On Profitability Drivers for Indian Banks: A Dynamic Panel data Analysis

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The purpose of this study is to determine the factors that influence bank profitability in India, including bank-specific, banking industry, and macroeconomic factors. The article uses data from Indian public and private sector banks for the years 2006–2007 through 2012–2013. More than 90% of all scheduled commercial bank business in India is handled by these two banks. This study employs dynamic panel data analysis. Bank specific characteristics, banking industry factors, and economic factors are dependent variables, while return on average assets and return on equity are independent variables. Nonperforming loans and the cost-to-income ratio are two bank-specific features that reduce bank profitability, whereas diversification attempts have little effect.

Keywords Factors unique to each bank Factors affecting the banking industry macroeconomic variables Diversification of Profitability a debt that is not working well (NPL) Factors unique to each bank.

Introduction

Indian banking has gained a lot of attention in recent years due to the country's greater GDP growth rates. While the global financial crisis had an impact on banks in Western countries, Indian institutions were largely unscathed. Despite the fact that India is a big developing market economy, we find that bank profitability issues are rarely discussed. A study of Indian banking performance both before and after the global financial crisis will be more important in this context. A variety of profitability measures are used to analyse bank performance. The return on average assets (ROAA) is a popular statistic for calculating profitability. In addition to return on average assets, return on equity is considered. Banks are looking for new sources of revenue, such as non-interest income, as a result of increased pressure on intermediation, which has resulted in a drop in net interest margins. The percentage of non-interest income to operational income is used to determine revenue diversification.

It has been highlighted that Indian banks have a lower ratio of diversification measures than developed countries. With Indian banks' net interest margins (NIM) under pressure, it's possible that they'll consider other possibilities. Nonperforming loans (NPLs) have been researched in terms of cost efficiency, management quality, and macroeconomic issues such as interest rates, fiscal deficit, and GDP growth (Podpiera and Weill 2008). (Beck et al. 2015; Kauko 2012; Nkusu 2011). The findings of Boateng et al. (2015), who looked at banking and economic factors, are used in this study. The Arellano and Bond estimator is used in this study, and it is based on moment conditions and uses a first-differenced equation with lags of the dependent variable and first differences of the exogenous variables. The method is advantageous since it accounts for endogeneity, heteroscedasticity, and autocorrelation (Arellano and Bover 1995; Lee et al. 2012).

We used data from both public and private sector banks in India from 2006–2007 to 2012–2013. For many years, performance disparities based on ownership have been a topic of public debate and intellectual interest.

The goal of this research is to assess the performance of India's banking industry, which is made up primarily of public and private sector banks. It is widely accepted that private sector banks that concentrate on technology perform better. Through ROAA and ROE, the article investigates the effects of ownership, non-performing assets, bank size, cost to income ratio, and income diversification on profitability measures. Performance analysis in Indian banks has traditionally relied primarily on Data Envelopment Analysis (DEA). We utilised dynamic panel data because it allows us to account for lagged values of dependent variables while still utilising the data's dynamic nature. . It also avoids endogeneity by using lagged levels and lagged differences of regressors as instruments. The paper is structured as follows. Section 2 describes Indian banking and Sect. 3 discusses the literature review. Section 4 offers methodology and data. Section 5 covers model specification, and Sect. 6 presents empirical findings. Section 7 concludes and offers managerial discussion and implications**.**

Banking in India

The banking industry in India is divided into two types: scheduled banks and non-scheduled banks. Scheduled commercial banks are divided into two categories: scheduled commercial banks and scheduled cooperative banks. The two categories of Scheduled Co-operative Banks are Scheduled State Co-operative Banks and Scheduled Urban Co-operative Banks. The basic categories of scheduled commercial banks in India are as follows: Nationalized Banks, Private Sector Banks, Foreign Banks, Regional Rural Banks, India, and its Associates are all members of the State Bank of the United States. State banks and their affiliates, as well as nationalised institutions, make up the public sector banking sector. Different types of banks in India include public sector banks, old private sector banks, foreign banks, new private sector banks, cooperative banks, and regional rural banks. Between the scheduled commercial banks in March 2013, both public and private sector banks provided around 93 percent of deposits and 92.8 percent of loans. Rural regional banks and cooperative banks are two types of banks with a regional focus but a small banking market share. Regulation does not prevent other banks from functioning in specific areas. We offer an overview of the evolution of banks in India by discussing the banking system in India. Despite the fact that the majority of the population lived in rural areas, India inherited a financially weak banking industry and an overly urban focus when it gained independence in 1947. The Indian government expressed interest in implementing social banking after independence. As a result, there has been a push to develop India's public sector movement, with the primary purpose of bringing banking to the general public. The State Bank of India was nationalised in 1955, 1959 (State Bank and its colleagues), 1969 (14 Nationalized Banks), and 1980 (State Bank and its affiliates) in India (7 Nationalized Banks). In 1990, a large account deficit produced balance of payment problems. Public sector banks controlled 91 percent of all bank branches and 85 percent of all banking activity in the country by 1990, with foreign banks having a little presence. The administration implemented economic changes

that resulted in the liberalisation, privatisation, and globalisation of the Indian economy. In the 1990s, structural reforms resulted in the entry of new private sector banks into the Indian banking system, resulting in privatisation. Despite the fact that foreign banks and new private sector banks assisted them in strengthening their balance sheets, public sector banks continued to hold the bulk of overall deposits, advances, and investments (Patt 2009). The newcomers, largely local private sector banks, made considerable technology investments right away. As a result of privatisation, some banks became major players, while others incurred losses and were merged. The varieties of bank credit have varied as the financial system has progressed. Retail exposure has expanded considerably, with contributions from retail loans increasing from 10% in 1980 to 25% in March 2007. As part of the financial sector reforms in the 1990s, the government allowed private sector banks to enter the banking system, with the purpose of enhancing competition and improving efficiency. A few banks (Global Trust Bank; United Western Bank) have lost money, while others (Times Bank, Centurian Bank of Punjab) have gone through mergers and acquisitions. Certain banks, including as ICICI Bank, Axis Bank, HDFC Bank, and Yes Bank, performed well. Bank credit has a bigger contribution to GDP in countries with a well-developed banking industry. In India, the outstanding bank loan to GDP ratio increased from 27.3 percent in March 1997 to 60% in March 2008. This indicates that the role of banks in the economy is growing.

The Indian Banks Association's Performance Highlights for Indian Public Sector Banks and Performance Highlights for Indian Private Sector Banks provide annual bank level data for Indian Public Sector Banks and Indian Private Sector Banks. The table shows the summary statistics for the selected variables. There were 42 institutions in total, 25 of which were public sector banks and 17 of which were private sector banks, according to the survey. The information was gathered between 2007 and 2013. The rest of the economic data came from the World Bank. Our study takes into account a number of elements, including banking industry-specific characteristics, bank-specific variables, and macroeconomic data. Banks from both the public and commercial sectors are included in the poll.

Literature review

The subject of bank execution has been the subject of extensive examination and past investigations inspected different drivers of bank execution. In the writing on banking, we observe that bank benefit is estimated by return on normal resources (Bapat 2013). Rivard and Thomas (1997) contended for ROAA as it isn't bent by high value multipliers and it addresses a better proportion of the capacity of firms to generate returns on their arrangement of assets. ROAA relies upon bank's strategy choices as well as on bank's wild factors connecting with the economy and unofficial laws. In recent years, we track down that ROAA, as a proportion of profitability, has kept on getting acknowledgment (Apergis 2014;

Menicucci et al. 2016). While researching the effect of proprietorship on ROAA and other productivity parameters, the outcomes show that privatization isn't enough on the move nations (Bonin et al. 2005). Tan and Floros (2012) examined the reasons of low profitability utilizing two stage generalized method of second. Chronopoulos et al. (2015) proposed that adjustments of guideline impacted both the level and diligence of bank profitability for the period 1984-2010 in US. While surveying bank profitability utilizing ROAA and value profitability utilizing ROE, expense management was recognized as a variable influencing bank profitability (Islatince 2015). Analysts have inspected the impact of internal determinants and external determinants on bank profitability. As per concentrate by Duca and McLaughlin (1990), varieties in bank profitability are owing to varieties in credit risk. The utilization of ROE is viewed as analogous to profit efficiency rank ROE is a function of the allocation of value to various asset classifications (Berger et al. 2005). Different drivers of bank execution like asset quality, bank capital, proprietorship, financial design, size, non-performing loans (NPL), credit deposit rati , ownership , size, economic factors and diversification have been analyzed in the past. Banks pursued diversification since they confronted tension on center financial business. Fee based pay were at shifted levels among different bank types and the review observed the commitment of fee based pay at 13.3%   for cooperatives 15.4% for savings bank and 34.6% for commercial banks in Germany. The advantages of diversification remember increment for alternate types of revenue, reduction in information asymmetry, and balancing out pay (Shim 2013). The positive impact of diversification on bank execution has been inspected (DeYoung and Roland 2001; Stiroh 2004; Stiroh and Adrienne 2006; Mercieca et al. 2007). Busch and Kick (2015) saw that hazard changed returns on value and total assets are emphatically impacted by fee business for German universal banks. Edirisuriya et al. (2015) observed strong proof that diversification is good for the presentation of Australian banks.

The role of ownership has been subject to extensive research. With the rate of government intercession in financial area, scientists and strategy creators are quick to survey the effect of progress in possession on bank execution. Jensen and Meckling (1976) contended for scatter ownership which can lead to progress in efficiency. The issues of ownership concentration connect with overabundance observing (Burkart et al. 1997 ; Kyle and Jean-Luc 1991. The connection between ownership and bank execution has gotten recharged revenue as of late (Ochi and Saidi 2012). While inspecting the effect of ownership on bank execution, the impact of size is also researched. Analysts have shown strong fascination with studying size distribution of banks (Goddard et al. 2014; Hughes et al. It was seen that Hungarian Banks leaned toward huge banks as they are more productive (Hasan and Marton 2003). The results on bank size show that smaller banks were more drawn in with the non-premium creating works out, which is a direct result of better specialization and openness of separated administrations (Karray and Chichti 2013). The empirical outcomes connected with study of Syrian Banks noticed a positive relationship between bank size and profitability. Comparative outcomes were acquired from concentrates by Goddard et al. (2004), Kosmidou and Pasiouras (2005) and Flamini et al. (2009). Contradictory outcomes were gotten by studies from Naceur and Goaied (2008) and Sufian and Habibullah (2009). Hardly any contrasting outcomes were gotten while looking at relationship between bank size and execution. The study by Gunjan

(2007) in Indian context couldn't lay out conclusive relationship between the efficiency and the size of banks. The study by Barra et al. (2016) confirmed that technical efficiency of helpful banks in Italy deteriorates in comparison to different banks during the global financial emergency. Attempts were also made to think about the levels of diversification between greater and small banks. Utilizing a panel of Pakistani banks, it is seen that greater banks are more expanded than small banks. This happened as a result of more prominent effort and size of credit portfolios (Afzal and Mirza 2012The importance of GDP growth rate is confirmed by Afanasieff et al. (2002). In contrast, Naceur (2003) tracks down no effect for the economic growth on bank profitability. Demirgu¨c¸-Kunt and Huizinga (1999) saw that financial assets with a bigger portion are less profitable. Neely and Wheelock (1997) observed that bank profit are impacted by state level financial action. It has been broadly examined about the effect of late global financial crisis. The new global financial crisis has antagonistically impacted the presentation of most financial areas all over the planet for the period 2007-2009 (Mirzaei 2013). Naceur and Goaied (2008) observe loan-to-asset ratio emphatically affected interest edge and profitability. On the other hand, a few investigations confirmed negative relationship between loan ratio and profits (Hasan and Marton 2003; Staikouras and Wood 2003). The study by Dubey (2012) demonstrate that non-performing assets (NPA) sway the health of bank. Non-performing assets are arising as one of the central issues for banks in India with a decrease in asset quality, especially in open sector banks.

Methodology and data

Data

The Indian Banks Association's Performance Highlights for Indian Public Sector Banks and Performance Highlights for Indian Private Sector Banks provide annual bank level data for Indian Public Sector Banks and Indian Private Sector Banks. The table shows the summary statistics for the selected variables. There were 42 institutions in total, 25 of which were public sector banks and 17 of which were private sector banks, according to the survey. The information was gathered between 2007 and 2013. The rest of the economic data came from the World Bank. Our study takes into account a number of elements, including banking industry-specific characteristics, bank-specific variables, and macroeconomic data. Banks from both the public and commercial sectors are included in the poll. . More than 90% of planned commercial bank activity is accounted for by both of these bank groupings. The information was gathered from the Indian Banks Association's (IBA) book Performance Highlights for Public Sector Banks and Performance Highlights for Private Sector Banks, as well as an AceEquity database.

Model specification

According to regulators and investors, the best metric of bank profitability is return on average assets (ROAA). When examining bank profitability variables, Berger et al. (2000) claim that a bank can retain consistency in performance through time. The possibility of endogeneity was raised by Gracia-Herrero et al.

Table 1   Summary of variables

Variable	Description	Mean	SD	Source data base
Dependent variable Return on average assets (ROAA in %)	a proxy measure of bank profitability measured as the return to the average total assets of the bank	1.02	0.458	IBA
Return on equity (ROE in %)	A profitability efficiency measure	16.9	6.7	Ace Equity Database
Independent variables Non-performing loans (NPL)	Bank specific factors calculated as net non performing loans multiply by 100 divided by average net advances	0.97	0.68	IBA
Income diversification (other income to operating income)	is measured as the ratio between other income to operating income	0.12	0.04	IBA
Credit deposit ratio	is calculated as the ratio between total loans to total deposits	0.73	0.12	IBA
Cost to income ratio	is the ratio of operating expense to the operating income	0.50	0.11	Ace Equity Database
Independent variables Banking industry ownership	Banking industry factors specific. It was a dummy variable. Public sector banks were given value of 1 and private sector banks were given value of 0			IBA
Bank size	Logarithmic of the bank business	4.94	0.52	IBA
Independent variables Financial crisis	Economic indicators Dummy values of 0 to the year 2007, 2008 & 2009 and value of 1 to the year 2010, 2011, 2012 and 2013	0.57	0.49	–

. (2009). In addition, as a dependent variable, return on equity (ROE), a proxy for the dependent variable, was included. In our study, we used the generalised method of moments (GMM) estimators to add a lagged dependent variable to the regression models. The advantage of GMM is that it allows us to account for issues like persistence and endogeneity. As a result, the estimations are accurate.

Our study is unusual in that it takes into account the impact of bank-specific, banking-industry-specific, and economic data.

We estimate a line on regression in the following form to investigate the association between bank profitability, bank specific factors, banking industry factors, and macroeconomic determinants:

$ROAA_{jt} = \beta_1 ROAA_{jt-1} + \beta_2 \Sigma$ Bank Specific factors $+ \beta_3 \Sigma$ Banking Industry factors $+ \beta_4 \Sigma$ Macroeconomic factors $+ I_j + \underline{e}_{i,t}$

$ROE_{jt} = \beta_1 ROE_{jt-1} + \beta_2 \Sigma$ Bank Specific factors $+ \beta_3 \Sigma$ Banking Industry factors $+ \beta_4 \Sigma$ Macroeconomic factors $+ I_j + \underline{e}_{i,t}$

The return on assets is ROAA, the return on equity is ROE, and the coefficients for Bank Specific variables, Banking Industry factors, and macroeconomic factors are b1, b2, and b3, respectively. Bank-specific traits, banking-industry-specific factors, and macroeconomic factors are all independent variables. The correlation matrix is shown in Table 2.

Because the correlation is less than 0.80 and the variance inflation factor (VIF) is less than ten, we rule out multicolinearity.

The following is the regression equation:

$$\text{ROAA}_{jt} = \beta_1\,\text{ROAA}_{j\,t-1} + \beta_2\,\text{x npl} + \beta_3\,\text{x Other Income to operating income}$$
$$+ \beta_4\,\text{x Cost to income ratio} + \beta_5\,\text{x Credit deposit ratio} + \beta_6\,\text{x Dummy financial crisis}$$
$$+ \beta_7\,\text{x GDP growth} + \beta_8\,\text{x Inflation} + \beta_9\,\text{x log GDP per capita} + I_{j+}\,e_{jt}$$

$$\text{ROE}_{jt} = \beta_1\,\text{ROE}_{j\,t-1} + \beta_2\,\text{x npl} + \beta_3\,\text{x Other Income to interest income}$$
$$+ \beta_4\,\text{x Cost to income ratio} + \beta_5\text{x Credit deposit ratio}$$
$$+ \beta_6\,\text{x Dummy financial crisis} + \beta_7\,\text{x GDP growth} + \beta_8\,\text{x Inflation}$$
$$+ \beta_9\,\text{x log GDP per capita} + I_{j+}\,e_{jt}$$

Findings from the field

The regression results between bank profitability and other independent variables are shown in Table 3. The model is excellent, according to Wald X2 statistics. Our instruments are sufficiently orthogonal, and the Arrelano–Bond A R (2) test at the 5% significance level reveals no second order serial correlation. To corroborate the findings, we employ Sargan's test, which is recorded using X2. The substantial lagged dependent variable coefficient confirms the model's dynamic nature. As a result, it is justified to utilise a dynamic panel data model estimate .Table 3 shows the results of the dynamic panel regression. We show the results of dynamic Arellando–Bond panel GMM robust estimators with a two-step difference.

Table 2 Correlation matrix

	ROAA	ROE	Log of bank business	NPL	Diverse = other income to operating income	Cost to income ratio	Credit deposit ratio	Financial crisis	GDP growth	Inflation	Log GDP per capita	Square of diverse
ROAA	1.00											
ROE	0.54	1.00										

Log of bank business	0.16	0.29	1.00								
NPL	-0.66	-0.45	-0.03	1.00							
Diversification	0.19	-0.05	0.02	-0.17	1.00						
Cost to income ratio	-0.46	-0.49	-0.49	0.27	0.06	1.00					
Credit deposit ratio	0.09	-0.19	0.18	-0.01	0.22	-0.05	1.00				
Financial crisis	0.08	-0.06	0.30	-0.08	-0.18	-0.07	0.15	1.00			
GDP growth	-0.09	0.07	-0.15	0.04	0.19	0.00	-0.08	-0.12	1.00		
Inflation	0.08	0.00	0.20	-0.05	-0.06	-0.11	0.07	0.49	0.03	1.00	
Log GDP percapita	0.09	-0.06	0.32	-0.08	-0.20	-0.07	0.15	0.76	-0.16	0.50	1.00
Square of diversification0.54	0.16	-0.09	0.02	-0.13	0.74	0.05	0.23	-0.14	0.15	0.04	0.17	1.00

Table 3   Dynamic panel regression results

	Dependent variable: ROAA			Dependent variable: ROE		
Overall	Ownership (public sector bank)	Ownership (private sector bank)	Ownership (public sector bank)	Ownership (private sector bank)		
Lagged dependent	0.47*** (0.082)	0.36** (0.10)	0.28*** (0.097)	0.54*** (0.10)	0.41*** (0.13)	0.18*** (0.098)
NPL	− 0.23*** (0.033)	− 0.24** (0.042)	− 0.28*** (0.049)	− 2.26*** (0.70)	-2.75*(1.35)	− 3.72*** (0.60)
Log of business	− 0.58 (0.304)	− 0.21 (0.48)	− 0.85* (0.35)	− 10.50 (6.00)	− 18.2 (11.61)	− 9.0* (4.47)
Diversification = other income to operating income	1.76 (4.02)	2.47 (4.01)	− 1.67 (6.33)	− 52 (77.7)	− 47 (95.68)	42.42 (81.40)
Square-diversification	2.82 (4.43)	− 7.14 (4.58)	13.00 (7.06)	139.02 (88.09)	142.9 (109.09)	165.88 (92.18)
Cost to income	− 0.02*** (0.00)	− 0.00 (0.00)	− 0.02*** (0.00)	− 0.38*** (0.05)	− 0.48*** (0.07)	− 0.34 (0.04)
Credit to deposit	0.21 (029)	0.29 (0.236)	− 0.04 (0.54)	− 7.54 (5.66)	− 6.57 (5.58)	− 2.47 (7.23)
Financial crisis	− 0.17 (0.10)	− 0.17 (0.10)	− 0.16 (0.18)	0.88 (2.02)	1.91 (2.48)	− 1.04 (2.33)
GDP growth						
GDP growth	-0.08***(0.019)	− 0.03 (0.023)	− 0.09* (0.028)	0.21 (0.37)	0.78 (0.57)	− 0.87 (0.35)

Inflation	0.056* (0.02)	0.02 (0.026)	0.08* (0.03)	0.12 (0.43)	− 0.54 (0.65)	0.73 (0.379)		
Log of GDP per capita	2.66* (1.17)	1.66 (1.50)	3.57 (1.95)	6.46 (22.54)	− 7.4 (35.81)	26.84 (24.33)		
Sargan test	0.08	0.12	0.12	0.15	0.06	0.06		
n	42	25	17	42	25	17		

n Total number of observations

The value in parenthesis represents standard error, whereas ***,**,* denotes 1, 5, and 10% significance levels, respectively.

The two-step estimate was used for analysis since it is considered more efficient than the one-step estimate. Methodologies for the study were given by Arellano and Bond (1991), Blundell and Bond (1998), Windmeijer (2005), and Bond (2005). (2002). Because the analysis is meaningful for lagged values of the dependent variable, there is a risk of weak endogenity (Bond 2002). The Sargan test is a method for determining the validity of instrumental variables that requires overidentifying limits. The Sargan test results also support the conclusion. The results were put through a series of tests to confirm that they were accurate.

Conclusions

Using balanced bank level panel data, the study investigates the impact of bank specific variables, banking sector factors, and macroeconomic factors on the performance of Indian banks from 2006–2007 to 2012–2013. We developed a dependent measure for bank profitability dubbed return on average assets (ROAA) and return on equity (ROE) using data from 44 institutions, including 25 public sector banks and 17 private sector banks (ROE). Bank-specific variables, we determined, have a major impact on bank profitability. Non-performing loans (NPLs) and the cost-to-income ratio have a negative influence on bank profitability, although diversification has no effect, according to the research. When values change, the results are the same regardless of ownership. Nonperforming loans (NPLs), as measured by asset quality, are a critical aspect in establishing a bank's financial soundness and health. As Indian firms struggle to service their bank debts, the deterioration of NPLs may add to the strain. The cost-to-income ratio is used to evaluate the operational efficiency of banks. It's vulnerable because of its high cost-to-income ratio, which investors use to gauge future prospects. The negative correlation between bank profitability demands continuous monitoring. The data reveal that bank diversification has no influence. While diversification metrics vary depending on ownership structure, some believe that greater diversification is risky for institutions with limited prior experience. However, variety in developing countries is not nearly as high as it is in affluent countries. Diversification had little effect on bank profitability, according to the findings.

Managerial discussions and implications

This study will be beneficial to both managers and academics. Indian banks followed the prescription of privatisation as a result of financial sector reforms in the 1990s. While Boateng et al. (2015) looked at both banking and economic factors in their research, we looked at banking industry features such as ownership and scale in addition to banking and economic factors. The impact of privatising banks in India was mixed. Despite the fact that the financial crisis in 2008–2009 damaged global banks, past study shows that Indian banks were unaffected. During this time, the performance of public sector banks was comparable to that of private sector banks. Our research is primarily focused on the elements that determine bank profitability. Nonperforming loans, the cost-to-income ratio, and diversification were all taken into consideration. Non-performing loans are a source of concern because they've been related to bank failures and financial crises in the past. They worsen economic downturns and macroeconomic instability. Increases in NPL that are more than the permitted limit should be reported to the regulator. The cost-to-income ratio is recognised as a key indication of efficiency. Diversification was calculated using the ratio of non-interest revenue to operational income. Diversification can be calculated using a number of different approaches. For example, Gambacorta et al. (2014) define diversity as the ratio of non-interest income to total revenue, but Mostak (2017) uses the Herfindahl–Hirshman metric to compute diversification and refers to it as emphasis. The more valuable something is, the more focused it is; the lower the value, the more diverse it is. There is a large difference in bancassurance income between public and private sector banks. For example, 26 public sector banks earn Rs. 73 billion, compared to Rs. 196 billion for 20 private sector banks. Diversity had little effect on bank profitability, as assessed by ROAA and ROE, according to the statistics. The public sector's performance deteriorated during the study period, and the increased volume of non-performing assets had a negative influence on bank profitability. As a result of heightened capital requirements during the global financial crisis, banks are pushed to generate larger levels of earnings from the same assets. In recent years, public sector banks have seen a significant increase in nonperforming loans (NPLs), and in this context, effective bad debt management is is critical to preserving profitability. Nonperforming loans (NPLs) have been identified as a threat to financial stability, and regulators have expressed concern about worsening asset quality in Indian banks, particularly public sector banks. Government intervention in distorting credit culture, particularly for public sector banks, and directed lending in priority sector credit are two examples of many variables. It is recommended that public sector banks focus their efforts on enhancing profitability characteristics rather than extending their balance sheets.

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