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Analysis of financial resilience of Indian public sector banks

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Abstract

The banking industry is the most consequential contributor to a country's economic development and progress. The author was motivated to investigate the resilience of India's public sector banking system by the current financial crisis in the United States and Europe. The Capital Adequacy Ratio is a key indicator of a bank's ability to withstand economic downturns. In this study, we examine the CAR to know how well India's public sector banks can weather economic storms. Using data from the previous five years (2019-2023), this investigation focused on Indian public sector banks. Findings show that India's PSBs have a high capability for resilience since their capital adequacy ratios consistently exceed international capital criteria.

Keywords: Basel III, Indian public sector banks, resilience, capital norms, capital adequacy ratio

Introduction

The stability of a nation's banking sector is crucial to the health of its overall economy, as it provides the foundation for the kind of fast growth that fuels national prosperity. The survival of the bank depends on its capital, which is why it must be managed with extreme care. A solid capital cushion allows a bank to safeguard its customers' funds and keep operations running smoothly. A capital adequacy ratio is a minimal ratio established by financial authorities that is used to measure a bank's ability to meet its financial obligations. The Reserve Bank of India mandated Indian commercial banks to implement capital criteria in 1992.

The CAR was set at 8% in 1992, under Basel I regulations. Following the addition of greater capital to account for market risk in 2004, Basel I requirements were revised into what are now known as Basel II norms. Basel III, an expanded set of rules from 2010, addressed issues of capital transparency, adequacy, and quality. According to Basel III capital standards, the CAR requirement is 11.5%. Basel I criteria were implemented by Indian banks in 1999, and Basel II, a revised version of Basel I, was implemented in 2009. Commercial banks in India have been using the updated Basel III regulations since April 2013.

The failure of Silicon Valley Bank, Signature Bank, and The First Republic Bank has triggered a financial crisis throughout the United States. The failure of another big Swiss bank, Credit Suisse Bank, had a similar effect on the international financial system. Since Indian banks are healthy, the Central Bank of India has said that the effects of this crisis would be minimal. This research was conducted because the present financial turbulence necessitated an examination of the Indian public-sector banking system's ability to withstand such economic shocks.

Review of Literature

Sharma *et al.* (2018)^[6] analyze the Capital to Risk-Weighted Assets Ratios of various Indian Banks. This research uses data collected for 8 years (2009-2016) from 10 public sector banks. All banks reached a 9 percent Capital to Risk-Weighted Assets Ratio, but only 4 met the 11.50 percent requirement imposed by the Reserve Bank of India. The public sector banks have shown a declining trend, with a negative Compound Annual Growth Rate (CAGR). It turns out that public sector banks in India were unable to increase their capitalization.

Andrle *et al.* (2019)^[1] sought to identify the methods used by EU banks to satisfy Basel III's

capital requirements. The research indicated that robust banking sectors employ retained profits to fulfill the extra capital requirements of Basel III, whereas less robust banking sectors depend on fresh share offerings. It has also been noted that banks in EU member states have decreased portfolio risk. The authors predict that a rise in CAR will have a negative impact on GDP.

Das and Rout (2020) [2] explored the relationship between capital adequacy ratio, productivity, profits, and danger. Forty-three Indian commercial banks were included in the research, covering the years 1996-2016. According to the findings, banks' profitability and risk-taking behavior are favorably correlated with the capital adequacy ratio, whereas efficiency is adversely correlated with the ratio. It is proposed that regulators and bankers take appropriate steps to mitigate risk and maximize efficiency as a result of banks' increased capital.

Nguyen *et al.* (2021) [4] examined the impact of capital regulation on the capital ratio of Asian banks between 2001 and 2015. Banks' capital ratios were observed to improve as a result of stricter capital regulations. Bank size, lending, competition, deposit ratio, and economic growth rate all have negative effects on the capital ratio, whereas profitability, asset quality, and stock market development all have favorable effects. It has been noticed that capital regulation has a comparable effect on banks' capital ratios across the world.

Nguyen *et al.* (2021) [4] find the Basel III minimum capital adequacy ratio that is acceptable for Vietnam's commercial banks. The research found that the minimal CAR under Basel III is appropriate for Vietnamese banks and would help them perform better. By issuing new shares, keeping revenues, and lowering government shareholdings, banks may enhance their CAR.

Fritsch and Siedlarek (2022) [3] analyzed US banks to gauge their response to the Basel III-mandated increase in capital

requirements. Information from 675 small and 39 regional banks is utilized in this analysis, spanning the years 2010 to 2014. The research found that smaller banks in the United States did not adapt to Basel III, whereas regional institutions changed their capital ratios in advance of the standards' official release.

Banks throughout the globe have already accepted the capital adequacy rules, and in India, the Reserve Bank of India (RBI) requires all financial institutions to publicly report how closely they adhere to Basel III's capital requirements. No research has been conducted to date to evaluate the resilience of India's public-sector banks, despite the abundance of available literature on the topic. In light of the capital adequacy criteria of Indian public-sector banks, the author of this work set out to assess PSBs' ability to weather economic downturns.

Objectives

The main objective of this study is to know the resilience of Indian public sector banks with the help of the capital adequacy ratio of banks.

Research Methodology

The current study combines analytic and descriptive methods. From the previous five years of annual reports for 12 public-sector banks, we have collected data on the chosen variable CAR (capital adequacy ratio) (2019-2023). Using Microsoft Excel, we evaluated the data. Public sector bank financial statements and annual reports were obtained from the respective banks' websites and utilized as secondary sources in this research.

Data Analysis and Discussion

The capital adequacy ratio measures a bank's resilience in the face of economic stress. The CAR of Indian PSBs during the last five years is shown in the table below.

Table 1: CAR of Indian PSBs (2019-2023)

PSBs	2019	2020	2021	2022	2023	Mean	Max	Min	S. D.
Bank of Baroda	13.42	13.3	14.99	15.68	16.24	14.73	16.24	13.3	1.324
Bank of India	14.19	13.1	14.93	17.04	16.28	15.11	17.04	13.1	1.582
Bank of Maharashtra	11.86	13.52	14.49	16.48	18.14	14.90	18.14	11.86	2.465
Canara Bank	11.9	13.65	13.18	14.9	16.68	14.06	16.68	11.9	1.815
Central Bank of India	9.61	11.72	14.81	13.84	14.12	12.82	14.81	9.61	2.133
Indian Bank	13.21	14.12	15.71	16.53	16.49	15.21	16.53	13.21	1.485
Indian Overseas Bank	10.21	10.72	15.32	13.83	16.1	13.24	16.1	10.21	2.664
Punjab National Bank	9.73	14.14	14.32	14.5	15.5	13.64	15.5	9.73	2.247
Punjab & Sind Bank	10.93	12.76	17.06	18.54	17.1	15.28	18.54	10.93	3.255
State Bank of India	12.72	13.06	13.74	13.83	14.68	13.61	14.68	12.72	0.759
UCO Bank	10.7	11.7	13.74	13.74	16.51	13.28	16.51	10.7	2.237
Union Bank of India	11.78	12.81	12.56	14.52	16.04	13.54	16.04	11.78	1.718
Mean	11.69	12.88	14.57	15.29	16.16	14.12	16.40	11.59	1.97
Max	14.19	14.14	17.06	18.54	18.14	15.28	18.54	13.30	3.26
Min	9.61	10.72	12.56	13.74	14.12	12.82	14.68	9.61	0.76
S. D.	1.496	1.036	1.200	1.563	1.050	0.879	1.155	1.342	0.668

Source: Annual Reports of PSBs

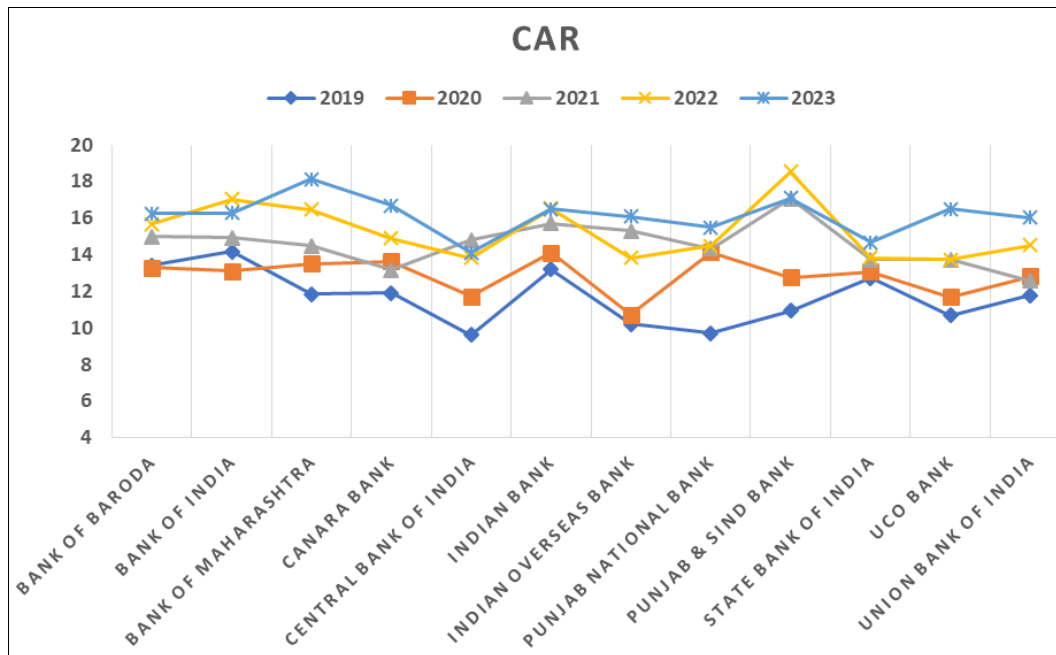
Table 1 shows the last five years' data from 2019 to 2023 of CAR. This table shows that the capital ratio of Indian PSBs ranges from 9.61% to 18.54% over 5 years. In 2019, the minimum CAR was recorded for the Central Bank of India (9.61%), and the maximum was recorded for the Bank of India (14.19%). The average CAR for 2020 is 12.88% which improved from 11.69% in 2019. The CAR of all

PSBs in 2020 was more than 10% and the highest CAR was attained by Punjab National Bank (14.14%). The average CAR of banks in 2021 improved to 14.57% against 12.88% in 2020. The average CAR of PSBs in 2022 (15.29%) and 2023 (16.16%) also witnessed continuous improvement. The period of five years (2019-2023) witnessed constant improvement in the CAR of public-sector banks.

The highest CAR during five years was recorded by the Punjab & Sind Bank (18.54%) in 2022 and the lowest was recorded by the Central Bank of India (9.61%) in 2019. The average CAR during the last five years has improved from 11.69% to 16.16%. The lowest standard deviation has been observed for the State Bank of India (0.78) and the highest for Punjab & Sind Bank (3.09). The year 2022 observed the

highest S. D. while the lowest was observed in the year 2020.

In 2023, all PSBs continue to adhere to the RBI-mandated Basel III capital requirements. The capital ratio of Indian public sector banks has improved over the study period. This demonstrates that all Indian PSBs have sufficient capital to weather economic storms.



Source: Author's Work

Fig 1: CAR of PSBs (2019-2023)

The CAR of Indian public-sector banks during the last five years is shown in the above bar chart. From this graph, it can be seen that the CAR of all banks in the public sector has been steadily rising over the period under consideration.

In the last five years, PSBs' average capital adequacy has ranged between 11.69% and 16.16%. This demonstrates that public sector banks in India are well-capitalized and can weather a financial storm.

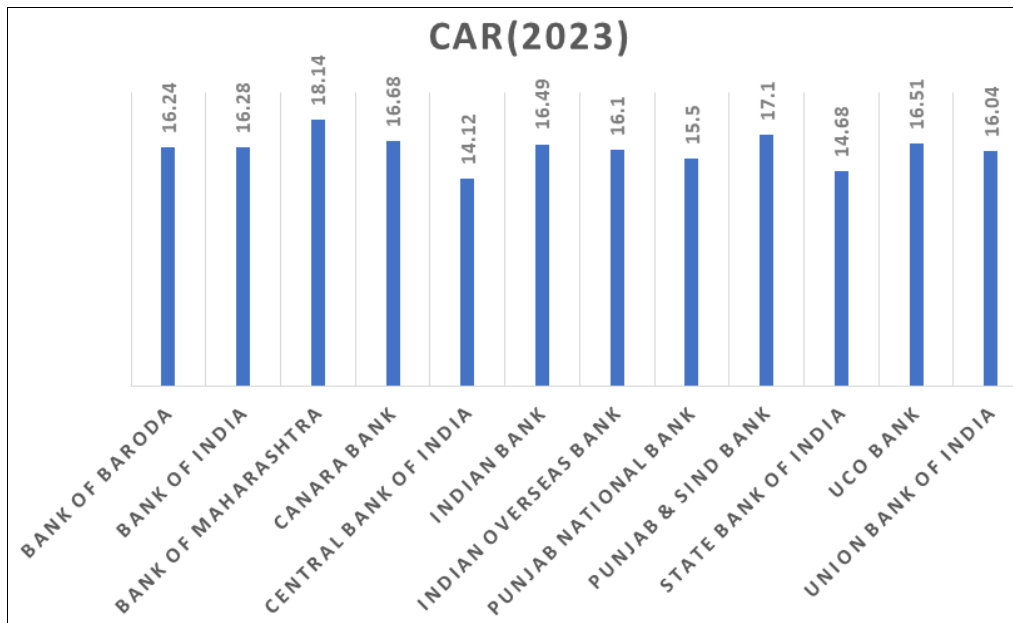
Table 2: CAR of Indian PSBs in 2023

PSBs	2023
Bank of Baroda	16.24
Bank of India	16.28
Bank of Maharashtra	18.14
Canara Bank	16.68
Central Bank of India	14.12
Indian Bank	16.49
Indian Overseas Bank	16.1
Punjab National Bank	15.5
Punjab & Sind Bank	17.1
State Bank of India	14.68
UCO Bank	16.51
Union Bank of India	16.04

Source: Annual Reports of PSBs

The above table shows that all PSBs met or exceeded the required CAR. As of 2023, the Bank of Maharashtra (18.14%) has the highest CAR, followed by Punjab & Sind Bank (17.1%) and Canara Bank (16.68%). The lowest CAR is recorded for the Central Bank of India (14.12%). The capital adequacy ratio in 2023 is much higher than the

minimum requirements, ranging from 14.12% to 18.14%. The robust and stable financial condition of all PSBs is shown by the greater capital adequacy ratio maintained by public-sector banks. In light of the existing CAR of Indian PSBs, it is safe to assume that these institutions will be able to weather any future economic storm.



Source: Author's Work

Fig 2: Present Status of CAR of Indian PSBs

The accompanying chart shows the current status of CAR for all Indian public-sector banks. All Indian PSBs are found to have sufficient capital. All government-owned banks meet the requirements of Basel III and have sufficient capital to weather any economic storm.

Conclusion

The study found that in 2013, public banks in India began adhering to Basel III capital adequacy criteria. There were initial challenges for certain PSBs in meeting these norms, but after that, all PSBs maintained their capital adequacy ratio in line with Basel III requirements. All public-sector banks, including Punjab National Bank, Union Bank of India, State Bank of India, Indian Bank, Indian Overseas Bank, Bank of Baroda, Bank of India, Canara Bank, Central Bank of India, UCO Bank, Bank of Maharashtra, and Punjab & Sind Bank, maintained CAR over 14% in 2023. In terms of the highest CAR, the Bank of Maharashtra is followed by Punjab & Sind Bank and Canara Bank among all Indian public sector banks. This demonstrates that the favorable reaction to the Basel III standards is shared throughout the public sector banking industry since all institutions are well-positioned to satisfy the requirements of the regulatory framework.

This research demonstrates that public-sector bank capitalization levels are higher than those required by global financial authorities. Due to their substantial capital bases, public-sector banks in India will be able to withstand any future financial catastrophes, even ones comparable to the 2008 global financial crisis or the 2023 financial upheaval in the United States and Europe.

Limitations of the Study

This study employs only the capital adequacy ratio to gauge the ability of Indian PSBs' resilience to shocks; other financial indicators may be used in future studies. In further studies, the capital adequacy ratios of both public and private banks in India can be compared. As of now, this study has only been conducted on Indian banks, but it might

be expanded internationally.

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