90	178.40	185.88
Total	122.12	132.82	155.27	185.74	216.01	264.97	303.95	248.45	183.60
II. Assets									
1. Cash and Balances with the Reserve Bank of India	85.84	77.17	126.33	121.18	136.34	154.17	179.97	175.29	111.04
2. Balance with Banks and Money at call and short notice	44.27	173.34	144.17	211.28	98.98	203.80	381.86	620.83	955.06
3. Investments	124.90	122.90	161.66	173.46	186.01	245.87	306.00	239.57	153.00
4. Advances	125.87	144.58	159.24	202.02	242.68	293.15	318.35	248.36	170.83
5. Fixed Assets	105.63	105.97	111.94	135.88	204.88	200.48	224.95	262.35	258.71
6. Other Assets	129.36	119.77	116.75	142.57	167.44	182.71	306.06	388.55	602.68
Total	122.12	132.82	155.27	185.74	216.01	264.97	303.95	248.45	183.60
Bills for Collection	83.74	92.79	104.80	122.89	151.78	62.40	90.73	69.39	68.77
Contingent Liabilities	290.86	228.97	225.04	251.14	324.73	289.68	0.00	741.01	535.08

Source : Calculated by the author from the Balance Sheet of LVB from 2011 to 2020.

Table 2 presents the trend analysis of LVB's balance sheet, highlighting the percentage change in financial performance metrics from 2011 to the end of the study period (taking 2011 as a base year as 100). It is clear by examining the capital and liability sections of the balance sheet that LVB's capital grew steadily, beginning in 2012 with a small increase and culminating in an astounding 245% increase in 2020. Nevertheless, the rate of increase in deposits fell to 162.61% and 92.32% in the following years after peaking at 198.75% in 2018. This suggests that depositor confidence was declining as a result of industry uncertainty in the banking industry. Comparably, reserves and surplus showed a steady increase up to 2018, growing at a pace of 160%; however, this dropped down to 12% in 2020, indicating that the bank used its reserves during those years. On the other hand, as the negative value shows, borrowings initially declined until 2016, indicating a sound financial condition for the bank. But borrowings saw a noticeable spike of 144.53% in 2017 and 453.4% in 2018, before finally slowing to 4.22% in 2020, suggesting a decreased reliance on borrowings in subsequent years.

In terms of assets, cash and balances held with the RBI showed consistent growth in 2020, rising from –14.16% to 11.04%, indicating better liquidity management. Further evidence of increased loan activity comes from advances and investments, which climbed from 25.87% and 24.9% in 2012 to an all-time high of 218 % and 206% in 2018, respectively. After that, though, they slowed considerably, with lows of 70% and 53% in 2020, respectively. Other assets also grew progressively, demonstrating the bank's overall expansion in its assortment of assets. Finally, the data indicate overall growth in capital, deposits, advances, and fixed assets. However, there are fluctuations in reserve and surplus, borrowings, and certain asset categories.

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The common-size balance sheet of LVB, as depicted in Table 3 over the past 10 years, provides valuable insights into the composition and structure of the bank's capital and assets.

Table 3 shows that deposits make up a significant amount of the bank's obligation on its balance sheet and that the ratio of deposits to total assets has been largely consistent over the past 10 years, averaging approximately

Table 3. ***Common Size Statement of Balance Sheet of LVB (in Percentage)***

Particulars	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
I. Capital and Liability										
1. Capital	0.73	0.6	0.55	0.47	0.73	0.62	0.54	0.63	0.97	1.38
2. Reserve and Surplus	5.98	5.30	5.19	4.63	5.57	5.51	5.52	5.12	4.76	3.66
3. Deposits	83.82	86.89	88.41	89.93	88.9	88.51	86.69	82.39	88.6	87.8
4. Borrowings	5.45	3.57	2.72	2.22	1.85	2.52	5.03	9.93	2.79	3.09
5. Other Liabilities and Provision	4.02	3.64	3.13	2.75	2.94	2.84	2.22	1.93	2.88	4.07
Total	100	100	100	100	100	100	100	100	100	100
II. Assets										
1. Cash and Balances with the RBI	7.09	4.99	4.12	5.77	4.63	4.48	4.13	4.2	5.01	4.29
2. Balance with Banks and Money at call and short notice	0.62	0.23	0.81	0.58	0.71	0.29	0.48	0.78	1.56	3.24
3. Investments	26.46	27.06	24.48	27.54	24.71	22.78	24.55	26.63	25.51	22.05
4. Advances	60.85	62.72	66.24	62.41	66.19	68.37	67.33	63.74	60.83	56.62
5. Fixed Assets	1.35	1.16	1.07	0.97	0.99	1.28	1.02	1.00	1.42	1.9
6. Other Assets	3.63	3.84	3.27	2.73	2.78	2.81	2.5	3.65	5.67	11.9
Total	100	100	100	100	100	100	100	100	100	100

Source : Calculated by author from the Balance Sheet of LVB from 2011 to 2020.

87%. This implies that client deposits serve as the bank's main source of funding, giving it a steady stream of capital for its lending operations. While advances hold a significant share on the asset side, averaging around 63%, the percentage of advances to total assets is showing a declining trend. This implies that the bank's lending activities have reduced its total asset base. Another major component on the asset side is "Investments," and the proportion of investments to total assets has decreased over the years. Thus, "Advances" and "Deposits" are crucial components of LVB's balance sheet.

The trend analysis of LVB's income statement over the 10 years, with 2011 as a base year, reveals several significant patterns.

First, Table 4 indicates that the bank's overall income rose quickly at first, from 39% in 2012 to 181% in 2018, but then slowed down to 112% in 2020. Additionally, the bank's expenses showed a similar trend of rising more quickly in 2019 and 2020; however, the rise slowed to 208.35. This implies that the bank's expenditures increased more quickly until 2019 and then decreased in 2020. The profit increase showed an erratic pattern, going from

Table 4. ***Trend Analysis of the Income Statement of LVB (% Change)***

Particulars	2011–2012	2011–2013	2011–2014	2011–2015	2011–2016	2011–2017	2011–2018	2011–2019	2011–2020
I. Income									
1. Interest Earned	142.67	165.33	186.31	207.97	241.19	267.33	285.64	266.70	207.23
2. Other Income	115.26	143.83	159.09	207.29	222.25	366.93	253.11	182.69	256.42
Total	139.55	162.88	183.21	207.89	239.03	278.69	281.93	257.12	212.84
II. Expenditure									
1. Interest Expended	164.04	195.55	214.04	241.18	274.78	294.92	321.65	325.75	254.20
2. Operating Expenses	128.74	148.11	173.14	190.34	237.87	285.50	342.77	360.48	348.24
3. Provisions and Contingencies	74.35	92.39	144.36	141.36	131.36	218.84	544.37	510.73	475.10
Total	142.65	169.53	194.63	214.98	244.62	281.03	360.98	361.98	308.35
III. Profit and Loss									
1. Net Profit for the Year	105.81	90.54	58.99	130.80	178.21	253.18	–578.28	–884.02	–826.62
2. Net Profit / Loss Brought Forward	156.25	56.25	56.25	43.75	50.00	0.00	38912.50	–419450.00	–978306.25
Total	105.99	90.48	58.97	130.65	178.01	252.79	–515.89	–1545.13	–2370.51
IV. Appropriations									
1. Transfer to Statutory Reserve	107.69	111.54	57.69	127.69	173.85	246.54	0.00	0.00	0.00
2. Transfer to Capital Reserves	66.93	270.87	8.66	377.17	475.59	6075.59	6792.13	5.51	4666.14
3. Transfer to the Revenue Reserve	80.12	40.75	59.63	102.86	124.22	115.65	0.00	0.00	0.00
4. Proposed Dividend (Incl. Dividend Tax)	139.13	120.02	40.04	150.81	227.21	0.00	218.30	0.00	0.00
5. Balance carried over to Balance Sheet	36.00	36.00	28.00	32.00	0.00	24904.00	–268448.00	626116.00	–984236.00
Total	104.76	86.36	52.55	127.20	172.44	259.71	–542.74	1625.67	–2493.85

Source : Calculated by author from the Balance Sheet of LVB from 2011 to 2020.

–615.89% in 2018 to –2470.51% in 2020, a negative, signifying fluctuations in the bank's profitability over the time under review. Due to shifts in reserves and the bank's capital and dividend policies, the appropriations showed notable variances.

In summary, the trend analysis indicates that LVB experienced income growth but faced challenges with rising expenditures and provisions. Fluctuating net profits and significant swings in appropriations highlight the bank's volatile financial performance during the period. These developments highlight the bank's requirements for careful risk assessment, efficient cost control, and ongoing attempts to improve capital position and profitability.

The bank's total income is largely derived from interest generated, which has been consistently consistent over time, ranging from 84.9% to 91.90%, as can be seen by carefully examining the income statement shown in Table 5. Interest costs, which range from 52.41% to 73.34%, are clearly the largest component of expenses. This shows how the bank depends on sources of finance that include interest expenses. Thus, "interest earned" and "interest expended" constitute a major share in the income statement of LVB with a fluctuating trend over time.

Financial Results of LVB

Ratio analysis has been used to assess the overall stability and risk management procedures of the bank and identify the main reasons for its problems in order to determine the variables that have contributed to LVB's failure.

Table 5. ***Common Size Income Statement of LVB (in %)***

Particulars	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
I. Income										
1. Interest Earned	88.60	90.58	89.93	90.10	88.63	89.40	84.99	89.76	91.90	86.27
2. Other Income	11.40	9.42	10.07	9.90	11.37	10.60	15.01	10.24	8.10	13.73
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
II. Expenditure										
1. Interest Expended	63.58	73.12	73.34	69.92	71.33	71.42	66.72	56.65	57.22	52.41
2. Operating Expenses	20.73	18.71	18.11	18.44	18.35	20.16	21.06	19.68	20.64	23.41
3. Provisions and Contingencies	15.69	8.18	8.55	11.64	10.32	8.43	12.22	23.66	22.14	24.18
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III. Profit and Loss										
1.Net Profit for the year	99.84	99.67	99.90	99.87	99.95	99.96	100.00	111.92	57.12	34.82
2.Net Profit/Loss Brought Forward	0.16	0.23	0.10	0.15	0.05	0.04	0.00	–11.91	42.88	65.18
Total	100.00	99.91	100.00	100.02	100.01	100.00	100.00	100.00	100.00	100.00
IV. Appropriations										
1. Transfer to Statutory Reserve	27.00	27.76	34.87	29.64	27.11	27.22	25.63	0.00	0.00	0.00
2. Transfer to Capital Reserves	1.32	0.84	4.14	0.22	3.91	3.64	30.86	–16.51	0.00	–2.47
3. Transfer to Revenue Reserve	41.80	31.97	19.72	47.43	33.80	30.11	18.61	0.00	0.00	0.00
4. Proposed Dividend (incl. Dividend tax)	29.62	39.34	41.16	22.57	35.12	39.03	0.00	–11.91	0.00	0.00
5. Balance Carried over to the Balance Sheet	0.26	0.09	0.11	0.14	0.07	0.00	24.90	128.42	100.00	102.47
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source : Calculated by author from the Balance Sheet of LVB from 2011 to 2020.

Table 6. ***Financial Performance of LVB***

Particulars	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Assessment of Capital Adequacy										
Capital Adequacy Ratio	13.19	13.1	12.32	10.9	11.34	10.67	10.38	9.81	7.72	1.12
Advances to Asset Ratio	60.85	62.72	66.24	62.41	66.19	68.37	67.33	63.74	60.83	56.62
Assessment of Profitability										
Return on Assets	0.91	0.73	0.54	0.32	0.61	0.69	0.83	–1.57	–2.32	–2.61
Return on Equity	12.40	11.56	9.28	5.77	10.14	10.86	13.13	–26.20	–42.37	–53.55
NIM (Net Interest Margin)	3.07	2.52	2.32	2.54	2.32	2.42	2.45	2.09	1.52	1.49
Profit Margin Ratio	8.42	6.38	4.68	2.71	5.29	6.27	7.65	–17.26	–28.93	–32.68
Assessment of Liquidity										
Credit-to-Deposit Ratio	72.60	72.19	74.93	69.40	74.45	77.24	77.66	77.36	68.66	64.49
Deposit to Total Asset ratio	83.82	86.89	88.41	89.93	88.90	88.51	86.69	82.39	88.60	87.80
Assessment of Asset Quality										
NNPA Ratio	0.9	1.74	2.43	3.44	1.85	1.18	1.76	5.66	7.49	10.04
GNPA Ratio	2	3	4	4	3	2	3	10	15	25
Assessment of Operating Efficiency										
Cost-to-Income Ratio	8.56	8.94	8.00	8.92	6.78	9.27	5.22	14.31	20.15	20.08
Total Advances to Total Deposit Ratio	72.6	72.19	74.93	69.4	74.45	77.24	77.66	77.36	68.66	64.49
Business per Employee	719.00	787.00	863.00	923.00	955.00	1099.00	1146.00	1130.00	1042.00	842.00
Profit per Employee	3.85	3.50	2.91	1.81	3.00	4.00	6.00	–11.00	–18.00	–18.00

Source : Annual report of LVB, 2011–2020.

The financial statements of LVB suggest the presence of impending insolvency, as evidenced by the decline in return on assets (ROA) from 0.91 in 2011 to –2.61 in 2020 (Table 6), with negative returns observed in the past three years starting from 2018. Moreover, return on equity (ROE) exhibits a steady decline from 12.40% in 2011 to –53.55% in 2020, and it turned negative in the past three years from 2018 due to additional provisioning requirements as a result of higher NPA and dwindling profit. The net non-performing asset (NNPA) ratio exhibited an increasing trend, reaching 10.04% in 2020 from a meager 0.9% in 2011, indicating deteriorating asset quality and a potential increase in credit risk. Increased provisioning has a direct impact on profitability, and thus, the profit margin ratio experienced a decline from 8.42% in 2011 to –32.68% in 2020, indicating deteriorating profitability, possibly due to higher expenses or lower revenue. Additionally, the capital adequacy ratio steadily declined from 13.19% in 2011 to a critically low 1.12% in 2020, indicating a substantial deterioration in the bank's ability to absorb losses. NIM remained relatively stable over the years but experienced a downward trend towards the latter years, indicating potential pressure on interest income. The credit-to-deposit ratio and deposit-to-total asset ratio fluctuated over the years but showed signs of decreasing liquidity in the later years, potentially indicating challenges in meeting short-term obligations. The ratio of cost to income indicates how well costs are managed. Growing operating expenses to income over time, which can have a detrimental effect on profitability, are indicated by the trend, which will reach 63.13% in 2020. A steady level of investments to deposits is indicated by the overall investment to total deposit ratio, which varies but is generally rather stable, with a minor decline in recent years.

Table 7. ***PCA Indicators of LVB***

Indicators	2011	2015	2016	2017	2018	2019	2020
CRAR	13.19	11.34	10.67	10.38	9.81	7.72	1.12
Tier-I Leverage Ratio	10.78	9.33	8.69	8.75	8.05	5.72	–0.88
ROA	0.91	0.61	0.69	0.83	–1.57	–2.32	–2.61
NNPA	0.9	1.9	1.2	1.8	5.7	7.5	10.0

Source : LVB Annual Report, 2011–2020.

Role of RBI in Banking Supervision

In order to address the bank's diminishing capital, liquidity, financial status, and lack of opportunity for capital injection, the RBI took the following steps. Still, a crucial query needs to be asked: Were these actions sufficiently quick to deal with the problem? Table 7 examines this issue. LVB was placed under the PCA framework in September 2019, considering the breach of PCA thresholds as of March 31, 2019, due to the falling of CRAR below 7.75% and negative return on assets for two consecutive years (Reserve Bank of India, 2023).

However, according to the indicators of PCA in Table 7, it becomes evident that LVB had already breached the CRAR threshold as of March 31, 2018 (see Appendix Table A1). Although this initial breach was within the first risk threshold-1, it reflects a regulatory inaction that exacerbated the bank's weaknesses. Therefore, it is apparent that remedial actions were not implemented promptly, leading to criticism of the RBI's oversight, which could be characterized as “negligence” or “inattentiveness.”

Reasons for the Failure of LVB

Following the assessment of the financial statement, the following reasons for the LVB's failure were identified, as detailed below.

- ***Rising NPAs :*** The banking industry faces a significant threat due to the rise of NPAs. LVB encountered considerable challenges with asset quality, as evidenced by the increasing trend of Gross and NNPA from 2011 to 2020 (as evident from Table 6). The increase in NPA can be attributed to asset-liability mismanagement. This implies that the quality of assets and liabilities can differ significantly, exposing the entity to credit risk. For instance, if a bank holds risky loans but relies on stable, low-risk deposits for funding, it may face losses if the loans default. This can be evident from the lending to the sensitive sector, which saw a huge jump from 728.63 crores in 2011 to 5254.38 crores in 2018 (Lakshmi Vilas Bank, 2018). Due to high NPA ratios, banks were required to maintain substantial provisions, leading to negative ROA from 2018 to 2020. This negative ROA reflects the bank's decreasing ability to generate sustainable profits and reinvest in its operations.

- ***Liquidity Crunch :*** LVB has been coping with a liquidity issue, as evidenced by the fact that the bank lacked sufficient capital to carry out its routine operations. The deposit witnessed significant growth initially, reaching its peak at 33,30.95 million in 2018. However, after that, customers started withdrawing their funds rapidly, resulting in a decrease of 26.76% in deposits from 29,27.94 million in 2019 to 21,44.32 million in 2020. In addition, withdrawals are bigger than deposits, which led to liquidity crunches in the LVB.

- ***Capital Adequacy Concerns :*** The bank has continuously maintained its capital adequacy ratio comfortably over the necessary threshold of 9% (as per Basel III rules). However, the bank's capital began to drop in 2015 and eventually reached a low of 1.12%, which had an impact on the bank's capacity to maintain its operations and comply with regulatory requirements.

➥ ***Governance Issues :*** To govern their operations, banks must adhere to a set of regulations and guidelines. This entails striking a balance between the interests of shareholders, top executives, and customers. LVB was confronted with several governance challenges. For instance, shareholders were so disheartened by allegations of mismanagement, poor governance, an increase in bad loans, and a drop in the value of bank shares that on September 25, 2020, they chose to dismiss seven members of the top management, including S. Sundar, the bank's interim MD and CEO. Thus, weak corporate governance practices, inadequate risk management, and poor decision-making by the management team were key contributors to the bank's failure.

➥ ***Bad Lending Strategies :*** LVB was inspired by reputed and big private sector banks like Axis and ICICI Bank to provide loans to big corporate houses. This shift in their strategy resulted in the distribution of loans of 2,000 crores to borrowers like Religare, Jet Airways, Nirav Modi Group, Coffee Day, Reliance Housing Finance, etc., which resulted in the multiplication of bad loans.

Financial Performance of the Development Bank of India Ltd.

We can infer the following information about the bank's current financial performance based on the data supplied for DBIL Bank before (2020) and after the merger (for the years 2021, 2022, and 2023) with LVB in Table 8.

The post-merger analysis of DBIL from 2020 to 2023 shows mixed results in terms of financial performance. Overall, the merger with LVB may present some challenges in the form of higher NPA. GNPA decreased from 2.60% in 2020 to 1.83 in 2021 and then increased significantly to 9.50% in 2022 before improving to 5.61% in 2023. NNPA also showed fluctuations, from 0.47% in 2020 to 2.83% in 2021, and then decreased to 1.17%

Table 8. ***Post-Merger Analysis of Development Bank of India Ltd.***

Particulars	2020	2021	2022	2023
Assessment of Capital Adequacy				
Capital Adequacy Ratio	16.33	15.13	16.29	14.99
Advances to Asset Ratio	30.43	47.86	52.03	42.29
Assessment of Profitability				
Return on Asset	0.2	0.46	0.20	0.22
Return on Equity	1.86	3.87	1.76	2.24
NIM (Net Interest Margin)	1.94	1.92	2.48	2.41
Profit Margin Ratio	3.15	7.09	3.20	3.40
Assessment of Liquidity				
Credit-to-deposit Ratio	53.66	71.79	89.63	76.84
Deposit to Total Asset ratio	56.71	66.67	58.05	130.14
Assessment of Asset Quality				
NNPA Ratio	0.47	2.83	1.61	1.17
GNPA Ratio	2.6	1.83	9.5	5.61
Assessment of Operating Efficiency				
Total Advances to Total Deposit Ratio	53.65	71.79	89.62	76.83
Business per Employee (in Lakh)	2770.94	1573.42	1616.18	1661.38
Profit per Employee (in Lakh)	6.09	5.54	2.87	3.47

Source : RBI, Statistical Tables related to Banking in India.

in 2023. The capital adequacy ratio showed a slight decline, from 16.33 in 2020 to 14.99 in 2023, suggesting a moderate erosion of capital adequacy post-merger. Profitability ratios present a fluctuating trend, with return on equity dipping to 1.76 in 2022 before improving to 2.24 in 2023. The net interest margin increased from 1.94 in 2020 to 2.41 in 2023, indicating better interest income management. Liquidity metrics such as the credit-to-deposit ratio rose significantly, peaking at 89.63 in 2022 before stabilizing at 76.84 in 2023, reflecting improved credit deployment. In operational efficiency, the total advances to total deposit ratio increased from 53.65% in 2020 to 89.62% in 2022 before dropping to 76.83% in 2023, while business per employee decreased from ₹ 2770.94 lakhs in 2020 to ₹ 1616.18 lakhs in 2022, and profit per employee fell from ₹ 6.09 lakhs in 2020 to ₹ 3.47 lakhs in 2023.

Overall, while the merger led to initial improvements in some profitability and liquidity ratios, there were also challenges with asset quality and operating efficiency, as indicated by fluctuating and decreasing ratios in certain areas. Additionally, the increase in branches and employees after the merger might have impacted business per employee and profit per employee ratios.

Recommendations and Conclusion

The paper investigates the factors contributing to the failure of LVB, and the study reveals that LVB encountered the problem of mounting NPAs due to asset-liability mismatch, liquidity crunch, capital adequacy concerns, governance issues, and bad lending strategies. The RBI placed the bank under the PCA framework in 2019 due to the bank's declining health quality. However, it is clear that corrective actions are not carried out promptly, which has led to criticism of the RBI's oversight, which can be described as "negligence" or "inattentiveness." RBI combined LVB with the DBIL, a division of the DBS, as a result of the resolution step. DBIL was chosen for the merger since it was awarded "the Asia Safest Bank" award consecutively for 15 years in a row from 2009 to 2023. Overall, the post-merger research reveals that although there are initial gains in several profitability and liquidity ratios as a result of the merger, there are also issues with asset quality and operating efficiency, as seen by the ratios in some sectors fluctuating and declining. Furthermore, the expansion of branches and staff following the merger may have affected the ratios of profit to employees and business per employee.

Therefore, these current crises throw up some imperative life lessons for RBI and require that RBI be vigilant in this situation and learn from its past experiences. RBI should not rely on the board members for the supervision of the bank but rather take control in their hands at times when the banks are not fairly performing. Moreover, analysis of financial statements finds increased levels of NPA due to asset-liability mismatch as one of the major reasons for the failure of banks along with corporate governance and bad lending strategy. As a result, the RBI should fulfill its regulatory obligation without delay and vigorously enforce PCA standards in order to address the deteriorating state of banks.

Limitations of the Study and Scope for Further Research

The possible limitations of this study include the accuracy and availability of financial data, as well as the challenge of extrapolating the results outside of the particular situation of Laxmi Vilas Bank. This could be further investigated in the future by comparing this to other private sector banks and examining how regulatory changes affect the stability of the Indian banking industry.

Authors' Contribution

Ananya Bhatia and Dr. Jagdeep Kumar conceived and designed the study on the failure of LVB and its correlation with financial performance. Ananya Bhatia conducted the data collection, meticulously extracting relevant financial data and other pertinent information. Both authors jointly carried out the analysis, utilizing statistical tools and methods to interpret the results comprehensively. Ananya Bhatia drafted the initial manuscript, incorporating insights and interpretations from the analysis. Jagdeep Kumar critically reviewed the draft, providing constructive feedback and suggestions for improvement. Both authors worked collaboratively on revising the manuscript, ensuring clarity, coherence, and accuracy. The final version of the manuscript was approved by both Ananya Bhatia and Jagdeep Kumar, reflecting their joint effort and contributions throughout the research and writing process.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest, or non-financial interest in the subject matter, or materials discussed in this manuscript.

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Appendix

Appendix Table A1.

RBI PCA Framework			
Parameter	**Risk Threshold 1**	**Risk Threshold 2**	**Risk Threshold 3**
CRAR	Less than 10.25% but more than equal to 7.75%.	More than or equal to 6.25% but less than 7.75%.	More than 3.625%.
Tier-I Ratio	Less than 6.75% but more than or equal to 5.125%.	Less than 5.125% but more than or equal to 3.625%.	More than or equal to 3.625%.
ROA	Negative for two consecutive years.	Negative for three straight years.	Negative for four straight years.
Net NPA Ratio	Greater than or equal to 6% but less than 9%.	Greater than or equal to 9% but less than 12%.	Greater than or equal to 12%.

Source : RBI, Prompt Corrective Action (PCA) Framework for Scheduled Commercial Banks.

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