

# Assessment of financial soundness of private and public sector banks in India

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## ABSTRACT

*The present study attempts to analyze the financial soundness of selected 13 private and 23 public sector banks in India for the period of 2007-2016. Bankometer Model has been used to analyze the results. Capital Assets Ratio, Equity Assets Ratio, Capital Adequacy Ratio, Non-Performing Loans to Loans Ratio, Cost to Income Ratio and Loan to Assets Ratio are the determinants of Bankometer model. As per empirical results, all private and public sector banks are financially sound. ICICI bank and State bank of India are utmost financially strong banks. ICICI bank and State bank of India have highest capital assets ratio. Kotak Mahindra bank and Indian bank have highest equity assets ratio. Yes bank and Bank of Baroda have highest capital adequacy ratio. ICICI bank and Bank of Baroda have lowest non-performing loans to loans ratio. The results show that cost to income ratio of all private and public banks is more than 40 % which shows the inefficiency of the banks. As per the results loan to assets ratio is more than 65 % for the City Union bank, State bank of Mysore, State bank of Bikaner & Jaipur, Andhra bank and Syndicate bank which is not good.*

## INTRODUCTION

Banking sector is the lifeline of Indian economy. Bank uses the amount of public deposits for productive purposes. Banks make investment in different sectors and help in capital formation. So, banks are an important source of development of a country. The present study is concerned with financial soundness of private and public sector banks in India. The banking sector of India has been classified into scheduled and non-scheduled banks. The banks which are included under the 2nd schedule of RBI Act, 1934 termed as scheduled banks. Indian banking is dominated by public sector banks because in 1969, 14 major private banks and in 1980, 6 more private banks were to be nationalized. At present, there are total 21 public and 23 private sector banks in India. On 1st April 2017, State bank of India merged with its five associate banks and Bharatiya Mahila bank. HDFC bank is the biggest private sector bank of India. In case of public sector banks, majority stake i.e. more than 50 % is in the hands of government while in case of private sector banks majority of shares is held by private shareholders. Indian banking is one of the developed banking in world. RBI is the central bank of India which controls and manages all banks. Financial soundness of a bank means ability to meet the fixed expenses. It plays a vital role in the development of country. So, the present study attempts to analyze the financial soundness of private and public sector banks in India.

## LITERATURE REVIEW

Yameen and Ali (2016) evaluated the financial soundness of Jordanian commercial banks by using Bankometer model for the period of 2002-2011. The results found that all commercial banks are in sound position. Arab Banking Corporation found to be on the top position. N and Rajgopal (2016) evaluated the financial position of selected private and foreign banks in India by using Bankometer model. The study covered data starting

from 2008-2015. The study found that all private and foreign banks are in strong position during 2008-2015. Paul (2015) evaluated the operational performance of Indian commercial banks by using different ratios. The study found that scheduled commercial banks of India are in healthy position. Ibrahim (2015) compared the financial performance of conventional and Islamic banks in United Arab by using financial ratios. The study covered data ranging from 2002-2006. The results found the all banks in sound position. Nagarkar (2015) analyzed the financial performance of 15 Indian banks by using Principal Component Analysis for the period of 2003 to 2013. The results found that banks are more depend on borrowings rather than deposits. The credit growth rate of banks found to be slow down during the study period. Kattel (2014) examined the financial solvency of commercial banks of Nepal by using bankometer model. The study covered data starting from 2007 to 2012. The results found that private banks are more financially strong in comparison of joint venture banks. Bateni et al. (2014) investigated the determinants of capital adequacy ratio in Iranian banks by using panel data regression model. The study covered data starting from 2006-2012. The study found negative relationship between bank size and capital adequacy ratio while positive relationship between loan asset ratio, ROE, ROA, Equity ratio and capital adequacy ratio. Deposit asset ratio and risk asset ratio had shown no relationship with capital adequacy ratio. Makkar and Singh (2013) evaluated the financial performance of Indian commercial banks by using CAMEL model. The study covered data from 2007 to 2011. The results found the IDBI bank in the strongest position. Dhanalaxmi bank was found to be in worst position. The study also concluded that there is no statistical difference between financial performance of public and private banks in India. Sharma (2013) examined the soundness of Indian banks by using Z-score model. The study covered data for the period of 2007-2012. The results found that Canara bank and Kotak Mahindra bank are in financial distress. Erari et al. (2013) examined the financial performance of Bank

Papua from the period of 2003 to 2011. The study used CAEL model, Bankometer model and Z- Score model to assess the financial soundness of Bank Papua. Both CAEL and Bankometer model found the healthy position of Bank Papua while Z- Score found that Bank Papua was in bankrupt position during 2007 and 2011. Shar et al. (2010) evaluated the performance of banks in Pakistan from the period of 1999-2002. The study used CLSA-stress test and Bankometer model to evaluate the financial soundness of banks. The study found that most of banks are in sound position. Sinha et al. (2009) evaluated the financial health of 15 Indian banks by using Z statistics. The study covered data for the period of 2004-2008. The results found that public banks are stronger than private banks.

## RESEARCH OBJECTIVE

The main aim of the present study is to analyze the financial soundness of selected private and public sector banks in India by using Bankometer Model.

## RESEARCH METHODOLOGY

Secondary data has been used for the present study. The data has been collected from annual reports of selected banks, moneycontrol.com and CMIE PROWESS. The sample of the study consists of 13 private and 23 public sector banks in India for the period of 2007-2016. Following model has been used for accomplishing the objective.

## BANKOMETER MODEL

This model has been used to analyze the financial soundness of selected private and public sector banks. According to Bankometer Model, banks having S value greater than 70% are solvent while banks having S value less than 50% are insolvent. Banks having S value between 50 % and 70 % are considered to be in grey area (Altman, 1968).

$$S = 1.5X1 + 1.2X2 + 3.5X3 + 0.6X4 + 0.3X5 + 0.4X6$$

Here, S = Solvency

X1 = CA or Capital Assets Ratio, CA > 04%

X2 = EA or Equity Assets Ratio, EA > 02%

X3 = CAR or Capital Adequacy Ratio, 40% < CAR > 08%

X4 = Non-Performing Loans to Loans Ratio, NPLs to loans < 15%

X5 = CI or Cost to Income Ratio, CI < 40%

X6 = LA or Loan to Assets Ratio, LA < 65%

## RESULTS AND DISCUSSION

Table 1 and 2 represent the assessment of Bankometer model for private and public sector banks respectively. Capital to assets ratio (CA) revealed the proportion of total assets financed through capital i.e. equity+debt. This ratio also measures whether the bank has enough capital to hold its assets or not. As per Bankometer model, capital assets ratio of bank should be more than 4%. As per table 1 and 2, all the private and public banks have CA more than 4%. In the present study, capital assets ratio is highest for ICICI bank and State bank of India while it is lowest for South Indian bank and United bank. The equity assets ratio is one of the important ratio to measure the financial position of a bank. This ratio reveals the proportion of assets financed through equity. As per table 1 and 2, all the private and public banks have more than 2 % EA. Kotak Mahindra bank and Indian bank have highest equity assets ratio. Capital adequacy ratio is used to measure the efficiency of a bank. This ratio termed as a percentage of a bank's risk weighted credit exposure. This ratio helps to protect the interest of depositors. As per table 1 and 2, all the private and public banks have CAR more than 8 % but less than 40 %. Yes bank and Bank of Baroda have highest capital adequacy ratio. Non-performing loans to loans ratio is used to check the efficiency of management of a bank. The lower ratio is good for a bank. This ratio indicates that how much part of loan is classified as non-performing loan. As per the table, non-performing loan to loan ratio is less than 15 % for all the banks and lowest for ICICI bank and Bank of Baroda. Cost to income ratio is a proportion of operating expenses and operating income of a bank. The results show that cost to income ratio of all private and public banks is more than 40 % which shows the inefficiency of the banks. HDFC and Central bank of India have highest cost to income ratio. Loan to assets ratio is used to measure the liquidity of a bank. This ratio indicates the amount of assets financed through loans. As per the results, City Union bank, State bank of Mysore, State bank of Bikaner & Jaipur, Andhra bank and Syndicate bank have loan to asset ratio more than 65 %, which is not good. S indicates the solvency of a bank. According to present study, all the private and public banks are financially strong. ICICI bank and State bank of India are utmost financially sound banks.

**Table 1: Bankometer Model for Private Sector Banks in India (2007-2016)**

Name of Bank	(CA)	(EA)	(CAR)	(NPL)	(CI)	(LA)	(S)
City Union Bank	8.58	7.72	13.76	0.94	40.27	65.26	109.05
Federal Bank	14.48	9.62	17.03	0.56	40.50	61.13	129.80
Jammu and Kashmir Bank	9.41	7.17	13.66	0.69	40.11	56.97	105.76
Karur Vysya Bank	10.95	7.82	13.78	0.97	42.99	62.63	112.57
Lakshmi Vilas Bank	10.58	6.74	12.88	1.43	53.84	64.69	111.92
South Indian Bank	7.70	5.91	12.70	1.34	51.13	63.04	104.45
Axis Bank	20.87	8.4	13.23	0.85	48.72	60.53	127.03
DCB	17.73	9.0	14.20	0.97	52.85	59.03	127.14
HDFC	15.72	9.0	14.08	1.00	64.07	59.41	127.25
ICICI	37.31	12.1	15.86	0.37	48.38	60.15	164.79
Indusind	21.43	8.4	17.45	1.55	40.76	56.59	139.09
Kotak Mahindra Bank	32.21	12.3	13.89	0.82	53.08	59.43	151.88
Yes Bank	23.36	7.3	17.77	1.32	55.19	57.92	146.51

Source: Results computed

**Table 2: Bankometer Model for Public Sector Banks in India (2007-2016)**

Name of the Bank	(CA)	(EA)	(CAR)	(NPL)	(CI)	(LA)	(S)
State Bank of India	16.03	6.17	13.0	2.09	49.5	62.68	118.13
State Bank of Mysore	12.73	5.86	12.27	1.80	50.09	65.20	111.26
State Bank of Travancore	11.48	4.57	12.41	1.51	50.19	64.61	107.95
State Bank of Bikaner & Jaipur	11.03	5.14	12.56	1.66	49.70	65.59	108.82
Allahabad Bank	10.63	5.82	11.98	2.31	43.74	62.14	104.22
Andhra Bank	11.56	5.64	12.28	1.51	44.14	65.16	107.30
Bank of Baroda	10.84	5.82	13.37	1.24	44.57	61.51	108.76
Bank of India	12.78	5.22	11.76	1.90	46.33	63.45	107.01
Bank of Maharashtra	10.92	4.69	12.00	1.98	53.20	63.36	106.52
Canara Bank	10.61	5.87	12.81	1.97	45.79	61.38	107.27
Central Bank of India	9.96	4.40	11.39	2.64	59.16	61.07	103.85
Corporation Bank	12.03	5.33	12.71	1.58	41.22	60.75	106.54
Dena Bank	8.85	5.06	11.65	2.14	50.90	61.54	101.29
Indian Bank	9.77	7.38	13.28	1.41	44.56	62.06	109.03
Indian Overseas Bank	13.76	5.45	12.35	3.08	49.48	61.35	111.64
Oriental Bank of Commerce	9.77	6.48	12.41	2.13	42.79	61.85	104.72
Punjab & Sindh Bank	10.60	5.50	12.42	1.71	53.52	61.30	107.57
Punjab National Bank	13.27	6.18	12.80	2.23	43.73	62.91	111.74
Syndicate Bank	10.66	4.33	11.99	1.42	49.74	65.67	105.19
UCO Bank	10.01	3.83	12.31	2.92	44.78	61.40	102.44
United Bank	8.67	3.97	11.89	3.44	50.42	56.22	99.06
Union Bank	12.41	5.40	11.89	1.71	45.41	63.87	106.91
Vijaya Bank	9.38	4.36	12.13	1.62	54.11	60.29	103.08

Source: Results computed

## CONCLUSION

The present study analyzes the financial soundness of private and public sector banks in India. The results conclude that all the private and public banks are financially strong. ICICI bank and State bank of India are utmost financially sound banks. ICICI bank and State bank of India have highest capital assets ratio. Kotak Mahindra bank and Indian bank have highest equity assets ratio. Yes bank and Bank of Baroda have highest capital adequacy ratio. ICICI bank and Bank of Baroda have lowest non-performing loans to loans ratio, which shows the efficiency of the banks. The results show that cost to income ratio of all private and public banks is more than 40 %. It shows the ineffectiveness of the bank. As per the results, City Union bank, State bank of Mysore, State bank of Bikaner & Jaipur, Andhra bank and Syndicate bank have loan to assets ratio more than 65 % which is not good for the banks. The study helps all the interested parties to analyze the financial position of Indian banks, so that their interest can be safe.

## SCOPE FOR FUTURE RESEARCH

The present study attempts to analyze the financial soundness of private and public sector banks in India. In future, further study can be done by showing the impact of Bankometer model's determinants on profitability of these banks. Also, financial solvency of banks can be checked through Z statistics.

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