



Predicting Credit Risk Through Strategic Capabilities: A Balanced Scorecard Framework for Indian Banks

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1. Introduction

In India, bank credit is the most common method of funding a business (Banerjee *et al.*, 2004; Goswami 2022). India has the oldest stock market and the most prominent commercial bank operating profitably for the past 200 years (Allen *et al.*, 2012). Since banks are the primary source of financing, it was predicted that as Indian companies grow and expand their operations abroad, so will their reliance on Indian banks. Providing loan and advances to business is one the main operations in banking. There are always chances of financial loss because of loan default, which is commonly called as credit risk. There are several international and Indian studies where reasons behind the credit risk are explored (Treacy and Carey 2000; Love & Peria, 2005; Uhde and Heimeshoff, 2009; Sanyal and Shankar, 2011; Didier & Schmukler, 2013, Mkalaf and Hilo, 2023). In the literature, much focus has been on the relationship between bank-specific characteristics and credit risk. Most of the studies documented that credit risk as an outcome of financial factors such as credit risk models (Crouhy *et al.*, 2000), growth of loans (Muninarayanappa, 2004), capital adequacy ratio (Fatemi & Fooladi, 2006), bank ownership (Haque and Brown, 2017) credit to deposit ratio (Chaibi and Ftiti 2015), growth in reserves & surplus (Goswami 2022), bank capital (Abbas and Ali 2022). However, this study proposes a model where along with bank specific financial factors; non-financial factors are also better predictors of credit risk. The study has selected these factors using balanced scorecard. The balanced score card is comprises of four dimensions finance, internal business process learning and growth and customer (Kaplan and Norton 1991). The study has considered credit risk as a “dependent variable” and one variable from each direction of balanced score card i.e., from financial dimension, Credit Deposit Ratio (CDR) from internal business process dimension, Cost to Income Ratio (CIR); from learning and growth dimension, Growth in Skilled Employees (GSE) and from customer dimension, Growth in Advances (GIA) are considered as an independent variable. The research work attempts to examine the impact these variables viz. CDR, CIR, GSE and GIA on the credit risk (CR). The research uses bank-level data from the top 20 commercial banks in India. Return on assets (ROA) and credit risk (CR) are two metrics used in the study to evaluate the performance of

public sector banks (PBs) and private sector banks (PVBs). The Reserve Bank of India directory and the annual reports of the individual banks used to fetch the financial statistics about Indian banks. Multiple linear regression is utilised to measure the accuracy of the suggested models for the study, and ANOVA is used to compare the banks' performances.

The paper continues as follows: Section 1 is introduction of the study. Section 2 focuses on the examination of prior literature related to the study, section 3 comments on research premise and conceptual model proposed by the authors, section 4 covers the research methodology, section 5 discusses the data analysis and primary empirical findings, which emphasizes the impact of selected variables on credit risk in the banking industry and the final section includes the study's conclusion, contribution and scope for further research.

2. Review of Literature

A review of prior research indicates that there is a substantial body of work on macroeconomic and bank-specific credit risk indicators (Agoraki et.al., 2011; Abid et.al.,2014; Benbouzid et.al., 2022). However, there is a need to do more research on the non-financial factors and its effect on CR. The following section provides a thorough summary of all relevant literature in relation to the study.

2.1 Bank Specific Financial Factors and Credit Risk

Haq and Heaney (2012) explored the influence of various factors on credit risk and bank equity risk, focusing on elements like bank capital, dividend payout ratios, operating leverage, and activities off the balance sheet. They utilized data from 117 financial institutions across 15 EU member states from 1996 to 2010, discovering a U-shaped correlation between credit risk, equity, and bank capital, while noting an inverse relationship with the dividend payout ratio. Shafique et al (2013) analysed how the choice of banking type affects equity and credit risks, finding that Islamic banks exhibit lower credit risks but higher systematic risks compared to traditional banks. Chaibi and Ftiti (2015) investigated the effects of macroeconomic and bank-specific factors on nonperforming loans among commercial banks in France and Germany from 2005 to 2011, using panel data to assess variables like leverage, loan provisions, and profitability. The study highlighted that the impact of these variables varies between market-based and bank-based systems in the two countries. Destefanis et al. (2014) examined cooperative banks in Italy, identifying low capital adequacy and poor management practices as primary contributors to credit risk. Abbas and Ali (2022) studied the relationship between credit risk and loan growth in Islamic banking, using the GMM method to explore how bank capital moderates this relationship, noting an increase in credit risk with higher loan volumes but less impact from bank capital.

2.2 Balance scorecard and credit risk

There have been few studies on using the balanced scorecard in the banking industry. Aston (1998) examined the use of the balanced scorecard in enhancing service quality in banks and its effectiveness in shifting the organizational culture from traditional command and control frameworks to a focus on empowerment and coaching. The adoption of a balanced scorecard was seen as a means to enrich the existing performance evaluation systems by integrating aspects of customer focus, internal processes, and opportunities for learning

and growth. This approach was promoted as a strategy to enhance the overall banking sector in China, as discussed by (Zhang and Li, 2009). According to Ozturk & Coskun, (2014) a balanced scorecard is an excellent tool for enhancing financial service delivery. They stated that it is critical to examine the usage of a balanced scorecard while adapting various advances in the banking sector to remain competitive globally. According to research published by Tominac (2014) using a balanced scorecard helps bank staff understand the strategy better. It also assists management in considering areas of strength, weakness, profit, and loss. According to Agyeman *et al.* (2017) research, the financial perspective was the most widely used of the four balanced scorecard perspectives. It was concluded that banks in Ghana continued to rely mainly on a financial viewpoint to assess performance. Zahoor and Sahaf (2018) explored the application of the balanced scorecard in the Indian banking sector, finding that employee development and learning significantly enhance internal business processes, which subsequently boosts customer satisfaction. Tran Trung Tuan (2020) study on Vietnamese Commercial Banks, demonstrated that the adoption of the Balanced Scorecard (BSC) positively influences the performance of banks.

Based on the literature, we make two premises. Firstly, in most of the cases bank-related financial factors are documented as the predictor's credit risk. And most of the research related use of balance score card in banking is based on strategy. Therefore, there is scope of exploring the use of balance score card in determining the credit risk. This study is an attempt to answer above discussed premises. From the literature we can say that various models related to CR, specifically by (Louzis *et al.*, 2012; Arora, 2014; Vithessonthi, C., 2016; Sharifi *et al.*, 2019; Goswami, 2022) can be combined as follows.

$$NPA_{i,t} = \alpha + \beta_j \times \text{Bank Factors}_{i,t} \dots \dots \dots (1)$$

Where,

$NPA_{i,t}$ is the credit risk of the bank 'i' in time 't'.

Bank Factors $_{i,t}$ are the bank-specific factors. Researchers have used different variables limited to bank-specific financial variables. These financial variables are but not limited to are Growth of Loans, Capital Adequacy Ratio, Credit to Deposit Ratio, The Log of Total Assets, Growth in Reserves & Surplus, Growth in Expense to Assets Ratio, etc.

3. Research Premise and Proposed Conceptual Model

In the above Model (refer equation 1), NPA is considered a credit risk. Credit risk is considered a result of bank-specific factors, mainly financial factors. At the same time, authors believe that other non-financial factors have a better predictive ability of credit risk. Furthermore, these factors remained unexplored in the literature. Considering this as a research premise, the authors designed a comprehensive Balanced Scorecard (BSC) for banks which consider four different parameters viz. “Financial” (FIN), “Internal Business Process” (IBP), “Learning and Growth” (LG) and “Customer” (C) (Refer Table 1 for details). Based on each parameter of balanced scorecard framework variables are identified and following model is proposed as

$$CR_{i,t} = \alpha + \beta_1 \times CDR_{i,t} + \beta_2 CIR_{i,t} + \beta_3 \times GSE_{i,t} + \beta_4 GIA_{i,t} \quad (2)$$

Where,

$CR_{i,t}$ is the Credit risk of the bank 'i' in time 't'.

$CDR_{i,t}$ is defined as the credit to deposit ratio of the bank 'i' in time 't' which comes under financial parameters (FIN) of the BSC.

$CIR_{i,t}$ is defined as cost to income ratio of the bank 'i' in time 't'. which comes under internal business process (IBP) parameter of the BSC.

$GSE_{i,t}$ is defined as the growth in skilled employees of the bank 'i' in time 't.' which comes under learning and growth (LG) parameter of BSC.

$GIA_{i,t}$ is defined as growth in advances of the bank 'i' in time 't' which comes customer parameters(C) of the BSC.

Table 1- Variables considered for the study.

BSE Perspective	Variables considered for the study	Symbol	Formula	Source
Financial (FIN)	Credit Deposit Ratio	CDR	(Total Advances / Total Deposits) * 100	Salas & Saurina, 2002; Al-Tamimi & Al-Mazrooei, 2007; Arora, 2014; Vithessonthi, C., 2016.
Internal Business Process (IBP)	Cost to Income Ratio	CIR	(Operating Expenses / Total Income)*100	Raut and Sahasrabuddhe, 2021.
Learning and Growth (LG)	Growth in Skilled Employees	GSE	[(No. of Employees in Present Year - No. of Employees in Last Year) / No. of Employees in Last Year]*100	Bernini and Brighi, 2018; Raut and Sahasrabuddhe, 2021.
Customer (C)	Growth in Advances	GIA	[(Present Year Advances Value - Last Year Advances Value) / Last Year Advances Value] * 100	Doan, <i>et al.</i> , 2018

[Source: Prepared by Authors; The basic theme of BSC is borrowed from Kaplan and Norton (1992). The framework is adopted from (Raut, R., & Sahasrabuddhe, A. 2021). The variables for the study are selected by the authors and validated by subject matter specialists].

4. Research methodology for proposed model study.

The authors have utilized the balanced scorecard framework to define the variables, which are structured around its four key dimensions (see Table 1). The primary sources of data include annual reports from banks, the Financial Stability Report by the Reserve Bank of India, and the RBI's "Statistical Tables Relating to Banks in India," covering the years 2010 to 2024. The study sample comprises the top 10 public and top 10 private sector banks in India, ranked by total assets as of May 5, 2020 (refer to annexure 1). To evaluate the stability of our estimations we have divided the sample of banks by sector (private sector and public sector). The study has considered credit Risk as a dependent variable and selected BSC variables as independent

variables. ANOVA analysis is used to compare the performance of PBs and PBs in terms of ROA and credit risk. Regression methos is used measure the effect of balanced scorecard factors on credit risk. The study is conducted to study the following hypotheses.

Hypothesis 1: There is significant difference in return on assets (ROA) performance between private and public sector banks.

Hypothesis 2: There is significant difference in the credit risk (CR) levels between private and public sector banks.

Hypothesis 3: There is a statistically significant relationship between CDR and credit risk (CR).

Hypothesis 4: CIR significantly predicts CR, controlling for CDR.

Hypothesis 5: GSE significantly predicts CR, accounting for the effects of CDR and CIR.

Hypothesis 6: GIA significantly predicts CR, considering the influences of CDR, CIR, and GSE.

5. Data Analysis

5.1 Statistics of Variables.

Table 2 provides descriptors for the key variables used in the study at the bank level. The table shows that the PBs have a higher percentage of credit risk than PVBs. The finding implies that in case of India, private sector banks are at less risk that public sector banks. Compared to PBs, PVBs perform better in CDR. The mean CDR for PVBs is 95.30 percent, whereas the mean CDR for PBs is 72.57 percent. The results show that private banks take an aggressive approach to lending. The cost-to-income ratio (CIR) of public banks is 48.09 percent, whereas the CIR of private banks is 42.68 percent. PVBs are far ahead of their counterpart in terms of recruiting skilled employees. In terms of growth in advances, (GIA) private banks are the forehead of public banks. We can see from the data that private banks are performing well compared to private banks.

Table 2- Statistics of Variables

Statistics	CR			ROA			CDR			CIR			GSE			GIA		
	PBs	PVBs	All Banks	PBs	PVBs	All Banks	PBs	PVBs	All Banks	PBs	PVBs	All Banks	PBs	PVBs	All Banks	PBs	PVBs	All Banks
Mean	4.97	1.23	3.01	0.08	1.43	0.75	72.57	95.30	83.93	48.09	42.68	45.43	4.48	13.28	8.86	8.02	22.66	15.37
Median	3.78	1.11	2.45	0.08	1.26	0.67	70.23	93.22	81.73	45.32	40.23	42.78	3.98	11.23	7.61	7.42	21.45	14.44
Maximum	5.20	1.67	3.44	0.10	1.58	0.84	80.56	96.50	88.53	52.78	48.66	50.72	5.88	15.80	10.84	10.35	25.65	18.00
Minimum	3.67	0.85	2.26	0.07	1.22	0.64	70.45	90.45	80.45	45.67	42.78	44.23	3.22	10.29	6.76	7.47	20.10	13.79
Std Dev	1.47	1.17	1.30	0.62	0.29	0.46	5.27	6.99	5.63	2.57	2.39	2.47	4.67	13.88	9.28	9.57	9.34	9.46
Skewness	0.35	0.57	0.46	0.76	0.56	0.66	0.32	0.57	0.44	0.72	0.88	0.80	0.33	0.69	0.51	0.47	0.56	0.51
Kurtosis	1.58	1.87	1.72	1.76	1.79	1.78	1.55	1.57	1.56	1.72	1.88	1.80	1.56	1.92	1.74	1.47	1.56	1.51
Observations	10.00	10.00	20.00	10.00	10.00	20.00	10.00	10.00	20.00	10.00	10.00	20.00	10.00	10.00	20.00	10.00	10.00	20.00

Notes: For further information on how the variables included in the study were described in Table 1.
Source: Prepared by authors based on the database from RBI, Annual Reports.

Source: Prepared by Authors

5.2 Correlation Analysis.

Table 3 presents the pairwise correlations among the key variables used in our analysis. The findings indicate a significant negative correlation between return on assets (ROA) and credit risk (CR). Almost all significant variables are significantly correlated with credit risk. Growth in advances is significant and negatively correlated with CR. Interestingly, business per employee is also significant and negatively correlated with CR. This study also documents a significant positive relationship between ROA and credit deposits ratio, business per employee (BPE), growth in deposits (GID), and growth in advances (GIA). The growth in advances is shown to be inversely correlated with CR and positively correlated with ROA, CDR, and GSE.

Table 3- Correlations of Variables

CORRELATIONS						
	CR	ROA	CDR	CIR	GSE	GIA
CR	1					
ROA	-0.047**	1				
CDR	0.035**	0.078**	1			
CIR	0.668**	-0.091	-0.005	1		
GSE	0.097**	0.874	0.43	0.11	1	
GIA	-0.023*	0.056**	0.021**	0.184	0.034*	1

*-Indicates that correlation is statistically significant at 0.01

** - Indicates that correlation is statistically significant at 0.05.

Source: Prepared by Authors

5.3 ROA in Banks

Return on assets in public banks and private sector banks is compared. The hypothesis is examined using ANOVA. Table 4 contains the ANOVA findings for comparing public and private banks.

Table 4- Comparison of Banks on ROA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.215	1	4.215	24.573	.002
Within Groups	1.834	18	0.305		
Total	6.049	19			

Source: Prepared by Authors

The ANOVA results comparing the performance of public sector banks (PBs) and private sector banks (PVBs) are detailed in Table 4. With a p-value below 0.05, Hypothesis 1 is supported, indicating a significant disparity in ROA between PBs and PVBs. This implies that private sector banks manage assets more effectively than public sector banks, leading to higher profitability for PVBs.

5.4 Comparison of Credit Risk in Banks:

Table 5 contains the ANOVA findings for the comparison between public and private banks. The hypothesis H_2 is examined using ANOVA.

Table 5- Results of comparative performance of PBs and PVBs in CR.

	Sum of the squares	Df	Mean Square	F	Sig.
Between Groups	6.237	1	6.237	37.520	.009
Within Groups	2.235	18	.662		
Total	8.472	19			

Source: Prepared by Authors

Given that the p-value is less than 0.05, Hypothesis 2 is accepted, indicating a significant difference in credit risk management between public sector banks (PBs) and private sector banks (PVBs). This demonstrates that private sector banks are more effective in loan management compared to public sector banks, which translates to greater profitability for PVBs.

5.4 Regression Analysis and Proposed Model Study.

The analysis, including regression and ANOVA, was conducted using the “Statistical Package for Social Science” (SPSS) on the collected data. A multiple regression approach was employed to explore the relationships between a “dependent variable” (DV) and multiple “independent variables” (IVs). In this study, credit risk (CR) is treated as an independent variable, while CDR, CIR, GSE, and GIA are considered as dependent variables. Using four distinct models, we applied the conservative strategy as proposed by Pedhazur and Schmelkin (1991) to understand the impact of independent and predictive variables on the dependent variable. Tables 6 and 7 present the results of the analysis.

Table 5- R square summary for all models

Model Summary				
Model	R	R Square	Adjusted R Square	Std. error of the Estimate
1	.272 ^a	0.224	0.184	0.78262
2	.293 ^b	0.246	0.206	0.83106
3	.298 ^c	0.266	0.236	0.85642
4	.328 ^d	0.295	0.256	0.87165
a. Predictors: (Constant), CDR				
b. Predictors: (Constant), CDR, CIR				
c. Predictors: (Constant), CDR, CIR, GSE				
d. Predictors: (Constant), CDR, CIR, GSE, GIA				

Source: Prepared by Authors

Table 6- ANOVA Results

ANOVA ^A						
MODEL		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.390	1	0.390	0.637	.008 ^b
	Residual	4.900	18	0.612		
	Total	5.290	19			
2	Regression	0.456	2	0.228	0.330	.000 ^c
	Residual	4.835	17	0.691		
	Total	5.290	19			
3	Regression	0.469	3	0.156	0.195	.006 ^d
	Residual	4.821	16	0.804		
	Total	5.290	19			
4	Regression	0.570	14	0.142	0.151	.005 ^e
	Residual	4.721	5	0.944		
	Total	5.290	19			
A. DEPENDENT VARIABLE: CR						
B. PREDICTORS: (CONSTANT), CDR						
C. PREDICTORS: (CONSTANT), CDR, CIR						
D. PREDICTORS: (CONSTANT), CDR, CIR, GSE						
E. PREDICTORS: (CONSTANT), CDR, CIR, GSE, GIA						

Source: Prepared by Authors

Table 7- Coefficients for Model 4

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		Beta	Std. Error	Beta		
4	(Constant)	2.843	4.831		0.589	0.002
	CDR	-0.263	0.376	-0.375	-0.699	0.001
	CIR	0.045	1.105	0.027	0.041	0.009
	GSE	-0.119	0.395	-0.235	-0.302	0.005
	GIA	0.112	0.343	0.188	0.327	0.004

Source: Prepared by Authors

To evaluate Hypothesis 3, CR was regressed against CDR, a financial perspective indicator from the Balanced Scorecard (BSC). The model's significance was confirmed using F-statistics, with a p-value of 0.008, leading to the acceptance of H3. This supports the significant influence of CDR on CR, aligning with previous studies by Bag (2009) and Espinoza & Prasad (2010). For Hypothesis 4, CIR, an internal business process metric from the BSC, served as a predictor, with CR regressed on CDR. The model's validity was established through F-statistics, and with a p-value of 0.008, H4 was accepted, indicating CIR's predictive ability for CR when considering CDR as a control variable. Hypothesis 5 was tested by regressing CR against CDR, using CIR and GSE as predictors. The model was validated using F-statistics, and a p-value of 0.006 led to the acceptance of H5, demonstrating GSE's predictive ability for CR, controlled by CDR and CIR. To assess Hypothesis 6, CR was regressed with CDR, incorporating CIR, GSE, and GIA as predictors. The model was substantiated

through F-statistics, with a p-value of 0.005 supporting H6, confirming GIA's predictive capacity for CR, controlled by CDR, CIR, and GSE (refer to Table 7).

The R-squared value, indicating the impact of BSC variables on CR, increased from 0.224 to 0.246 (refer to Table 6). This improvement suggests that Model 2 predicts the relationship more accurately than Model 1, attributing nearly 24.6% of the impact on CR to CDR and CIR. Model 3, showing a 26.6% influence of CDR, CIR, and GSE on CR, is considered superior to Model 2. Model 4, indicating a 29.5% influence of all four variables on CR, is deemed the most effective in demonstrating the hypothesized relationships

Further, we can conclude that if banks are paying attention to CIR, GSE and GIA; CA will considerably improve under the CDR model. We have calculated the coefficients to document the proposed Model 4 as an equation. From table 8, we propose equation 2 as

$$CR = 2.843 + (-0.263 \times CDR) + (0.045 \times CIR) + (-0.119 \times GSE) + (0.112 \times GIA)$$

With the study of beta coefficients, we can conclude that CDR is important component of the CR model with a coefficient value of -0.375. After CDR, GSE has a significant importance with a coefficient value of -0.235. Then GIA (0.118) followed by CIR (0.027). From the results, the proposed model 4 is the best fit to demonstrate the relationship between credit risk and other selected variables.

6. Conclusion:

Credit risk is identified as a crucial element in assessing bank management effectiveness. The analysis reveals that an annual increase in loan issuance is inversely correlated with CR. These findings are consistent with the research conducted by Altman and Saunders (1997). While many studies focus solely on profitability as a measure of banking performance, this research provides a comprehensive evaluation by equally considering both financial and non-financial dimensions of the Indian banking sector. The study compares PSBs and PVSBS based on four different parameters. Between 2010 and 2020, there is a continued general downward trend in PBs' ROA in contrast to PVBs' stable ROA. We also document a significant difference in credit risk management of PBs and PVBs. From the results, CDR, CIR, GSE, and GIA are the significant factors affecting credit risk. The banks should pay close attention to these four factors to improve the credit management process. From the results, all four components are observed as the predictors of CA. Further, we can say that if banks pay attention to CIR (under internal business process); GSE (under learning and growth) and GIA (under customer perspective) of BSC, credit risk management will considerably improve under this Model.

The ROA of PSBs decreased due to insufficient capital and increased NPAs, whereas PVSBS did an excellent job of maintaining a positive ROA from 2010 to 2020. The results support the RBI execution of measures to ensure early credit risk detection by requiring banks to communicate information on potential borrowers' profiles and credit ratings. By limiting the credit extended to individual businesses or entities, the Reserve Bank of India (RBI) promotes diversification in the banks' loan portfolios. Credit risk is identified as the sole

determinant influencing the management of credit risk in Indian banks, making the findings predictable. In terms of managing credit risk, private banks outperform government banks significantly. This outcome is expected given the operational autonomy and performance-driven goals of private banks.

7. Contributions:

The study's insights might interest risk officers, regulators, and bank executives, particularly those at banks experiencing substantial losses from credit defaults. The conclusions suggest focusing on CR to mitigate the impact on non-performing assets. Risk managers are advised to invest time in assessing the creditworthiness of potential borrowers to reduce credit risk through early detection. Collaborative efforts among banks could lower overall non-performing assets (NPAs) and enhance credit distribution across various economic sectors.

8. Practical Implications.

Practical implications of the research indicate that CRI is positively associated with the efficacy of credit risk management in Indian banks but inversely related to the growth of NPAs. The adoption of advanced risk management systems for identifying credit risks is crucial for enhancing credit risk performance. Indian banks and financial institutions could facilitate this by sharing valuable borrower information with all stakeholders in the financial system, potentially supporting the development of additional credit information firms. Such information sharing could improve credit risk management and performance. Implementing an effective credit risk management system is essential to reduce NPAs to levels comparable with those in industrialized nations.

9. Limitations of the study and scope for further research.

This analysis is limited to top 20 commercial banks in India. Large data of banks can be utilised to validate the proposed model. Further validity of the model can be tested in cooperative banks in India.

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Annexure 1

Sr. No.	Name of Public Sector Banks	Total Assets (INR Cr)	Sr. No.	Name of Public Sector Banks	Total Assets (INR Cr)
1	HDFC Bank	20,68,535.05	1	SBI	49,87,597.41
2	ICICI Bank	14,11,297.74	2	PNB	13,14,805.02
3	Axis Bank	11,75,178.11	3	Bank of Baroda	12,77,999.83
4	Kotak Mahindra	4,29,428.40	4	Union Bank	11,87,591.06
5	IndusInd Bank	4,01,974.58	5	Canara Bank	12,26,979.67
6	IDBI Bank	3,01,419.36	6	Bank of India	7,34,614.01
7	Yes Bank	3,18,220.23	7	Indian Bank	6,71,668.06
8	Federal Bank	2,20,946.31	8	Central Bank	3,86,565.59
9	IDFC First Bank	1,90,181.61	9	IOB	2,99,377.17
10	Bandhan Bank	1,38,866.55	10	UCO Bank	2,67,784.02

Source: Prepared by Authors