CRAR-An Analysis of Financial Soundness of Selected Public Sector Banks, Private Sector Banks and Foreign Banks in India

Anita Tanwar, Priya Jindal

Abstract: ***Banks are the strongest pillars of any economy. As their very nature of business like providing loans, Banks attract different types of default risks. Banks face credit risk, operational risk and market risk. In banks, Capital is crucial and vigorous to maintain the survival of bank. Capital Adequacy indicates that banks have adequate capital to maintain all of its liabilities and risks. So, capital adequacy requires in banks to build investors' confidence and prevent bank from bankruptcy. In this present paper researcher analysed CRAR of selected Public Sector Banks, Private Sector Banks and Foreign Banks in India with an objective to compare within selected banks that which bank is highly adequate in terms of their capital management. The time period of the study is from 2008 to 2016. For objective of this study; tool and techniques are CAMELs criteria, rank and correlation. Banks are selected on the basis of market capitalization rate. This paper has resulted that ICICI bank is highly consistent in maintenance of CRAR.***

Keywords: CRAR, CAMELs, BASEL-1, BASEL-2, BASEL-3.

I. INTRODUCTION

Banks are the strongest pillars of any economy. As their very nature of business like providing loans, Banks attract different types of default risk. Banks face credit risk, operational risk and market risk. In banks, Capital is crucial and vigorous to maintain the survival of bank. Capital Adequacy indicates that banks have adequate capital to maintain all of its liabilities and risk. So capital adequacy requires in banks to build investor confidence and prevent bank from bankruptcy.

Banking institutions are playing major role for development of an economy. In this context in 2010 capital adequacy norms were introduced by the Basel committee on banking supervision (BCBS) because of economic crisis in 2008. In India capital adequacy norms or CRAR were implemented through RBI in 2010.

There are certain objectives for that banks have to maintain their capital adequacy such as maintain the financial soundness and liquidity of banks, strengthening the banking ability to maintain their existence, assistance to cope up with the losses of banks, and to maintain risk exposure of banks.

The primary regulators that provide forum for regular cooperation of banks and regulation related prudential norms to different banks is represent by the Basel committee on banking supervision (BCBS).it is based in Basel in Switzerland in 1930s.The BCBS provide three Basel norms that is Basel I,II,III.

Basel I prudential norms

Basel I norms were introduced in 1988, provide the limit for minimum capital requirement by the banks.it set out the limit of 8 percent capital adequacy ratio. Reserve bank of India implemented Basel I in 1992.Assets of banks are categorized into five parts that is 0%,10%,20 %,50 % and 100%.

Basel II prudential norms

Basel II norms were introduced in 2004, it provides guidelines regarding risk management system, capital adequacy and disclosure requirements.it focused on operational risk and market risk.

Basel III prudential norms

These norms were proposed in 2010. These norms are focusing on four parameters that is liquidity, leverage, capital and funding.it provide tier I capital requirement ranged from 4.5 percent to 6 percent. RBI provide minimum CRAR that is 11.5 percent.

II. LITERATURE REVIEW

Allen N. Berger (1995) and Vrictor and Blanco (2002), revealed that there is negative relationship between capital and yield of bank and analysed that how banks set their capital ratio. Dowd, K. (1999), concluded that maintenance of capital adequacy helps in security of deposits and strong banking system. Jim , Choi and Fong (2005) analysed that what are the factor that fix the amount of capital requirement in banks and regulatory regulation how affect the capital requirement in banks.

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Ajayi (2008), revealed that banks are not being regularly profitable in inflationary environment. Therefore, banking regulation does not get effect by economic growth in all aspects and technology advance in the banking sector. Mathuva (2009), Ho. & Hsu (2010), depicted that capital adequacy and banks profitability have positive relationship. It has examined that return on equity and return on assets have negative relation with capital adequacy and analysed risk full strategies of investment and capital structures of Taiwan banks. Regression analysis has been used to found that there is a positive relation between financial structure and business cycles. Further Sanusi (2010), explained that capital adequacy is important for find out credit risk, operational risk, and all kinds of risk. Maintenance of capital adequacy helps to build the trust of investors, depositors and creditors. Hoffmann Paolo Saona, (2011), analysed data through GMM system estimator. It has revealed that what are the determinants of profitability in Unites States. It has concluded that there is negative relation between capital and profitability of banks. Further Williams (2011) studied the effect of capital adequacy norms on Nigeria economy. Banerjee (2012), revealed that financial parameters affect the banks performance. It analysed data through random effect model for basel 1 and tobbit censored regression model for Basel 2 norms. It has also identified that non performing assets affect the foreign banking operation of country. Bateni et.al (2014), analysed that what financial factors that affect the capital of private sector banks in Iran between the time periods of 2006 to 2012. It has concluded that bank size and capital adequacy have negative relation and other factors such as return on equity, return on assets and equity ratio have not any impact on capital adequacy. Further Kumar and Selvan (2014), analysed the impact of capital adequacy, Debt-equity and advances to assets from 2009 to 2010. Binh and Thomas (2014) and Sharif (2015), revealed that capital, equity risk, return on equity and return on Assets combination have influence on bank capital adequacy and depicted that capital adequacy have impact on private commercial banking industry in Bangladesh. It took data from 2008 to 2014 of private banks through OLS regression model. This research revealed that capital adequacy is making impact on profitability of private commercial banks of Bangladesh. Irawan and Anggono (2015), revealed the determinants of capital adequacy in Indonesia. It has taken time period from 2005 to 2014.Regression analysis has used as statistical tool. It has concluded that NPLs, assets and return on advances have positive effect on capital adequacy. Further Lal et.al. (2016), depicted that the correlation between return on asset debt equity and net income is positive. Singh, analysed the Indian and China banking system through CAMELs model.

III. OBJECTIVES OF THE STUDY

The objectives of study are as follows:

1. To study the capital adequacy of the selected Public Sector, Private Sector and Foreign Banks in India.
2. To examine the status of capital adequacy of selected Public Sector, Private Sector and Foreign Banks in India.

IV. METHODOLOGY

Research Gaps

This study analysed CRAR maintenance of selected banks. It helps to know about the performance of the banks with regard of the maintenance of capital adequacy ratio. This paper has taken specified objectives that have not earlier discussed in other similar researches. It calculates capital risk adjusted ratio of selected banks.

Research Design and Sample

Empirical research design has been used for it. This is the research that based on historical data. From all public sector banks, private sector banks, and foreign banks 9 top banks have been selected for the study on the basis of their income and total assets. The Selected banks in public sector are State Bank of India (SBI)), Punjab National Bank (PNB), and Bank of Baroda (BOB), private sector banks are Housing Development Finance Corporation of India (HDFC), Industrial and Investment Corporation of India Ltd. (ICICI ltd.), and Axis Bank, and Foreign Banks are Hongkong and Shanghai Corporation of India Ltd. (HSBC), Standard Chartered Bank, and Citi bank. The time period of study has taken from 2008 to 2016.

Data collection

Secondary data collection method has been used for the study. Secondary data is that data that have been collected by researcher from official and authentic website of organisations.

Tools and Techniques

Tools and techniques are CAMELs criteria, mean, standard deviation, Coefficient of Variation, rank, rating, Min, Max.

Data analysis and Interpretation

Table. 1 CRAR of Public sector banks, Private sector banks and foreign banks.

SR. NO	Banks	2008	2009	2010	2011	2012	2013	2014	2015	2016	MIN	MAX	MEAN	RANK	S.D.	C.V.	SK	MEDIAN	CAGR

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PUBLIC SECTOR BANKS	1	SBI	13.54	14.25	13.39	11.98	13.86	12.92	12.44	12	13.12	11.98	14.25	13.06	7	0.8	6.11	-00.24	13.12	0.02
	2	PNB	13.46	14.03	14.16	12.42	12.62	12.72	11.52	12.21	11.28	11.28	14.16	12.71	8	1.01	7.97	0.28	12.62	-0.02
	3	BOB	12.94	14.05	14.36	14.52	14.67	13.3	12.44	12.61	13.18	12.28	14.67	13.56	6	0.85	6.27	0.93	13.3	0
PRIVATE SECTOR BANKS	4	HDFC	13.6	15.69	17.44	16.22	16.52	16.8	16.07	16.79	15.53	13.6	17.44	16.07	2	1.1	6.85	-0.4	16.22	0.02
	5	ICICI	13.96	15.53	19.41	19.54	18.52	18.74	17.7	17.02	16.64	13.96	19.54	17.45	1	1.86	10.7	-0.4	17.7	0.02
	6	AXIS	13.73	13.69	15.8	12.65	13.66	17	16.07	15.09	15.29	12.65	17	14.78	5	1.42	9.59	-0.67	15.09	0.01
FOREIGN BANKS	7	CITI BANK	12	13.23	18.14	17.31	16.03	15.9	16.49	15.3	15.76	12	18.14	15.57	4	1.91	12.3	-0.51	15.9	0.03
	8	SCB	10.59	11.56	12.41	11.88	11.05	13	12.48	12.49	12.98	10.59	13	12.05	9	0.84	6.99	-1.29	12.41	0.03
	9	HSBC	10.59	15.31	18.03	18.03	16.04	17.1	17.36	14.84	15.99	10.59	18.03	15.92	3	2.3	14.5	-0.16	16.04	0.05
		MIN	10.59	11.56	12.41	11.88	11.05	12.72	11.52	12	11.28									
		MAX	13.96	15.69	19.41	19.54	18.52	18.74	17.7	17.02	16.64									
		Mean	12.71	14.15	15.9	14.95	14.77	15.28	14.73	14.26	14.42									
		S.D.	1.33	1.3	2.45	2.91	2.26	2.3	2.46	1.98	1.81									
		C.V.	10.48	9.15	15.42	19.48	15.3	15.03	16.68	13.87	12.58									

Source: Data processed through excel (statistical tables related to banks in India, RBI.)

It reveals from the table 1 that ICICI bank is at rank 1 out of all selected banks ,HDFC stands at 2nd rank ,Bank of Baroda has 6 th rank and PNB has 8th rank in maintaining of capital adequacy. HSBC banks has highest CAGR that is 0.05 percent. Coefficient of variation depicts that SBI, PNB, and BOB 6.11, 7.97, and 6.27, CITI Bank, SCB, and HSBC are 12.25, 6.99, and 14.45,HDFC, ICICI, and Axis Bank are 6.85, 10.68, and 9.59. By comparing C.V. it shows that Standard chartered Bank is less consistent in its CRAR maintenance and ICICI bank is highly consistent in maintenance of CRAR.

Table. 2 Year Wise Composition of CRAR maintenance of Selected Banks.

level/year	2008	2009	2010	2011	2012	2013	2014	2015	2016
9%-≤10%									
>10%-≤11%	2								
>11≤12%	1	1		2	1		1		1
>12%≤13	1		1	2	1	2	3	4	1
>13%≤14%	5	2	1		2	2			2
>14%≤15%		3	2	1	1			1	
>15%		3	5					2	4
>20%				4	4	5	5	2	1
No. of banks	9	9	9	9	9	9	9	9	9

Source: Data constructed through excel From above table, it has been analysed that as RBI has fixed CRAR 9.00 percent in 2008 to 2014 all the banks have maintained their capital adequacy ratio. In 2015 to 2016 CRAR has 11.50, and it has been depicted from the data that all the banks have maintained that criteria.

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Table. 3 CAMELS Criteria: Result basis on Capital Adequacy

RATING	Range	CAMELs CRITERIA	Rank Mean=5, S.D=2.72	Description of the Bank	Banks
1	1st-25%	Upto (mean-.67 S.D)	Upto (5-0.67 x 2.72) =3.17	Strong performance Basically sound in every respect	ICICI,HDFC,HSBC
2	2nd-26% to 50%	From (mean-.67 S.D) upto Mean	From 3.17 to 5	Satisfactory performance Fundamentally sound with moderate weakness	CITI Bank, Axis Bank
3	3rd-51%to 75%	Above mean Upto (mean+.67 S.D)	Fom 5 to (5+1.82) =5 to 6.82	Fair performance that has decreased to some degree. financial, operational or compliance weakness that give cause for supervisory concern	BOB, SBI
4	4th-76% and above	Above (mean+.67 S.D)	Above 6.82	Marginal performance that is significantly below average. Serious financial, operational and managerial weakness that could impair future viability	PNB, SCB

Sources: (compiled by author)

It has been depicted from the table 3 that Punjab National Bank and standard Chartered Bank have got rating 4 that shows they are not performing well in terms financial and operational activities. BOB and SBI have got rating as they have fair performance in terms of financial and operational activities. CITI bank and Axis bank have satisfactory performance and got ranking 2. ICICI bank, HDFC AND HSBC bank have got rating 1 and have strong performance.

Table. 4 Banks and Ranking Description

BANKS		RANK	Description
PUBLIC SECTOR BANKS	SBI	7	Fair performance that is flawed to some degree. financial, operational or compliance weakness that give cause for supervisory concern
	PNB	8	Fair performance that is flawed to some degree. financial, operational or compliance weakness that give cause for supervisory concern
	BOB	6	Satisfactory performance Fundamentally sound with moderate weakness
FOREIGN BANKS	CITI BANK	4	Satisfactory performance Fundamentally sound with moderate weakness
	S CH BANK	9	Fair performance that is flawed to some degree. financial, operational or compliance weakness that give cause for supervisory concern
	HSBC	3	Strong performance Basically sound in every respect
PRIVATE SECTOR BANKS	HDFC	2	Strong performance Basically sound in every respect
	ICICI	1	Strong performance Basically sound in every respect
	AXIS	5	Satisfactory performance Fundamentally sound with moderate weakness

Source Compiled through excel.

This table has taken 4 rating criteria, rating 1 shows strong performance and rating 4 shows marginal performance. By analysing rating it shows that HSBC bank have highest compounded annual growth rate so it stands on rank 1 and have rating 1. Standard chartered bank rank is 9 as it has least compounded annual growth rate.

V. FINDINGS AND CONCLUSION

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It has been revealed from the table 1 that ICICI bank is at rank 1 out of all selected banks ,HDFC stands at 2nd rank ,Bank of Baroda has 6th rank and PNB has 8th rank in maintaining of capital adequacy. HSBC banks has highest CAGR that is 0.05 percent. Coefficient of variation depicted that SBI, PNB, and BOB 6.11, 7.97, and 6.27, CITI Bank, SCB, and HSBC are 12.25, 6.99, and 14.45,HDFC, ICICI, and Axis Bank are 6.85, 10.68, and 9.59. By comparing C.V. it has shown that Standard chartered Bank is less consistent in its CRAR maintenance and ICICI bank is highly consistent in maintenance of CRAR. Further, it has been analysed that as RBI has fixed CRAR 9.00 percent in 2008 to 2014 all the banks have maintained their capital adequacy ratio. In 2015 to 2016 CRAR has 11.50, and it has been depicted from the data that all the banks have maintained that criteria. It has been depicted from the table 3 that Punjab National Bank and standard Chartered Bank have got rating 4 that showed they are not performing well in terms of financial and operational activities. BOB and SBI have got rating as they have fair performance in terms of financial and operational activities. CITI bank and Axis bank have satisfactory performance and got ranking 2. ICICI bank, HDFC AND HSBC bank have got rating 1 and have strong performance. It has been depicted that rating 1 shows strong performance and rating 4 shows marginal performance. By analysing rating it shows that HSBC bank have highest compounded annual growth rate so it stands on rank 1 and have rating 1. Standard chartered bank rank is 9 as it has least compounded annual growth rate. Standard Chartered bank is less consistent in its CRAR maintenance and ICICI bank is highly consistent in maintenance of CRAR. ICICI, HDFC, and HSBC banks have strong performance in their capital adequacy maintenance.

VI. LIMITATION AND STUDY FORWARD

This study has taken a specific time period and it has not calculated market level change occur in banking sector. This type of study helps banks and individual investors to maintain their capital requirement and investment in banking organisation.

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FURTHER READINGS

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