

Capital Structure of Commercial Banks in India– A step towards Efficiency and Governance

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Historically, there were no capital structure requirements for commercial banks in India till the beginning of nineties. The Reserve Bank of India (RBI) has only the stipulation as regards minimum capital a bank was required to maintain for obtaining a license for opening of a bank. The capital requirement fixed for opening of a bank was very nominal. It was only in 1994 when government wanted to promote private sector banks to bring competitive spirit among the banks, the minimum capital was fixed at Rs.200 crore. This was later enhanced to Rs.300 crore and again with effect from April 1, 2016, this requirement is further increased to Rs.500 crore. Any new Bank intends to open under private sector has to comply with minimum capital requirement. The rationale behind maintaining the minimum capital requirement has two dimensions, one the measurement of liquidity and other, the strength of a bank to sustain during the phases of financial crisis. In India, the standard to maintain the capital began only after 1990 when BASEL committee issued standard guideline to central banks.

The implementation of Basel banking norms can be attributed to existence of Basel Committee on Banking Supervision (BCBS) promoted jointly by G 10 countries in 1974. The task was assigned to Bank for International Settlement (BIS) located at Basel, Switzerland. A committee was constituted known as Basel Committee on Banking Supervision. The Basel committee formulated recommendations and guidelines on various banking regulations focusing capital risk, market risk and operational risk. The first Basel accord was issued in 1988 that primarily focused on credit risk by classifying the banking assets based on inherent risk. Based on the lessons from implementation of Basel 1 and observing certain gaps, the Basel 2 accord was modified and issued in 2004. It was more comprehensive and covered operational, credit, market and liquidity risks besides more stress on increased disclosures in the financial statements. Following the 2008 financial crisis, Basel 3 accord was re-oriented to lay a greater focus on more stringent norms for capital requirements, liquidity and leverage. This is proposed to be implemented by 2018.

The strengths of banking system in an economy are the indicators of a strong financial system. The strengths and efficiency of banks lie in terms of effective capital requirement management, asset management, liquidity and risk management. The banks have large exposure on both the fronts i.e. on the balance sheet and also the off balance sheet. Both the exposures need to be managed professionally as they carry inherent risks given the diverse features of financial instruments. It is largely felt that the financial crisis which occurred in 2007 was mainly on account of banks built up excessive on- and off-balance sheet leverage. This was accompanied by gradual erosion in the level of asset quality and quality of the capital base. There were also instances of many banks holding insufficient liquidity buffers. The issue became further critical by a pro-cyclical deleveraging process and by the interconnectedness of series of complex transactions in variety of financial

instruments and financial institutions. This phenomenon and inbuilt weaknesses of the financial transactions between banks and financial institutions were rapidly transmitted to the rest of the financial system and the real economy. This resulted in a large contraction of liquidity and credit availability across the countries.

The situation of financial crisis motivated to design and develop strategies for a sound financial system. Towards this end, in July 2009, the Basel Committee introduced a package of measures to strengthen the capital and enhance the three pillars of the Basel 2 framework. Among various measures suggested by the Basel committee, it also recommended to strengthen national resolution powers and their cross-border implementation. The Basel Committee mandated its Cross-border Bank Resolution Group to deeply look into various aspects of financial crisis and report the lessons from the crisis and also to provide a report on recent changes and adaptations of national frameworks for cross-border resolutions. The Group was also required to evaluate the most effective elements of current national frameworks and those features of current national frameworks that may hamper optimal responses to crises.

The emergence of Basel 3 was on account of too much leverage and inadequate liquidity buffers in the banking system that were observed as major factors responsible for the financial crisis. In addition to this, weaknesses in governance and inadequate risk management strategies, as well as inappropriate incentive structures added to aggravate the crisis further. Responding to these risk factors, the Basel Committee issued principles for sound liquidity risk management and supervision. It also stressed on higher global minimum capital standards for commercial banks. Several other issues were also addressed in the Basel 3 accord such as additional layer of common equity, capital conservation buffer, countercyclical capital buffer, leverage ratio, minimum liquidity ratio etc. This is in this background that this study is undertaken to assess the extent of efficiency in liquidity position of commercial banks after implementation the Basel norms for maintaining the capital requirements.

Literature Review

There have been several empirical studies establishing relationship between capital structure decision and financial performance of business entities. These studies have mixed opinion wherein some of them revealed a positive impact, while others observed either a negative impact or no effect.

Nikoo (2015), by employing the data of 17 banks over a period of 2009–2014, observed a significant positive effect of capital structure choice on the performance of the banks selected under the sample. Umar et al. (2012) used data on 100 listed business entities over a period of 2006–2009 and observed a significant positive association between the performance of a firm and capital structure. The components of assessment included ROA, Earnings Per Share (EPS) and net profit margin as proxies to measure the performance and short-term debt obligations to total asset (STDTA), long-term debt obligations to total asset (LTDTA), and total debt obligations to total asset (TDTA) as the capital structure variables. The authors claimed, on the basis of exponential generalized least squares approach. In the analysis their findings support the trade-off theory.

Salteh et al. (2012) evaluated the influence of capital structure decision on the profitability of 28 firms from the listed stock exchange. The data for this study was taken for the period 2005-2008. The study analyzed positive impacts of capital structure variables, STDTA, LTDTA, TDTA, on the performance proxies by ROE.

Tobin's Q. Arbabiyan and Safari (2009), in their study analyzed the data of 100 firms for 2001–2007 and observed significant positive link between STDTA and TDTA with ROE. However, this study also found an inverse relationship between LTDTA and ROE. This may be on account of limitation of this study as the authors used only a single variable i.e. ROE to measure the performance.

In another study vein, Abor (2005) attempted to explore the impacts of capital structure on the performance of the firms belonging to the Ghana stock exchanges and found a significant positive impact of STDTA and TDTA on ROE. In this study, the author also observed a negative relationship between LTDTA and ROE.

Ramadan and Ramadan (2015) analyzed the data during the period of 2008–2012, to explore the impacts of capital structure variables, TDTA, LTDTA and STDTA, on the performance of business firms. The authors selected 72 companies for the data over the period of 2005–2013. The analysis used the pooled OLS and observed significant negative impact of capital structure on ROA.

Abdel-Jalil (2014), applied multiple regression analysis to assess the impact of debt to equity ratio on rate of return. The study observed significant inverse influence of debt ratio and the proportion of debt to equity on the rate of return generated from investment activities thereby impact on ROI.

Memon et al. (2012) found the relationship of a capital structure decision on the performance of selected firms in Pakistan. In this study components used included ROA as a single measure of performance. The log-linear regression model was applied on 141 textile firms. The data selected for this study was for the period of 2004–2009. The study concluded negative relationship between TDTA and ROA.

Muritala (2012) assessed the influence of leveraged capital structure on the performance of Nigerian firms by using the ratio of debt to the total asset as a single proxy of capital structure and ROA as a proxy to measure the performance of firms. The data for the period of 2006–2010 was used for this study. The scholar selected 10 business firms for this study. The analysis was made using panel least square approach. The study concluded negative influence of debt to total asset ratio on ROA.

In another study, Soumadi and Hayajneh (2012) observed negative influence on ROE. 76 firms were selected for analyzing the data and the period covered was 2001–2006. However, the study used a single measure to assess the performance of the firm which may not reflect correct conclusions.

Salim and Yadav (2012) employed EPS, ROA, ROE and Tobin's Q as measures of performance. They used panel data of 237 Malaysian companies for 1995–2011 and observed a significant negative influence of TDTA, LTDTA and STDTA on EPS, ROA, ROE and Tobin's Q.

Chakraborty (2010) also found an inverse relationship between leverage and the performance of firms where performance was considered by the relative amount of profit before interest and taxes. No Relationship While some studies observed a link, either positive or negative, between capital structure decisions and performance, there are other studies that reported no such association between the same.

There have been number of studies undertaken in the past to assess the impact of capital structure on various components of financial performance of the business entities. However, majority of studies were undertaken in the context of business firms. There is scanty literature available on the relationship between capital structure and performance banks. Therefore, this study focuses to evaluate capital structure of banks and its impact on banks performance.

Research objectives:

The present study focuses on evaluation impact of capital structure on the performance of banks. The following are the objectives;

- a) to evaluate the impact of capital structure on performance of banks
- b) to assess the impact of capital structure on the long term loans

For evaluating the performance of banks on the basis of capital structure, the data on important parameters for the period 2012 to 2016 was obtained on selected commercial banks in India. The banks were selected amongst public sector and private sector. The approach of sample selection was the mixed approach. There were two types of banks, one those working satisfactorily and other the banks whose financial performance was not that satisfactory. The major components on which data was obtained include capital adequacy ratio, net interest margin return on assets, return on equity and ratio of term loans to total advances. The data has been obtained for 5 years period from 2012 to 2106. The data is presented in the following table.

Selected Ratios of Scheduled Commercial Banks 2015-16

Table - 1

Year	Bank	Ratio of term loans to total advances	Ratio of net interest income to total assets (Net Interest Margin)	Return on assets	Return on equity	Capital adequacy ratio
2016	STATE BANK OF BIKANER & JAIPUR	49.92	3.11	0.83	13.34	10.44
	STATE BANK OF HYDERABAD	55.50	2.88	0.65	10.65	11.62
	STATE BANK OF INDIA	53.28	2.64	0.46	7.30	13.12
	STATE BANK OF MYSORE	56.84	2.60	0.44	7.03	12.43
	STATE BANK OF PATIALA	48.32	2.12	-0.82	-12.85	10.88
	STATE BANK OF TRAVANCORE	54.24	2.32	0.31	5.99	11.60
	ALLAHABAD BANK	52.54	2.55	-0.33	-5.57	11.02
	ANDHRA BANK	45.60	2.76	0.28	5.13	11.58
	BANK OF BARODA	43.20	1.84	-0.78	-13.48	13.18
	BANK OF INDIA	45.74	1.91	-0.94	-19.50	12.01
	BANK OF MAHARASHTRA	58.21	2.53	0.07	1.19	11.20
	HDFC BANK	69.27	4.25	1.92	18.26	15.53
	ICICI BANK	77.69	3.11	1.49	11.43	16.64
	IDFC BANK	97.25	1.15	1.10	3.42	22.04
	INDUSIND BANK	72.84	3.59	1.91	16.14	15.50
JAMMU & KASHMIR BANK LTD	67.50	3.47	0.57	6.64	11.81	

Table - 2

Year	Bank	Ratio of term loans to total advances	Ratio of net interest income to total assets (Net Interest Margin)	Return on assets	Return on equity	Capital adequacy ratio
2015	STATE BANK OF BIKANER & JAIPUR	47.31	3.05	0.84	13.67	11.57
	STATE BANK OF HYDERABAD	52.46	2.97	0.89	14.66	11.26
	STATE BANK OF INDIA	51.22	2.86	0.68	10.62	12.00
	STATE BANK OF MYSORE	57.29	2.72	0.54	8.62	11.42
	STATE BANK OF PATIALA	48.50	2.25	0.33	5.41	12.06
	STATE BANK OF TRAVANCORE	51.65	2.17	0.32	6.83	10.89
	ALLAHABAD BANK	53.49	2.76	0.29	5.08	10.45
	ANDHRA BANK	43.95	2.57	0.38	6.79	10.63
	BANK OF BARODA	40.75	1.92	0.49	8.96	12.61
	BANK OF INDIA	44.23	1.91	0.27	5.57	10.73
	BANK OF MAHARASHTRA	62.43	2.74	0.33	5.84	11.94
	HDFC BANK	67.97	4.14	2.02	19.37	16.79
	ICICI BANK	79.28	3.07	1.86	14.55	17.02
	INDUSIND BANK	71.57	3.44	1.90	18.22	12.09
	ING VYSYA BANK	38.52	3.11	0.82	6.85	15.30
	JAMMU & KASHMIR BANK LTD	67.36	3.43	0.70	8.60	12.57

Table - 3

Year	Bank	Ratio of term loans to total advances	Ratio of net interest income to total assets (Net Interest Margin)	Return on assets	Return on equity	Capital adequacy ratio
2014	STATE BANK OF BIKANER & JAIPUR	48.33	3.19	0.87	14.46	11.55
	STATE BANK OF HYDERABAD	56.39	2.86	0.70	12.74	12.00
	STATE BANK OF INDIA	50.36	2.93	0.65	10.03	12.44
	STATE BANK OF MYSORE	55.24	2.73	0.40	6.18	11.08
	STATE BANK OF PATIALA	50.88	2.33	0.42	7.80	10.38
	STATE BANK OF TRAVANCORE	50.14	2.30	0.29	6.81	10.79
	ALLAHABAD BANK	53.18	2.50	0.57	10.12	9.96
	ANDHRA BANK	44.52	2.38	0.29	5.07	10.78
	BANK OF BARODA	41.65	1.98	0.75	13.36	12.28
	BANK OF INDIA	40.35	2.11	0.51	10.14	9.97
	BANK OF MAHARASHTRA	63.16	2.77	0.30	5.61	10.79
	HDFC BANK	54.48	4.14	2.00	21.28	16.07
	ICICI BANK	81.23	2.91	1.78	14.02	17.70
	INDUSIND BANK	69.97	3.61	1.81	16.89	13.83
	ING VYSYA BANK	42.03	3.04	1.20	11.25	16.76
JAMMU & KASHMIR BANK LTD	69.65	3.57	1.74	22.34	12.69	

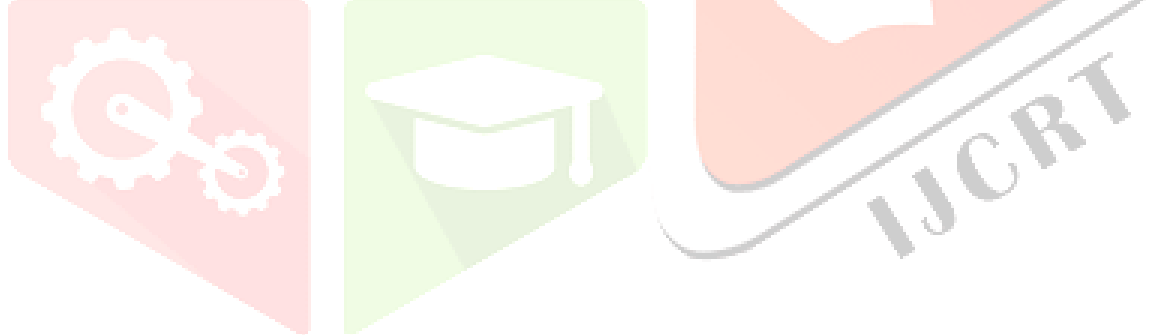


Table - 4

Year	Bank	Ratio of term loans to total advances	Ratio of net interest income to total assets (Net Interest Margin)	Return on assets	Return on equity	Capital adequacy ratio
2013	STATE BANK OF BIKANER & JAIPUR	50.81	3.24	0.96	16.36	12.16
	STATE BANK OF HYDERABAD	55.36	3.08	0.99	17.70	12.36
	STATE BANK OF INDIA	47.01	3.06	0.97	15.43	12.92
	STATE BANK OF MYSORE	56.71	2.88	0.66	10.00	11.79
	STATE BANK OF PATIALA	50.43	2.37	0.68	13.17	11.12
	STATE BANK OF TRAVANCORE	49.76	2.27	0.66	14.94	11.70
	ALLAHABAD BANK	50.57	2.51	0.64	10.84	11.03
	ANDHRA BANK	46.52	2.77	0.99	16.19	11.76
	BANK OF BARODA	43.10	2.28	0.90	15.07	13.30
	BANK OF INDIA	39.85	2.16	0.65	12.25	11.02
	BANK OF MAHARASHTRA	60.51	2.92	0.74	13.66	12.59
	HDFC BANK	55.40	4.28	1.90	20.34	16.80
	ICICI BANK	82.34	2.70	1.70	13.10	18.74
	INDUSIND BANK	73.09	3.41	1.63	17.15	15.36
	ING VYSYA BANK	49.33	3.02	1.26	14.24	13.24
	JAMMU & KASHMIR BANK LTD	72.64	3.51	1.70	23.56	12.83



Table - 5

Year	Bank	Ratio of term loans to total advances	Ratio of net interest income to total assets (Net Interest Margin)	Return on assets	Return on equity	Capital adequacy ratio
2012	STATE BANK OF BIKANER & JAIPUR	53.91	3.28	0.99	18.59	13.76
	STATE BANK OF HYDERABAD	56.37	2.99	1.15	21.98	13.56
	STATE BANK OF INDIA	47.98	3.38	0.88	15.72	13.86
	STATE BANK OF MYSORE	55.22	2.82	0.67	9.62	12.55
	STATE BANK OF PATIALA	51.80	2.60	0.93	17.95	12.30
	STATE BANK OF TRAVANCORE	47.90	2.42	0.65	13.93	13.55
	ALLAHABAD BANK	51.16	3.09	1.02	19.64	12.83
	ANDHRA BANK	46.46	3.22	1.19	19.25	13.18
	BANK OF BARODA	44.14	2.56	1.24	20.64	14.67
	BANK OF INDIA	40.03	2.26	0.72	14.00	11.95
	BANK OF MAHARASHTRA	62.59	3.00	0.55	9.91	12.43
	HDFC BANK	58.63	4.19	1.77	18.69	16.52
	ICICI BANK	84.88	2.40	1.50	11.20	18.52
	INDUSIND BANK	73.37	3.30	1.57	18.26	13.85
	ING VYSYA BANK	56.55	2.81	1.09	13.82	14.00
JAMMU & KASHMIR BANK LTD	74.32	3.32	1.56	21.22	13.36	

Data Analysis and Findings:

1. The analysis reveals that in majority of cases, higher the capital ratio higher is the level of term loans advances in the total advances. It may be on account of higher level of non-performing assets that decreases the CAR. In consequence to this, the banks become more cautious in lending for long term loans. However, there are few exceptions where CAR is relatively better but the ratio of term loans in very low.
2. There seems to be direct relationship between net interest margin as the analysis reveals that the net interest margin is relatively higher in case of the banks where CAR is higher. But there are few banks where CAR is relatively high but net interest margin is lower. Further, the analysis in these cases reveals that wherever the proportion of term loans is higher, net interest margin is higher.
3. There is a little influence of CAR on return on assets (ROA) as the analysis reveals negative ROA in many cases where CAR is normal. There are also few banks which have better CAR level but a high negative ROA. This is on account of the fact that ROA depends on the quality of assets and level of NPAs in a bank. Higher the level of non-performing assets, the lower or negative will be the ROA.
4. The similar is the case with return on equity (ROE). There are cases where the level of CAR is normal but returns on equity are negative. There are also evidences of higher ROE where CAR level is higher. Here again we can say that ROE directly depends on the level of NPAs. Therefore, higher the level of NPAs, lower will be the ROE.

5. In an overall analysis, it can be concluded that the level of CAR impacts the proportion of term loans since banks are in a better position to lend for long term viable projects. This also impacts positively the net interest margin. On the other hand, ROA and ROE is the function of standard assets.

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