7

Taking Stock[1]

Status of Risk Based Supervision in India

Richa Verma Bajaj

7.1. Introduction

Recent literature suggests that rapid deregulation and globalisation of financial markets and the invention of new financial instruments, may have created a situation of financial crises (James, 2009, Moshirian, 2011). According to Basel Committee Chair Erik Thedéen, "There have been no fewer than 150 systemic banking crises since 1970. We have recently observed distress of five banks with total assets exceeding one trillion US dollars, causing significant system-wide banking stress"[2]. The crises reveal many shortcomings in the financial system that trigger the need for regulatory reforms. Caprio, Demirgüç-Kunt and Kane (2010), pointed failed regulators and supervisors behind these global financial crises. *"Strong regulation and supervision are, thus, essential for the stability and inclusiveness of the banking sector"* (World Bank, 2019).

The supervisors world-wide are concerned about protecting the depositor's interests and sustain financial stability, by building a strong supervisory framework. The focus is to identify the inherited risks in a supervisory entity on time and build a strong architecture to control them in order to remain financially stable. Thus, with an aim to promote financial stability, the Basel Committee on Banking Supervision (BCBS), has set global standards of regulation and supervision for banks through the Basel Core Principles for Effective Banking Supervision. These principles set minimum standards in line with size, complexity and risk profile of supervisory entity, covering areas of supervisory responsibilities, resources, risk management procedures and capital adequacy (Alonso, et al 2024). Sengupta (2023) provided a detailed discussion on principles of risk-based supervision, examining its evolution from compliance-based supervision to risk-focused supervision. The paper also viewed supervisory risk assessment methods, and integration of various qualitative and quantitative methods to prioritize supervisory resources and their application in banking and financial services sector in an effective manner. Deloitte (2018) report also captures this transition. However, the report also highlights the challenges in implementation in India considering the resource constraints.

The Basel committee's prudential framework for banks is structured around three Pillars:

- *Pillar I*: Minimum Capital Requirement, which formulates broad supervisory standards, guidelines, and best practices to manage various risks that banking and financial institutions are exposed to.
- *Pillar II*: Supervisory Review Process and Internal Capital Adequacy assessment process (ICAAP).
- *Pillar III*: Market Discipline and Disclosure.

1. The author is grateful to Amol Padhye and Sanjay Basu for their valuable comments and suggestions. The usual disclaimer applies.

2. Keynote speech by Erik Thedéen, (Chair of the Basel Committee on Banking Supervision and Governor of Sveriges Riksbank), at the Institute of International Finance Annual Membership Meeting, Washington DC, https://www.bis.org/speeches/sp241023a.htm

Through Pillar II, the supervisor ensures maintenance of sufficient capital and institutes a risk management system to safeguard the institutions' financial stability. Both off-site surveillance and on-site inspections and control system internal to banks, frame the supervisory approach in India. Off-site surveillance, viz. Off-Site Monitoring and Surveillance (OSMOS) is a mechanism to maintain stability remotely. It was founded as part of the 'prudential' supervisory reporting framework for off-site returns submission in 15 to 21 days[3] so as to ensure data collection and reporting for robust supervision. This is combined with a verification of prudent practices and financial condition of banks through on-site examinations.

The approach to on-site inspection of banks in accordance with the recommendations of the Padmanabhan Working Group (1995) has been adopted from the cycle of inspections commencing July 1997, with appropriate modification to suit Indian conditions. The Working Group recommended Two Supervisory Rating Models based on CAMELS and CACS. CAMELS constitutes six rating factors, namely Capital Adequacy, Assets Quality, Management, Earnings, Liquidity, System and Control (in United States, S stands for Sensitivity to Market Risk). CACS comprises four rating factors, namely, Capital Adequacy, Assets Quality, Compliance, Systems and Controls, which were worked out for foreign banks. These ratings would enable the Reserve Bank to identify the banks whose condition warrants special supervisory attention. This model was replaced with SPARC (Supervisory Programme for Assessment of Risk and Capital) in the year 2013-14 for the purpose of supervision.

SPARC, represents a significant development in the regulatory stance in India's banking sector. It is a departure from compliance oriented and point in time[4] performance-based assessment system. It "enables evaluation of present and future risks with a view to identifying concerns building up in a bank or the system", (RBI, 2014b). In line with Board of Financial Supervision (BFS) directives, 28 banks, with 60 percent of banking system's assets and liabilities, were assessed under SPARC in the beginning of 2013-14. It includes qualitative and quantitative evaluation of bank's risk profiles (IMF, 2018), to allocate supervisory resources in entities with high Risk Assessment Rating (RAR). SPARC framework offers an inclusive, steady and objective foundation for risk and capital assessment using the integrated risk and impact scoring (IRISc), a proprietary risk scoring and aggregation model. By 2016-17[5], all SCBs operating in India (excluding RRBs and LABs) were brought under this. SPARC's off-site orientation using OSMOS returns with on-site inspection, augments supervision by proactive identification of risk followed by active assessments, well-organized resource allocation, etc.

The overall objective of Risk Based Supervision (RBS) is to have in place risk sensitive supervisory processes. At the overall level, regulators worldwide mostly use numerical or categorical scales (e.g., 1–4, 1–5, Low/Medium/High) for assigning risk rating to supervisory entities. CAMEL/CAMELS is most widely used by banks for assessing composite risk profiles. The purpose of rating is to decide the intensity and frequency of supervision. The Supervisory Assessment Programme that is followed across jurisdiction is presented through Figure 7.1.

Internationally, various regulatory authorities like Federal Reserve, Hong Kong Monetary Authority (HKMA), Australian Prudential Regulation Authority (APRA), Monetary Authority of Singapore (MAS), European Banking Authority (EBA), Office of the Superintendent of Financial Institutions (OSFI) and others have chosen to move towards a risk-based supervision approach in line with Basel regulation. Table 7.1, provides details regarding supervisory assessment programme followed by these regulators for comparative analysis, on the basis of risk coverage, focus area, supervisory tools and rating used.

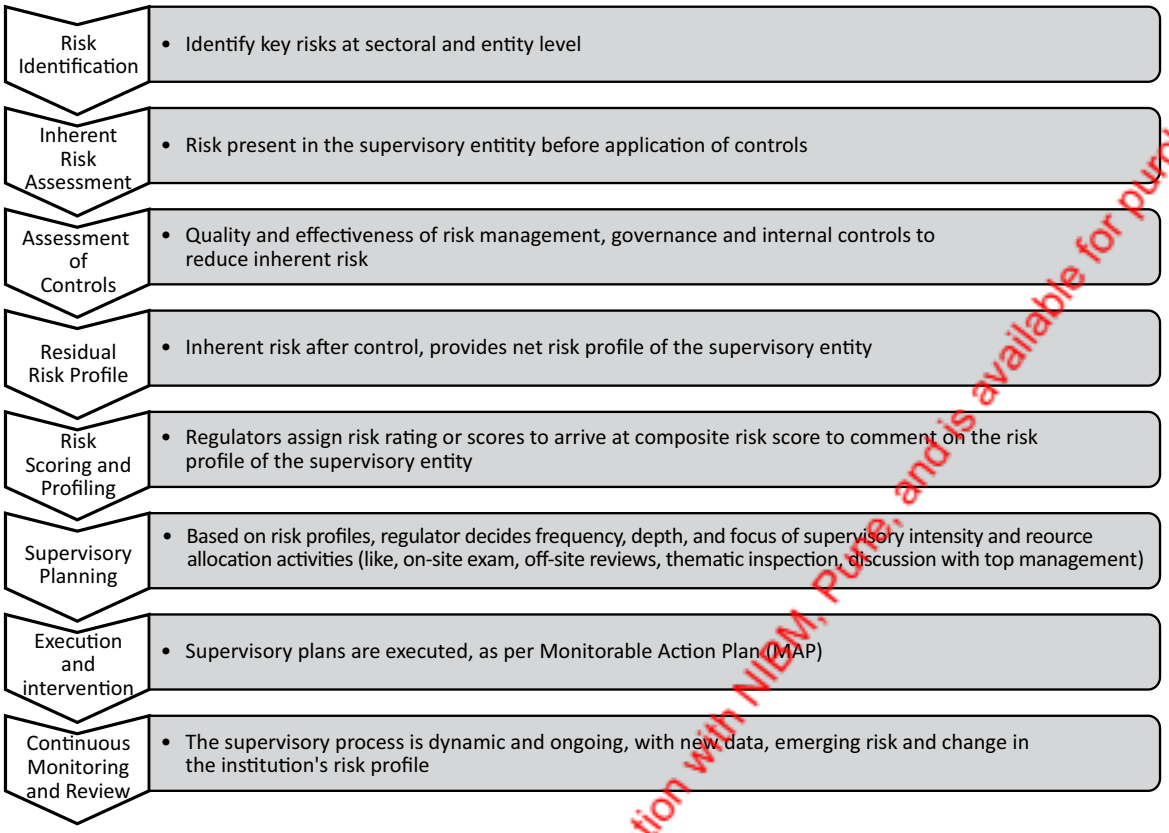
3. RBI, 2005, 'Supervisory Reporting System – Off-site Monitoring and Surveillance (OSMOS) - DSB Returns - Time for Filing the Returns', available at https://www.rbi.org.in/scripts/BS_CircularIndexDisplay.aspx?Id=2242#1

4. Annual Report - Reserve Bank of India.

5. RBI, 2017, 'Policy Environment', Chapter III, Report on Trend and Progress of Banking in India 2016-17, available at https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/3CHA320174E3A08EBAA5A4A65A2701005AC368445.PDF

FIGURE 7.1

Supervisory Assessment Programme



Source: Author's own compilation from various regulatory reports.

Given this background, this chapter attempts to compare global supervisory methodology and prepares a Banking Stability Map as a tool of supervisory assessment by RBI, on six dimensions comprising 23 ratios for all 94 scheduled commercial banks operating in India in 2024. Section 7.2 discusses the data sources and methodology. Section 7.3 constructs and compares Banking Stability Maps within and across bank groups. Section 7.4 concludes.

7.2. Variable Definition, Database, and Methodology

"The banking stability map and indicator present an overall assessment of changes in underlying conditions and risk factors that have a bearing on the stability of the banking sector during a period. The six composite indices represent risk in six dimensions - soundness, asset quality, profitability, liquidity, efficiency and sensitivity to market risk. Each composite index is a relative measure of risk during the sample period used for its construction, where a higher value would mean higher risk in that dimension", (RBI, 2025). In 2010, to reflect on overall assessment of the supervisory entities, the Reserve Bank of India declared in the Financial Stability Report (FSR) a framework for Banking Stability Map, based on six dimensions - soundness, asset quality, profitability, liquidity, efficiency and sensitivity to market risk. These ratios are drawn from those used by RBI's supervisory department as part of CAMELS assessment of banks, (Mishra, et al, 2013[6]).

The objective is to identify each rating components' key ratios and weight to determine the final composite score for each bank. The Banking Stability Map is, then, "constructed as a simple average of normalised score on these six dimensions. Each composite score on the map takes values between zero and one" (RBI, 2024).

6. Publications - Reserve Bank of India

TABLE 7.1

Comparison of Supervisory Assessment Programmes

	India	*Hong Kong*	*Singapore*	*Australia*	*United States*	*Canada*	*Europe*
Year of Adoption	Initiated in 2001, 2013 revised and updated	1999, 2004, 2022	1998	2002, 2021	1980, 2018	1999, 2024 (recent version)	2013, revised in 2022
Regulatory Agency	RBI	HKMA	MAS	APRA	Federal Reserve, OCC, FDIC	OSFI	European Banking Authority
RBS Framework Features	SREP (Supervisory Review and Evaluation Process), focus on both micro and macro-prudential risks, SPARC	Continuous, integrates CAMEL rating, forward-looking, strong focus on emerging risks (e.g., climate, cyber)	Forward-looking, SRS (Supervisory Risk Scoring), Comprehensive Risk Assessment Framework and Techniques (CRAFT)	2002, Probability and impact-based, PAIRS (Probability and Impact Rating System), SOARS (Supervisory Oversight and Response System) 2021- Supervision Risk and Intensity (SRI) Model.	RBS integrated with Comprehensive Capital Analysis and Review (CCAR) and Dodd-Frank Act stress tests (DFAST), tailored to institution size and complexity	Overall Risk Rating (ORR -1-10), B-10/B-20 guidelines	SREP (Supervisory Review and Evaluation Process) and supervisory stress testing
Risk Categories Assessed	Credit, market, operational risk (IT and Non-IT), liquidity Enhanced focus on IT/cyber risk, governance, and stress testing	8 core risks, emerging (climate, cyber) Early identification of sector-wide risks, thematic exams, integration with Basel III	All inherent risks, business model risk Emphasis on AML/CFT, fintech, and operational resilience	Credit, market, operational, business model, IT/cyber, Strong focus on governance, stress testing, and crisis readiness	Credit, market, operational, liquidity, legal Emphasis on large bank resolution, systemic risk, and stress testing	Credit, market, operational, liquidity, others Focus on technology risk, climate risk, and corporate governance	Credit, market, liquidity, operational, interest rate, business model, governance, conduct, IT/cyber, ESG/climate
Supervisory Cycle & Tools	Off-site surveillance, on-site inspection, SREP	Off-site reviews, on-site exams, prudential meetings based on CAMELS system	Ongoing supervision, thematic reviews	SRI, regular risk reviews, on-site visits	Continuous monitoring, on-site exams, stress testing	Supervisory framework, ongoing reviews, thematic exams	SREP framework
Risk Rating System/Scale	Ratings on Capital, Asset Quality, Management, Earnings, Liquidity, Sensitivity; composite risk rating (Low/Moderate/High/Very High); SREP process for overall risk score.	CAMEL (Capital, Asset quality, Management, Earnings, Liquidity); Composite Risk Profile (High/Medium/Low)	Supervisory buckets (1–4) for inherent risk, control effectiveness, and overall risk; colour-coded risk matrices; composite risk rating for each institution.	SRI (A to F), Stage-wise supervisory intensity	Ratings 1 (strongest) to 5 (weakest) for each CAMELS component; composite rating;	Risk Matrix rates inherent risk, quality of risk management, and net risk (Low/Moderate/Above Average/High)	SREP assigns scores 1 (lowest risk) to 4 (highest risk) for each pillar

Source: Authors own compilation from various regulatory documents.

Each financial ratio is normalised using the following formula:

Firstly, the metrices are put on common scale. Min-Max normalisation formula is used to adjust the values measured on different scales to a notionally common scale.

When the ratio assessment is "HIGHER THE BETTER", the normalisation formula is:

$y = (x - min) / (max - min)$

When the ratio assessment is "LOWER THE BETTER", the normalisation formula is:

$y = (max - x) / (max - min)$

Higher the final composite score of a bank, the more stable the bank is, and vice-versa.

Some variables considered for assessment in this chapter are as listed under CAMELS performance-based rating model and the Financial Stability Report of June 2025: soundness, assets quality, profitability, liquidity, efficiency and sensitivity to market risk. This chapter considers above-mentioned dimensions, but the ratios considered here are different from FSR. As many as, 23 ratios (Table 7.2) for all scheduled commercial banks operating in India in the year 2024 were considered for designing the Banking Stability Maps for Public Sector, Private Sector, Foreign Banks, Small Finance Banks and Payment banks. The data for the analysis was collected from Statistical Tables relating to Banks in India, RBI.

The variables are explained below:

(1) *Soundness Indicator*: Capital is the cornerstone of prudential regulation. Banks have to maintain sufficient capital to protect depositors' interest and to maintain confidence in the financial sector. Moreover, capital acts as a buffer to absorb losses and to remain sound in unexpected events like Global Financial Crises and Covid-19 pandemic. This chapter considers the following ratios to comment on the soundness of banks under study:

(a) *Capital to Risk Weighted Assets Ratio*: It is a ratio of equity capital to risk weighted assets of a bank. "Capital to risk weighted assets ratio is arrived at by dividing the capital of the bank with aggregated risk weighted assets for credit risk, market risk and operational risk. The higher the CRAR of a bank the better capitalized it is". (RBI). It measures the capacity of an institution to absorb unexpected losses. A higher score indicates higher soundness.

(b) *Tier I Capital Adequacy Ratio*: It is computed as ratio of Tier-I Capital of the bank to its risk weighted assets. Tier I capital consists of bank's equity capital and disclosed reserves (minus goodwill, if any). "The items listed under Tier I are believed to be of the highest quality because they are fully obtainable to cover losses Hence, it is also termed as core capital" (RBI).

(c) *Debt to Equity Ratio*: It is a financial metric that measure a bank's Total Debt to Tangible Net worth (equity + reserve and surplus). Higher the leverage, higher the financial risk, and more uncertain an institution is about its asset quality and profitability.

(d) *Gross Loans to Total Assets Ratio*: This ratio measures the assets composition in a bank, that captures the bank's exposure to loans out of total assets. It is a reflection of Credit Risk in a supervisory entity. Higher the ratio, higher the default risk, because of high loan concentration, but lower the liquidity. The bank has to prioritise between depositor's safety over aggressive lending.

(e) *Investment in Government Securities to Total Investment Ratio*: "Investments in Government Securities includes investments in the securities of the Central and State Governments including treasury bills, postal obligations such as national savings certificates etc. It also includes government securities deposited by foreign scheduled banks under Section 11(2) of the Banking Regulation Act, 1949" (RBI, 2014b). This shows, low credit risk, since these are backed by the government. Higher the ratio, higher the score.

(2) *Asset Quality Ratio*: The ratios considered under this category are as follows:

(a) *Gross NPAs to Gross Advances Ratio*: Gross NPA as a percentage of advances ratio looks at the percentage of loans which have turned into NPA as against the total outstanding loan book. Higher the ratio, lower the composite score.

(b) *Net NPAs to Net Advances Ratio*: It is a measure of the quality of loan of a supervisory entity. Net NPAs reflect on low number of provisions for unpaid debts of a bank. Higher amount of Net NPAs negatively affects banks liquidity and profitability.

(c) *Total Investments to Total Assets (ITA)*: It looks at what proportion of bank's total assets are invested in securities, bonds etc. This ratio is considered very important to understand the bank's risk exposure and profitability. Higher the ratio, higher the return on investment in securities. Lower the ratio, more is the liquidity, which the bank can easily access during the period of financial stress. This ratio demands banks have to prioritise between liquidity over profitability.

(3) *Profitability Ratios*: The ratios considered under this category are:

(a) *Operating Profits to Total Assets*: Operating profit is defined as total earnings less total expenses, excluding provisions and contingencies. This ratio is calculated as Operating profit to Total assets. Higher the ratio, higher the score.

(b) *Net Interest Margin (Spread to Total Assets)*: Net interest margin is defined as the difference between a bank's earning and interest costs. It indicates how well the bank manages its assets and liabilities. It is calculated as, (Interest earned - Interest paid) to Total assets. However, this ratio fails to capture operational efficiency of a supervisory entity.

(c) *Interest Income to Total Income*: This ratio looks at the major part of income the bank generates from its operations. Total income looks at fee income and interest income of the bank. During a rising interest rate regime, banks tend to earn more interest income. A higher ratio means that interest income forms a major part of total income of the bank. Interest income includes income on advances, interest on deposits with RBI, and dividend income.

(d) *Non-Interest Income to Total Income*: Non-interest income includes fee, commission and service charges and others. It looks at diversification benefits.

(e) *Return on Assets*: It is obtained as weighted average of return on assets of individual banks in the group, weights being the proportion of total assets of the bank as percentage to total assets of all banks in the corresponding bank group (RBI, 2011).

(f) *Return on Equity*: It looks at bank's capacity to generate profits from the shareholders equity. This ratio is calculated as Net Profit to Shareholders Equity (Capital + Reserves and Surplus). This is commonly used by investors to comment on a bank's profitability.

(4) *Liquidity Ratios*: Liquidity is very important for any organization dealing with money. Liquidity ratios of banks are subject to prudential liquidity requirements. Liquidity coverage ratio (LCR) and Net Stable Funding Ratio (NSFR) have been designed to meet short term and long-term liquidity requirements, respectively, for banks under Basel III. However, this chapter considers following ratios for the purpose of analysis:

(a) *Liquid Assets to Total Assets*: Liquid assets consists of cash, balances with RBI, balances in current accounts with banks, money at call and short notice, inter-bank placements due within 30 days and securities under "held for trading" and "available for sale" categories excluding securities that do not have ready market. (RBI, Glossary). The proportion of Liquid assets to Total Assets indicates the overall liquidity position of the bank.

(b) *Government Securities to Total Assets*: Government securities are the most liquid and safe investments. This ratio measures the G-Secs as a proportion of total assets. Banks invest in government securities primarily to meet their SLR requirements, which are around 18 percent (from February 2022) of net demand and time liabilities. This ratio measures the risk involved in the assets held by a bank.

(c) *Liquid Assets to Demand Deposits*: Demand deposits are liabilities which are payable on demand. They include current deposits, demand liabilities portion of savings bank deposits, margins held against letters of credit/ guarantees, balances in overdue fixed deposits, cash credit etc. (RBI, 2014b). This ratio measures the ability of a bank to meet the demand from deposits in a particular year. It is arrived at by dividing the liquid assets by total demand deposits. Demand deposits offer high liquidity to the depositor and so banks have to invest these assets in a highly liquid form.

(d) *Liquid Assets to Total Deposits*: This ratio measures the liquidity available to the deposits of a bank. Total deposits include demand deposits, saving deposits, term deposits and deposits of other financial institutions. Higher the ratio, higher the score.

(5) *Efficiency Ratios*: The various ratios considered to assess the efficiency of the banks in this chapter are as below:

(a) *The Cost to Income Ratio* reflects the extent to which non-interest expenses of a bank make a charge on the net total income (total income - interest expense). The lower the ratio, the more efficient is the bank. It is computed as, Non interest expenditure/Net Total Income * 100 (RBI, Glossary).

(b) *Credit-Deposit Ratio*: "This is an important ratio as it conveys how much of each rupee of deposit is going towards credit markets. A higher growth in credit deposit ratio suggests credit growth is rising quickly which could lead to excessive risks and leveraging on the borrowers side. In case of banks, it could imply there will be a rise in NPAs when economic cycle reverses. This ratio serves as a useful measure to understand the systemic risks in the economy" (RBI, 2014b).

(c) *Productivity* is measured through business per employee and profit per employee (Samantaraya, 2025). Asia Productivity Organization (APO), defines productivity as, efficiency and effectiveness. The productivity of employees in terms of business per employee and profit per employee, is crucial for the overall efficiency of the banks (RBI, 2007).

(6) *Sensitivity to Market Risk*: "Sensitivity to market risk reflects the degree to which changes in interest rates, foreign exchange rates, commodity prices, or equity prices can adversely affect a financial institution's earnings or capital" Federal Reserve Bank of St. Louise (2018).[7] It is measured using the beta coefficient. A higher beta indicates that the bank's investments move in line with market and vice-versa. The data for sensitivity to market risk is collected from ACE Equity.

7.3. Analysis and Interpretation

The overall composite score of the banks on Banking Stability Map and Bank-wise analysis on various dimensions is presented below.

The Table 7.3, shows that soundness, assessed through capital adequacy ratio, is observed to be high in private sector banks followed by foreign banks in India at the overall level among all scheduled commercial banks. In terms of assets quality, the foreign banks and payment banks, have the highest normalised score of 1, which requires urgent regulatory and top management attention. The further look at the table shows that public sector banks followed by foreign banks, are outperforming in

7. Section 7.1 Sensitivity to Market Risk

TABLE 7.2

Variables and their Impact on Banking Stability

	Variables	*Impact on Stability (Composite Score)*
Soundness	Capital Adequacy Ratio (Capital to Risk Weighted Assets Ratio)	+
	Tier I Capital Adequacy Ratio	+
	Debt to Equity Ratio	-
	Gross Loans to Total Assets Ratio	+/-
	Investment in Government Securities to Total Investment Ratio	+
Asset Quality	Gross NPAs to Gross Advances Ratio	-
	Net NPAs to Net Advances Ratio	-
	Total Investments to Total Assets	+/-
Profitability	Operating Profit to Total Assets	+
	Net Interest Margin (Spread to Total Assets)	+
	Interest Income to Total Income	+
	Non-Interest Income to Total Income	+
	Return on Assets	+
	Return on Equity	+
Liquidity	Liquid Assets to Total Assets	+
	Government Securities to Total Assets	+
	Liquid Assets to Demand Deposits	+
	Liquid Assets to Total Deposits	+
Efficiency	Cost to Income Ratio (Burden to Interest Income)	-
	Credit to Deposit Ratio	+
	Business per Employee	+
	Profit per Employee	+
Sensitivity to Market Risk	Beta	-

terms of profitability, with a normalised score of .833 and .830, respectively. Small Finance banks, in contrast, have the lowest profitability. The normalised score of Liquidity parameter for foreign banks, as observed from the Table 7.3 is 1. Does this means they have the highest liquidity among all scheduled commercial banks? This is definitely not the case, as foreign banks also have the lowest normalised score in liquidity parameter, followed by private sector banks. The Table 7.3 further presents efficiency ratios, it is clear from the analysis that the private sector banks, followed by public sector banks, have high efficiency score. Surprisingly, public sector banks have the lowest efficiency score. Further taking a look at the score of the parameter sensitivity to the market risk, the analysis shows that the high value of the normalised score clearly indicate that the banks in India are highly affected by market movement. The normalised score of beta of 1, clearly reflect the high volatility in bank stocks vis-s-vis the market. At the overall level, the private sector banks are performing well amongst all sectors of scheduled commercial banks. However, public sector banks are giving a tough fight to their private counterparts. In contrast, payment banks have the lowest score on the Banking Stability Map. However, it's too early to comment on their performance, as they are recent entrants in the industry.

TABLE 7.3

Scores of Scheduled Commercial Banks in India

	Soundness	*Asset Quality*	*Profitability*	*Liquidity*	*Efficiency*	*Sensitivity to market risk*	*Overall Score*
Public Sector Banks							
Min	0.225	0.238	0.167	0.124	0.013	0.000	0.243
Max	0.750	0.691	0.833	0.880	0.857	1.000	0.649
Private Sector Banks							
Min	0.253	0.317	0.202	0.085	0.101	0.000	0.279
Max	0.817	0.864	0.730	0.845	0.909	1.000	0.655
Foreign Banks							
Min	0.266	0.000	0.164	0.074	0.065	-	0.257
Max	0.800	1.000	0.830	1.000	0.826	-	0.601
Small Finance Banks							
Min	0.309	0.333	0.207	0.148	0.193	0.000	0.424
Max	0.791	0.839	0.575	0.727	0.819	1.000	0.605
Payment Banks							
Min	0.106	0.000	0.231	0.287	0.325	-	0.394
Max	0.703	1.000	0.652	0.500	0.511	-	0.457

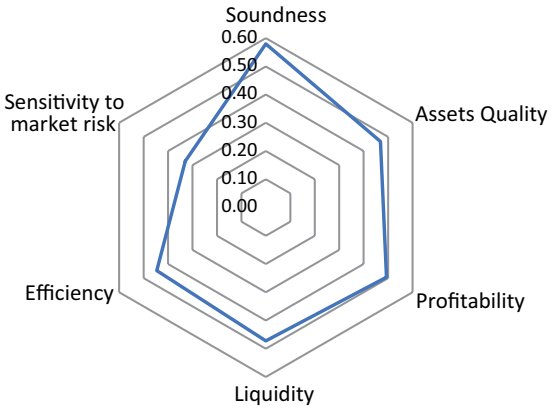
Source: Author's own analysis.

Banking Stability Index of Public Sector Banks

Further, it is interesting to observe from Table 7.3 and Figure 7.1 (a) that the overall composite score of public sector banks is in the range 0.243 to 0.649. The major contributor to the overall banking stability is strong liquidity followed by efficiency among the public sector banks. The analysis, however, clearly indicates that assets quality is still a matter of concern for public sector banks in the country. Figure 7.1 (b) presents the bank-wise analysis, which clearly indicates that Bank of Maharashtra followed by Indian Bank are the best performers in public sector banks in the year 2024. The State Bank of India followed by Central Bank of India have lowest score on the Banking Stability map, and requires urgent regulatory attention. Further, analysis of Public Sector Banks like Indian Overseas Bank, State Bank of India, and Canara Bank show that they have the highest score in soundness, assets quality and liquidity, parameters, respectively. Bank of Maharashtra surpassed banks in public sector, in terms of profitability and efficiency ratios. Sensitivity to market is observed to be the highest in Indian Bank and lowest in Punjab and Sind Bank. The lowest score of banks on soundness, assets quality, profitability, liquidity and efficiency parameters are for State Bank of India, Bank of India, Punjab and Sind Bank, Bank of Baroda and Central Bank of India, respectively. These lowest normalised score of the banks are contributing to instability in banks in public sector.

FIGURE 7.1(A)

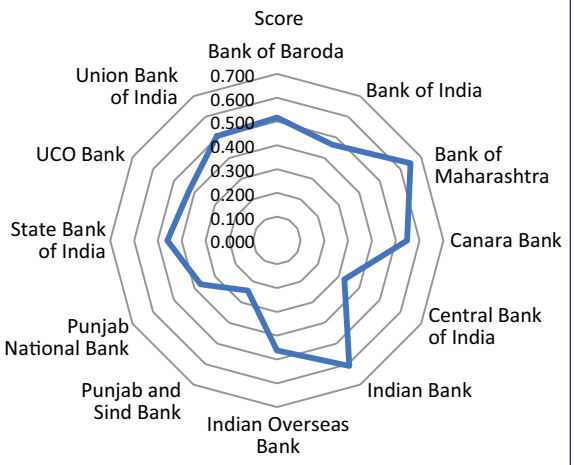
Banking Stability Map of Public Sector Banks



Source: Author's own Analysis.

FIGURE 7.1(B)

Bank-wise Composite Score of Public Sector Banks



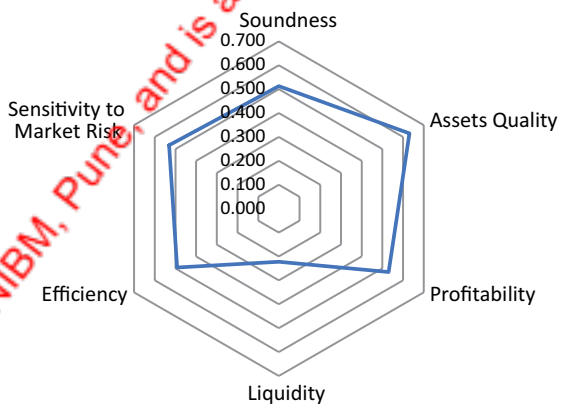
Source: Author's own Analysis.

Banking Stability Index of Private Sector Banks

Bank-wise analysis among private sector, as Figure 7.2 (b) indicates, shows that Tamilnadu Mercantile Bank has the highest score on Banking Stability Map, and is the best performer among private sector banks, followed by ICICI Bank. Dhanlaxmi bank is amongst the lowest performers, indicating instability. This clearly calls for urgent management attention. Tamilnadu Mercantile Bank is observed to be the best bank in terms of soundness and is highly sensitive to market risk with normalised score of 1. However, the bank is sensitive to market risk. The banks with the highest scores of .864, .730, .845, and .909 in terms of assets quality, prof-

FIGURE 7.2(A)

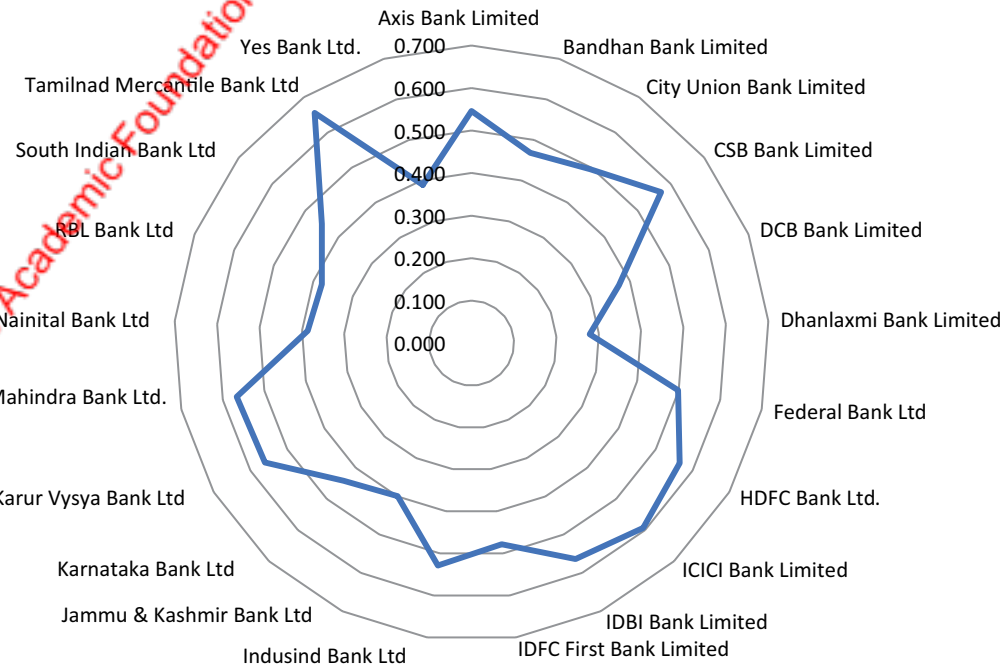
Banking Stability Map of Private Sector Banks



Source: Author's own Analysis.

FIGURE 7.2(B)

Bank-wise Composite Score of Private Sector Banks



Source: Author's own Analysis.

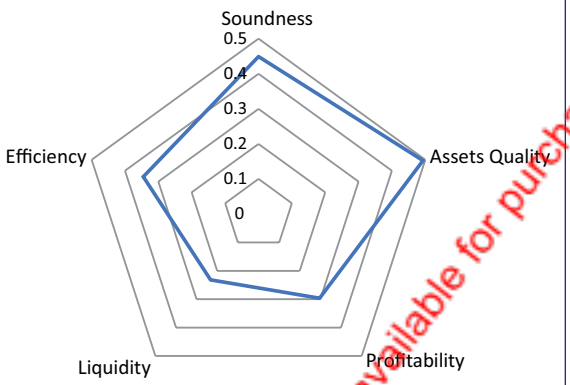
itability, liquidity, and efficiency within private sector banks are Kotak Mahindra Bank, ICICI, Nainital Bank and HDFC Bank, respectively. The private sector banks like Dhanlaxmi Bank, Yes Bank and Karur Vysya Bank have the lowest score in terms of soundness, profitability, and liquidity parameters respectively. Nainital Bank needs to improve in terms of assets quality and efficiency score.

Banking Stability Map of Foreign Banks

The analysis of foreign banks presented in Figure 7.3 (b) clearly shows that Nat West Market PLC is the best performer on the Banking Stability Map. In contrast, Industrial Bank of Korea, has the lowest score. The banks with best normalised score in terms of Soundness, profitability, and liquidity is Bank of Nova Scotia, Sberbank and Krung Thai bank, respectively. Natwest Market PLC has the highest normalised score in assets quality and efficiency, in this segment on Banking Stability Map. The foreign banks

FIGURE 7.3(A)

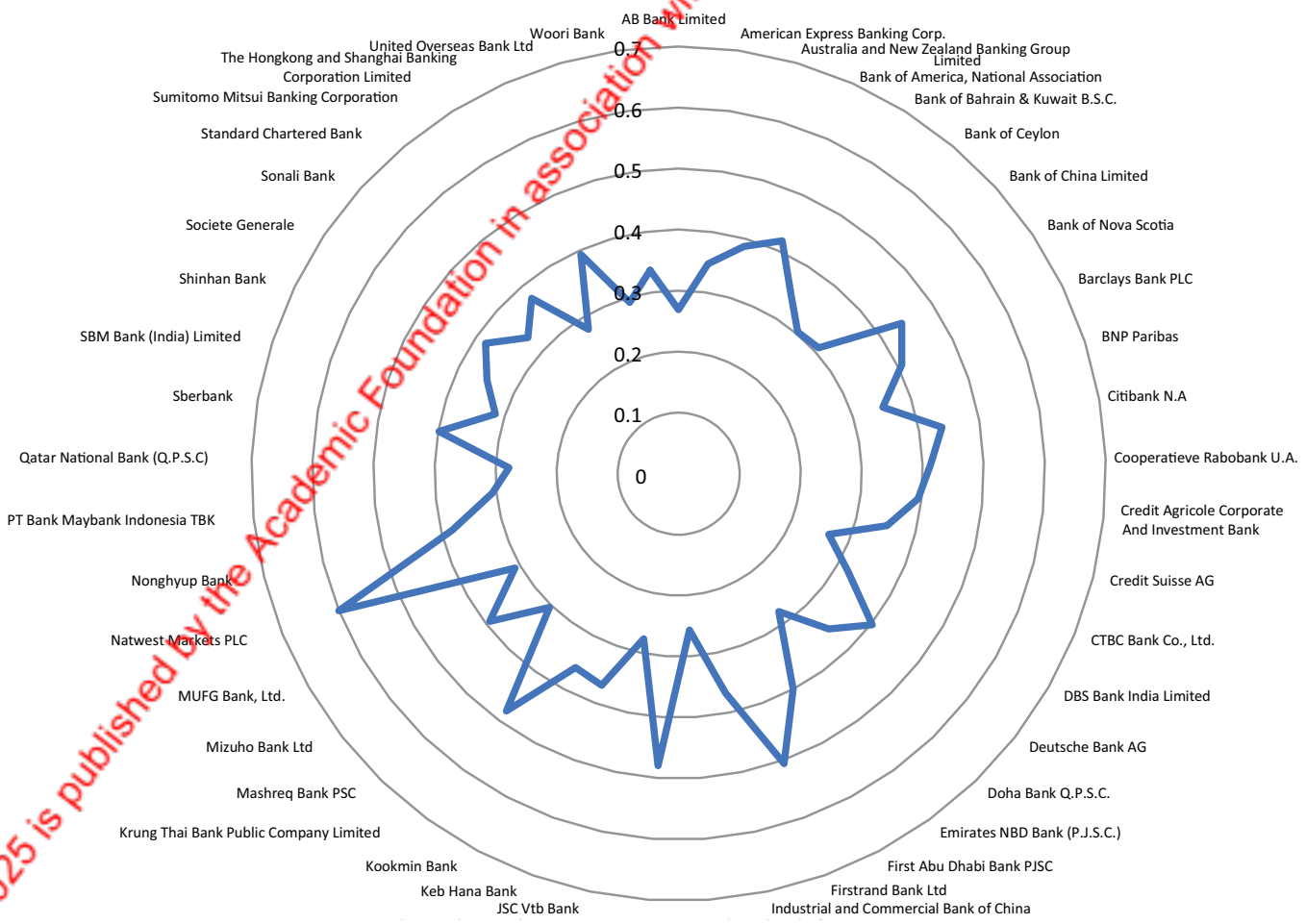
Banking Stability Map of Foreign Banks



Source: Author's own Analysis.

FIGURE 7.3(B)

Bank-wise Composite Score of Foreign Banks



Source: Author's own Analysis.

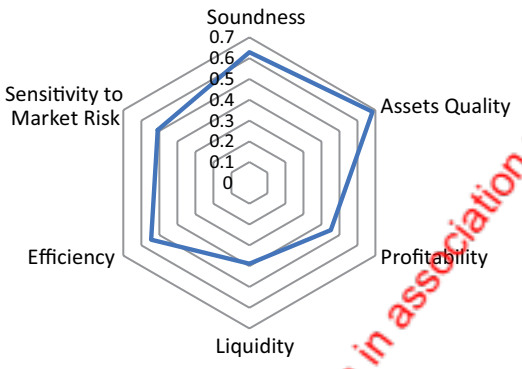
with the lowest score are DBS bank, Industrial Bank of Korea, Kookmin Bank, Mashreq Bank PSC, and AB Bank Ltd., in terms of soundness, assets quality, profitability, liquidity, efficiency, respectively.

Banking Stability Index of Small Finance Banks

The graphical representation of small finance banks, in Figure 7.4 (a) and (b) clearly indicate strong competition among banks in this sector. The best performer is Fincare Small Finance Bank followed by ESAF small finance bank. It is interesting to observe that the Bank with lowest score is North East Small Finance Bank. North East Small Finance Bank has a low score in terms of soundness, assets quality and efficiency parameters on the Banking Stability Map, which calls for management and regulatory attention. In contrast, liquidity is observed to be good in the North East Small Finance Bank. A further look at Figure 7.4 (b) shows that, AU Small Finance Bank has the highest normalised score in assets quality parameter and the lowest in terms of liquidity. The Bank is very much sensitive to market risk as well. The analysis further shows that on the Banking Stability Map, the best performing banks are Survodya Small Finance Bank, Ujjivan Small Finance Bank and Capital Small Finance Bank in terms of soundness, profitability, and efficiency respectively. Shivalik Small Finance Bank and Jana Small Finance Banks are observed to be the lowest in terms of profitability and sensitivity to market risk on Banking Stability Map.

FIGURE 7.4(A)

Banking Stability Map of Small Finance Banks



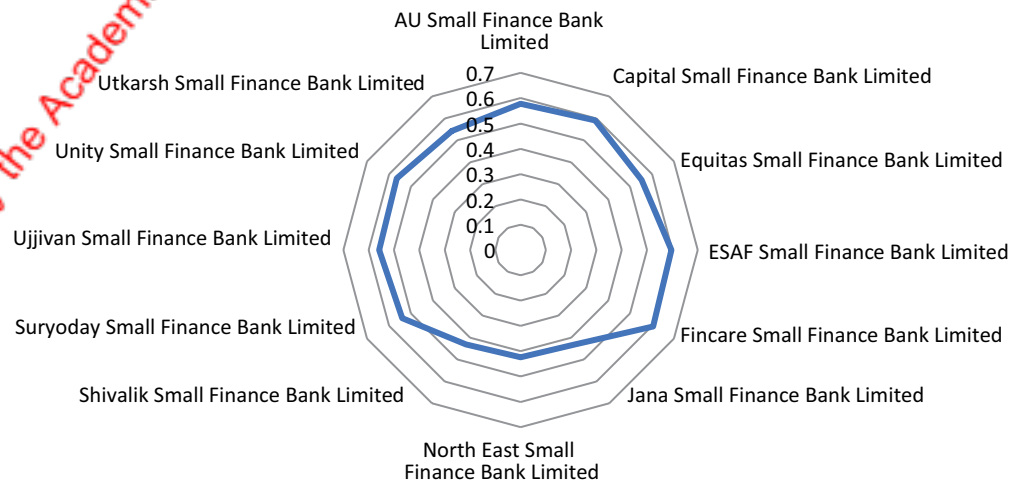
Source: Author's own Analysis.

Banking Stability Index of Payment Banks

A further look at the payment banks, Figure 7.5(a) and (b), show that India Post Payment Bank is the best payment bank in this segment, given its long presence, wide coverage and government backing. According to Prime

FIGURE 7.4(B)

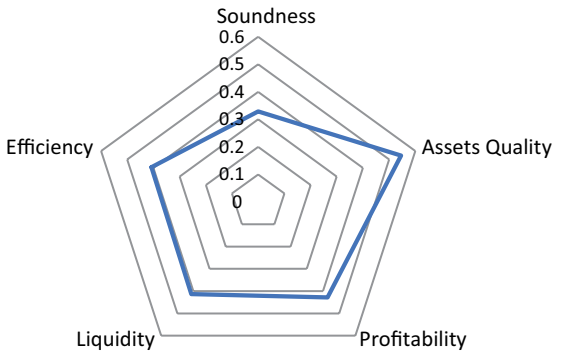
Bank-wise Composite Score of Small Finance Banks



Source: Author's own Analysis.

FIGURE 7.5(A)

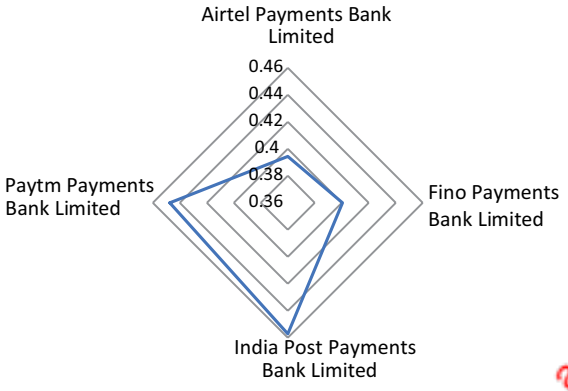
Banking Stability Map of Payment Banks



Source: Author's own Analysis.

FIGURE 7.5(B)

Bank-wise Composite Score of Payment Banks



Source: Author's own Analysis.

Minister Shri Narendra Modi (2018)[8] *"India Post Payments Bank is not just a bank, but it is the biggest initiative in the country to achieve the goal of financial inclusion."* However, Paytm Payment Bank shows comparable performance. The bank with lowest normalised score is Airtel Payment Bank. On the Banking Stability Map, Paytm Payment Bank has the highest normalised score in terms of soundness, profitability and liquidity, whereas the bank's score is lowest for assets quality parameter. In contrast, India Post Payment Bank has the highest score on assets quality and efficiency parameter and lowest score in terms of soundness and profitability, which is raising urgent concern about this bank. Among the Payment Banks, Fino and Airtel Payment Banks have the lowest score on liquidity and efficiency parameters.

7.4. Conclusion

This chapter is an attempt to present risk-based supervision in India, which embodies a noteworthy progression in regulatory practices intended at enhancing financial stability and resilience for banks. A comparative picture of supervisory programme of various regulators show that the CAMELS rating framework forms the base for supervisory assessment. Few ratios listed under Banking Stability Map, in RBI, FSR, are also built upon this framework. This chapter considers 23 ratios to develop Banking Stability Map for all public sector, private sector, foreign banks, small finance banks and payment banks for the year 2024.

The analysis clearly shows that banks in India are sound as they maintain sufficient capital. The public sector banks are observed to be weak on dimensions like assets quality while private and foreign banks are observed to be strong in terms of liquidity parameter, on the Banking Stability Map. Overall, public sector banks are giving a tough fight to their private counterparts. Banks like Bank of Maharashtra, Tamilnadu Mercantile Bank, Natwest Markets PLC, Fincare and India Post Payment Bank have the highest normalised score on Banking Stability Map. Whereas, Punjab and Sind Bank, Dhanlaxmi Bank, Industrial Bank of Korea, North East Small Finance Bank and Airtel Payment Banks are with lowest score and this calls for immediate regulatory attention to improve stability in India's banking system in order for it to remain resilient in this volatile environment.

8. Press Note Details: Press Information Bureau.

References

Adams, M., H.Y. Aydin, H.K. Chon, A. Morozova, and E.S. Iskender. (2022). "Regulating, Supervising, and Handling Distress in Public Banks." *International Monetary Fund*.

Alonso, A., D. Durán, B. García-Olmedo, and M.A. Quesada. (2024). "Basel Core Principles for Effective Banking Supervision: An Update After a Decade of Experience." *Financial Stability Review*, 46.

Caprio Jr, G., A. Demirgüç-Kunt, and E.J. Kane. (2010). "The 2007 Meltdown in Structured Securitization: Searching for Lessons, Not Scapegoats." *The World Bank Research Observer*, 25(1), 125–155.

Demirgüç-Kunt, A. (2019). "Bank Regulation and Supervision a Decade After the Global Financial Crisis." World Bank Blogs, 6 November. https://blogs.worldbank.org/en/allaboutfinance/ bank-regulation-and-supervision-decade after-global-financial-crisis#:~:text=As%20 happens%20after%20every%20crisis%2C%20 this%20crisis%20also,banking%20sector%20 and%20the%20crisis%20revealed%20many%20 shortcomings.

IMF. (2018). *Detailed Assessment of Observance of the Basel Core Principles for Effective Banking Supervision, India*. Financial Sector Assessment Program, IMF Country Report No. 18/4, January 2018.

James, C. (2009). "Structural Causes of the Global Financial Crisis: A Critical Assessment of the 'New Financial Architecture'." *Cambridge Journal of Economics*, vol. 33, no. 4, pp. 563–580.

Kumar, S., and M. Sreeramulu. (2007). "Employees' Productivity and Cost – A Comparative Study of Banks in India During 1997 to 2008." *Reserve Bank of India Occasional Papers*, 28(3), 35–50.

Moshirian, F. (2011). "The Global Financial Crisis and the Evolution of Markets, Institutions and Regulation." *Journal of Banking & Finance*, 35(3), 502–511.

Reserve Bank of India. (2014). "A Handbook on RBI's Weekly Statistical Supplement." 18 June.

Reserve Bank of India. (2011). "Explanatory Notes." 14 November.

Reserve Bank of India. (2014). "Regulation, Supervision and Financial Stability." Chapter VI, *Annual Report 2013–14*.

Samantaraya, A. (2025). *Regulating and Managing Banks in India*. Cambridge Books.

Annexure: List of Banks Considered for the Study

Public Sector Banks (12): Bank of Baroda; Bank of India; Bank of Maharashtra; Canara Bank; Central Bank of India; Indian Bank; Indian Overseas Bank; Punjab and Sind Bank; Punjab National Bank; State Bank of India; UCO Bank; Union Bank of India
Private Sector Banks (21): Axis Bank Limited; Bandhan Bank Limited; City Union Bank Limited; CSB Bank Limited; DCB Bank Limited; Dhanlaxmi Bank Limited; Federal Bank Ltd; HDFC Bank Ltd.; ICICI Bank Limited; IDBI Bank Limited; IDFC First Bank Limited; IndusInd Bank Ltd; Jammu & Kashmir Bank Ltd; Karnataka Bank Ltd; Karur Vysya Bank Ltd; Kotak Mahindra Bank Ltd.; Nainital Bank Ltd; RBL Bank Ltd; South Indian Bank Ltd; Tamilnad Mercantile Bank Ltd; Yes Bank Ltd.
Foreign Banks (45): AB Bank Limited; American Express Banking Corp.; Australia and New Zealand Banking Group Limited; Bank of America, National Association; Bank of Bahrain & Kuwait B.S.C.; Bank of Ceylon; Bank of China Limited; Bank of Nova Scotia; Barclays Bank PLC; BNP Paribas; Citibank NA; Cooperatieve Rabobank U.A.; Credit Agricole Corporate and Investment Bank; Credit Suisse AG; CTBC Bank Co. Ltd; DBS Bank India Limited; Deutsche Bank AG; Doha Bank Q.P.S.C.; Emirates NBD Bank (P.J.S.C.); First Abu Dhabi Bank PJSC; FirstRand Bank Ltd; Industrial and Commercial Bank Of China; Industrial Bank of Korea; JPMorgan Chase Bank National Association; JSC VTB Bank; Keb Hana Bank; Kookmin Bank; Krung Thai Bank Public Company Limited; Mashreq Bank PSC; Mizuho Bank Ltd; MUFG Bank Ltd; Natwest Markets PLC; Nonghyup Bank; Pt Bank Maybank Indonesia Tbk; Qatar National Bank (Q.P.S.C); Sberbank; SBM Bank (India) Limited; Shinhan Bank; Societe Generale; Sonali Bank; Standard Chartered Bank; Sumitomo Mitsui Banking Corporation; The Hongkong and Shanghai Banking Corporation Limited; United Overseas Bank Ltd; Woori Bank.
Small Finance Banks (12): AU Small Finance Bank Limited; Capital Small Finance Bank Limited; Equitas Small Finance Bank Limited; ESAF Small Finance Bank Limited; Fincare Small Finance Bank Limited; Jana Small Finance Bank Limited; North East Small Finance Bank Limited; Shivalik Small Finance Bank Limited; Suryoday Small Finance Bank Limited; Ujjivan Small Finance Bank Limited; Unity Small Finance Bank Limited; Utkarsh Small Finance Bank Limited
Payment Banks (4): Airtel Payments Bank Limited; Fino Payments Bank Limited; India Post Payments Bank Limited; Paytm Payments Bank Limited