

ANALYZING CAPITAL REGULATIONS OF PUBLIC SECTOR BANKS WITH REFERENCE TO BASEL III NORMS.

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ABSTRACT

Implementation of Basel III norms is a strong step in streamlining the banking practices which would provide greater stability and better resilience to face financial storms. A well-capitalized banking system is a prerequisite for stable economic growth. Nowadays, Indian banking industry is facing a dramatic stage of financial reforms and various regulatory measures are being announced by the government because the winds of regulatory reforms are blowing across the globe. In case of banking business, the survival of banks is generally based on the adequate capital because in absence of sufficient capital, banks may face the bankruptcy. Therefore, banks always keep adequate level of capital to maintain liquidity. A bank with higher capital adequacy ratio is considered safe and capable to meet its obligations. The prudential regulations on capital adequacy of banks have traditionally been a matter of concern. In the wake of financial reforms in India, a capital to risk weighted asset (CRAR) system was adopted by Indian commercial banks. The regulatory framework had been designed by BCBS in form of Basel norms. The level of CAR has been ascertained by the financial regulators to provide a cushion to soak up the unexpected losses and risks because an efficient and stable banking system is essential for productivity of the economy. Thus, the present study intends to measure the consistency of capital adequacy ratio of Indian public sector banks. The results conclude that Indian public-sector banks are stronger and stable due to high capital ratio recorded by all banks indicating that Indian public-sector banks are positively moving towards the implementation of Basel III norms.

Keywords: Basel III, Capital regulations, capital adequacy ratio, Indian public sector banks.

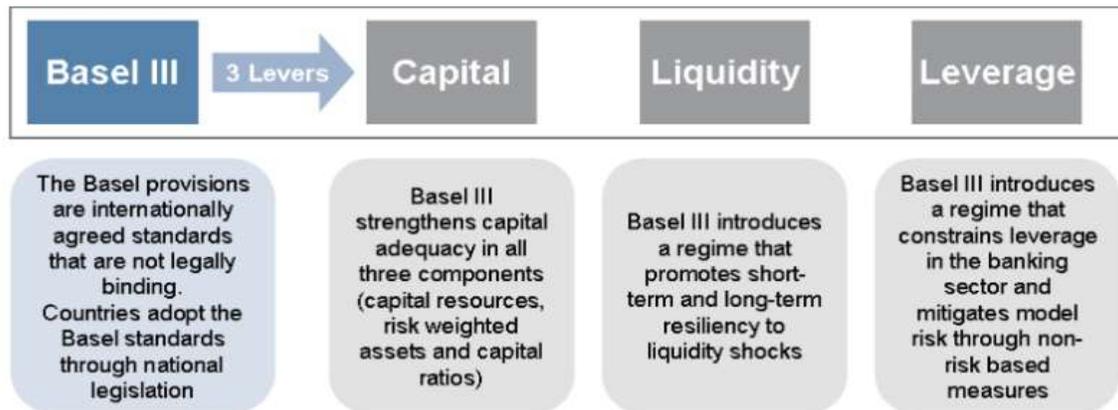
I INTRODUCTION

Capital is the difference between total assets and liabilities. Regulatory capital is the minimum capital requirements as called up by regulators and which is used to absorb losses and shocks during tough periods. In banking business, various types of risks are attached with banking activities due to borrowing and lending. If banks are unable to cover its loan amount and assets, banks will operate at high risk level which can put banks into failure. Therefore, to reduce the chances of any failures, banks are required to maintain a sufficient level of capital so that banks can easily recover any loss arising due to default payments and other reasons. If banks maintain high level of capital, then the chances of failure will be less because bank is capable to bear all risk and losses. That's why capital regulations are the most important banking regulations prevailing all over the world. The banks should have sufficient level of capital because of various reasons such as:

- To soak up the unanticipated losses arising due to higher risks.

- To preserve depositor's confidence.
- To protect the bank from failure.
- To prevent the bank from unforeseen bankruptcy.
- To increase the shock absorbing capability of banks where bank can with stand easily during tougher situations.
- To help banks in better financial planning.
- To ensure the better utilization of bank's capital fund.
- To promote the financial stability in banks.

FIGURE 1: BASEL III FRAMEWORK

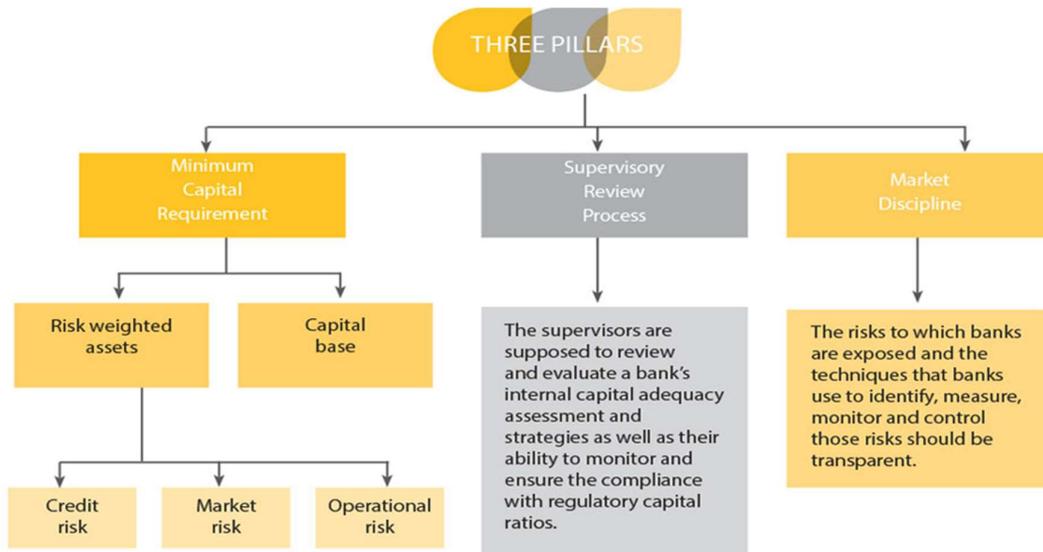


Source: www.bis.org

In 1992, the CAR was specified at 8% under Basel I norms. After 2004, the capital norms under Basel I had changed because more capital was added for market risk and these regulations have been known as Basel II norms. In 1997, 27 Indian public-sector banks had maintained the 8% level of capital adequacy.

Further, in 2010 a regulation named Basel III has come up with the more comprehensive set of regulation focusing on the quality, quantity and transparency of capital. The requirement of CAR has been set at 11.5% under Basel III capital regulations. The Indian banks enforced Basel I in 1999 and Basel II in 2009. The Basel III guidelines have been adopted by Indian commercial banks since April, 2013.

FIGURE 2: PILLARS OF BASEL III



Source: www.bis.org

The capital requirements for the implementation of Basel III guidelines may be lower during the initial years and higher during the later years. In India, commercial banks have disclosed the capital ratios computed as per the Basel III capital adequacy norms since March 2013.

Regulatory Capital = Core Capital + Capital conservation buffer + Counter cyclical buffer

The concepts of capital adequacy norms include four elements. BIS sets requirements on two categories of capital: Tier I and Tier II Capital

Total capital = Tier I + Tier II

(i) Tier I capital

The Tier I capital consist not only common equity but also other qualifying financial instruments will be increased to 6%. The capital used to compute the capital adequacy ratio is divided into two tiers. Tier one capital means core capital which includes equity capital, ordinary share capital, intangible assets and audited revenue reserves. Tier one capital is taken to absorb losses and banks do not need to cease operations. This part of capital provides more protection to depositors. It consists of:

- Paid up capital
- Statutory reserves
- Capital reserves
- Disclosed free reserves

Tier I capital = book value of stock + paid up capital + retained earnings (statuary reserve + disclosed free reserve+ capital reserve) - equity investments in subsidiaries + intangible assets and loss in current period.

(ii) Tier II capital

The tier II capital is the supplementary capital of banks which helps in absorbing losses during winding up and it does not provide more protection to depositor. It comprises unaudited reserve

and retained earnings, hybrid capital instruments, undisclosed reserve and investment reserve. The Tier II capital cannot exceed 50% of Tier I capital. Tier II capital consists:

- Undisclosed reserves
- revaluation reserves
- Hybrid capital
- General provisions
- Loss reserves
- Subordinated debt

Tier II capital = loan loss reserve + subordinated debt + revaluation reserve + general provision.

The two tiers of capital are added together and divided by risk-weighted assets to compute the capital adequacy ratio. Risk-weighted assets are calculated by looking at a bank's loans, evaluating the risk and then assigning a weight. Risk weighted assets is a measure of number of banks assets that is adjusted for risks.

CAR is computed as follows:

$$\text{CAR (Capital Adequacy Ratio)} = \frac{\text{Tier I + Tier II Capital}}{\text{RWA (Credit + Market + operational risk)}}$$

The CAR is used to examine whether a bank is complying with statutory capital requirements or banks are capable of recovering any unforeseen losses.

Capital adequacy ratio is computed on the basis of bank's assets. The worth of assets of banks is taken according to the risk level involved in the assets instead of taking the assets as per their book values. For examples: CAR is at 10% on Rs. 150 crores is to be maintained. It means that bank is expected to hold a minimum capital of Rs. 15 crores including Tier I and Tier II capital items.

(IV) Subordinated Debt

This includes the bonds issued by banks for raising Tier II capital. It consists:

- Fully paid up instruments
- Unsecured Debt
- Subordinated to the claims of creditors means that claims of bank's holders will be paid at last.
- Not redeemable at the option of holders because the repayment will be ascertained by the issuing bank.

Regulatory Capital Norms as per Basel III

Calibration of Basel III regulatory capital reforms			
Elements	Features	Specificity	Remarks for banks
Enhanced quality	Increased transparency and consistency of capital	Stricter definition of capital	Stronger and increased capacity

Enhanced quantity	Higher loss absorbing capacity	11.5% of RWAs	Strengthen capitalization of banks
Conservation buffer	Cushion of capital during period of stress	2.5%	Increased Financial stability
Countercyclical buffer	Reduce economic cycles	0% to 2.5%	Increased Resilience of banks

Source: Author's Compilation

These are the major areas for capital reforms:

- **Enhanced Capital quantity and quality:** the loss absorbing capacity of banks has been increased by enhancing the quantity and quality of capital. It means that banks will be capable of withstand better during stress periods.
- **Increased transparency and consistency of capital:** Basel III norms specify the stringent capital norms with CAR of 11.5% and the definition of capital has been changed with more stringent elements.
- **Introduction of Buffers:** Under Basel III capital reforms, two types of buffers have been introduced such as:
 - Capital conservation buffer: It would ensure the banks to maintain a cushion during shocks and crises.
 - Countercyclical buffer: It would protect the banks during economic pro-cyclicality which would encourage the lending during tough periods.
- **Minimum capital requirements:** Under Basel III stipulations, the minimum capital requirements have been changed from 2% to 4.5% as minimum common equity is considered as the highest loss absorbing capital.
- **Systemically Important Financial Institutions:** BCBS prescribed norms for Domestic Systemically Important Banks (D-SIBs) under Basel III regulations. It specified the higher loss absorbency capital norms for Global Systemically Important Banks (G-SIBs) and required to hold a high level of capital depends on the level of systemic importance. The Systemically important banks have been expected to have loss absorbing capacity beyond the Basel III stipulations which consists capital surcharges, bail-in-debt and contingent capital.

A financial institution with strong capital base is capable to protect the interest of its depositors and can smoothly pursue its business operations. Therefore, it is necessary to set the regulatory guidelines for limits of capital hold by banks (Jyoti et.al 2016). So, it is mandatory for banks to maintain sufficient capital to better withstand for crisis. The proposed capital regulations would enhance the stability of financial system and economic growth of a nation (Shukrant, 2018)

II REVIEW OF LITERATURE

Carosio (2001) revealed that banks need to work on some of the operational aspects of the regulations. The study concluded that high capital requirements will decline the rate of loans during recession. **Nag and Das (2002)** assessed the impact of implementing uniform capital norms on Indian public-sector banks. The Indian banking sector undergone through a shift of reforms in 1991 and the significant factor was capital adequacy regulations envisaged by Basel I. **Chen (2003)** examined the new capital regulations in the state commercial banks in China. The study found that China adopted the new capital Accord but banks in China need additional funds to compete with the foreign banks operating in China. **Singer (2004)** highlighted that central regulator of the developed nations have adopted the international capital standards. The stringent capital regulations made the banks to compete globally and capable to respond to the unexpected shocks. **Fouche et.al (2005)** examined that capital adequacy norms have become the critical issues in banking industry which measure the stability of financial position of banks. The results demonstrated that capital adequacy ratio plays crucial role as the benchmark of measuring financial health of banks. **Sarma and Nikadio (2007)** analyzed that the regime of Basel I, the Indian banks were performing well and accounted 12% CAR which was found higher than globally admitted 8% level of CAR and accepted ratio of 9% by RBI. **Vyas et.al (2008)** indicated that well capitalized banks would not face any chance of bankruptcy due to the higher capital ratio determine the higher profitability of banks. **Drumond (2009)** advocated that raising additional capital would be costly and difficult task for banks specifically in bad times. The Basel II capital guidelines can lead to higher financial expansion of the business cycle than Basel I capital Accord which would negate the goal of capital guidelines. **Dhanda and Rani (2010)** highlighted the status of capital adequacy ratio of scheduled commercial banks of India and determined the impact of implications of capital regulations. The global value of CAR is ranging between 7.1% and 34.9%. **Varotto (2011)** found that new requirements for credit risk may be substantial as compared to the old capital requirements. The study concluded that capital required for absorbing losses in stress scenario can be increased more than ten times. **Kudinska and Konovalova (2012)** indicated that Latvian commercial banks were maintaining the required level of capital adequacy and ensuring the stability and safety of banks. The banks in Latvia did not require additional buffers capital because the banking system is stable and hold sufficient capital as risk coverage. **Wall (2013)** investigated that banks in US responded to the new Accord by reducing the capital in a way that will not affect the shareholder value. **Dalecka and Konovalova (2014)** revealed that banks will require additional fund of 577 billion to comply with minimum capital norms and banks have maintained capital ratio of 10.5% which is more than stipulated by new regulations. The study concluded that state banks in Latvia ensured capital ratio at 9.89 % showing that banks partially satisfied the new capital standard. **Fatima (2014)** concluded that private banks maintained higher capital ratio as compared to public banks. All Indian banks are ready for Basel III implementation and it will not create more difficulty for banks in initial years. **Son Hong Nghiem (2015)** concluded that average low capital ratio recorded at 5.5% for public banks and results indicated the low lending rate in public banks. On the other hand, private banks found with more risk-taking ability and more profit efficient than public banks. **Li et.al (2016)** The higher capital requirements may foster Taiwan banks to reach the level of efficiency

in banking operations but higher requirements of capital may lead to reduction in loan and will have negative effect on the operational performance. **Goel and Kumar (2016)** found that CAR was not more increased after the Basel II implementation but public-sector banks has maintained capital adequacy ratio more than 9%. This shows banks maintained sufficient capital indicating the stable financial position of banks. **Maraghni (2017)** observed that regulatory pressure made Tunisian banks to meet the capital standard and capital does not entail a decrease or increase in the risk-taking attitude of banks. The change in risk level has not impacted the level of capital ratio during the analysis period of the study. **Singh and Seth (2017)** The position of banks was found sound as far as capital adequacy is concerned. The Central Bank of India should focus on the soundness because the banks have not fulfilled the minimum requirements of capital and other selected banks in the study maintained their capital adequacy above the prescribed criteria of RBI. **Sunita and Kshamta (2018)** The capital adequacy is the important benchmark to measure the safety and stability of banking sector as it is used as a guard to absorb the shocks. The results indicated that profitability, deposit and size of the banks are negatively correlated with the CAR values. **Vinod and Mohammed (2018)** concluded that banks have maintained capital adequacy ratio above the ratio specified by regulators. The higher capital requirements would enhance the stability, risk taking ability and efficiency of banks. **Ramesh (2019)** revealed that capital adequacy ratio has a significant impact on return on assets whereas insignificant impact on return on equity. The banks will have to hold adequate capital in relation to the risk level of banks because there was found a relationship between the amount of capital and level of risk. **Jangra (2020)** The study recommended that banks with low operational efficiency should focus on improving their financial performance to boost their level of efficiency to comply with Basel norms. **Jadhav et.al (2021)** The findings concluded that banks should develop a reliable framework for efficient capital management that can bring overall efficiency in banking operations. **Rizvi et.al (2021)** recommended that a holistic view of banking experts on Basel III in India is required to implement these norms efficiently.

As stated in previous studies, the capital adequacy norms are being implemented all over the world and it is also mandatory for Indian public-sector banks to disclose their capital ratio as per Basel III. This has enforced to examine the status and consistency of capital adequacy requirements of Indian public-sector banks as per Basel III.

III OBJECTIVE

The present study intends to measure the capital adequacy ratio of Indian public sector banks with reference to Basel III capital norms.

In this regard, following hypotheses have been tested:

H1: There are not significant differences between the mean values of CAR of each category of banks.

H2: There are no considerable differences in CAR of nationalized banks, SBI group and other Public-sector banks

IV RESEARCH METHODOLOGY

The present study is based on secondary data collected from the annual reports of the banks for the period of 2008-2017. In order to achieve the objective of this study, descriptive and analytical approaches have been used. The present study analyzes capital adequacy ratio of selected Indian public sector banks for the period of 2008-2017. The analysis was carried out through descriptive statistics, and histogram, chart and graphs. Further, the study used one sample t-test and ANOVA for testing the hypotheses using MS-Excel.

V DATA ANALYSIS

I. Capital adequacy level of each category of public-sector banks

II. Measurement of consistency in CAR of banks.

Capital adequacy ratio level of each category of public-sector banks

The capital adequacy ratio of nationalized banks, State bank group, other public-sector banks and average CAR for all banks from 2008 to 2017 has been studied and presented in the table 1.1.

TABLE 1.1: CAR LEVEL OF EACH CATEGORY OF INDIAN PUBLIC-SECTOR BANKS

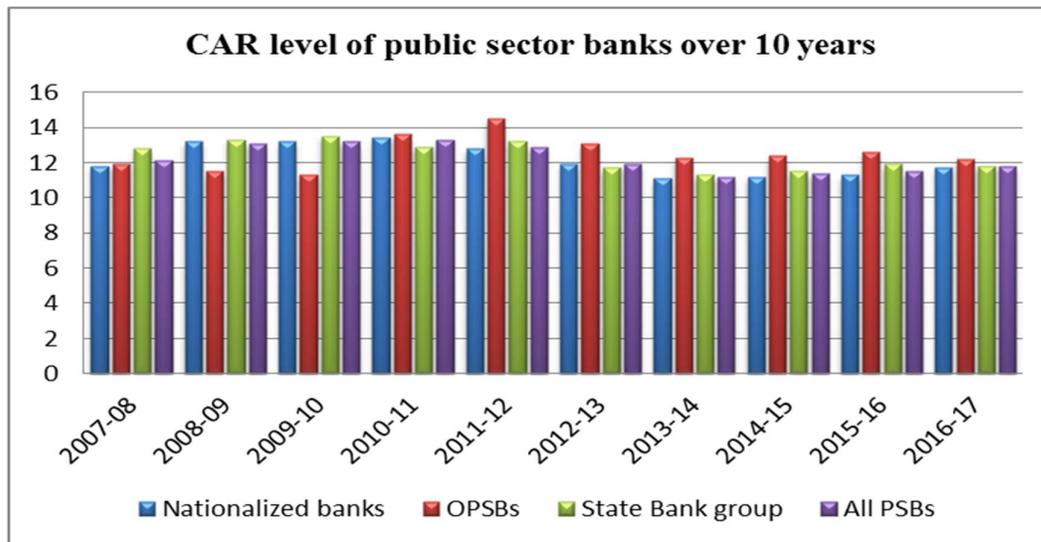
Year	Nationalized banks	OPSBs	State Bank group	All PSBs
2007-08	11.8	11.9	12.8	12.1
2008-09	13.2	11.5	13.3	13.1
2009-10	13.2	11.3	13.5	13.2
2010-11	13.4	13.6	12.9	13.3
2011-12	12.8	14.5	13.2	12.9
2012-13	11.9	13.1	11.7	11.9
2013-14	11.1	12.3	11.3	11.2
2014-15	11.2	12.4	11.5	11.4
2015-16	11.3	12.6	11.9	11.5
2016-17	11.7	12.2	11.8	11.8

Source: Compiled from the annual reports of the banks

The average CAR level of each category of public-sector banks varied between 11% and 14.5% during the period of 10 years (2007-17). The CAR of public banks was consistent and indicates that Indian public banks were Basel III compliant as on March 31, 2013. The average CAR of each category of public banks exhibited improvement in CAR values after implementing Basel III capital norms in 2013 in Indian banks and average CAR was much higher than minimum regulatory requirement of 11%. Table shows, average CAR level of nationalized banks continued to decline between 2012 and 2016 and recorded an increase of 0.4%. On the other hand, CAR level for state bank group decreased in 2011, 2013, 2014 and 2017 but it was higher in 2009, 2012 and 2016. During the financial crisis in 2008, the CAR level of all public-sector banks increased which indicates the strong financial position of banks. In initial years, the CAR level of each group of banks was much higher than the last years. CAR level for all banks

recorded increasing trend between 2014 -2017. At the end of 2017, all groups of public-sector banks had CAR of more than 11.5% which shows that banks are maintaining CAR above the Basel III standards.

FIGURE 3: CAR LEVEL OF EACH CATEGORY OF PUBLIC-SECTOR BANKS



Source: Compiled from the annual reports of the banks

The chart demonstrates the CAR level of each group of public-sector banks over the period of 10 years (2008-2017). As seen in the figure 3, increasing trend of CAR was recorded for all bank groups between 2008 -2013. CAR of other public-sector banks shows increasing trend throughout the period of the study. The CAR level of nationalized banks and State Bank group depicts the decreasing trend with less variations over the period of 2013-2016.

The trend of CAR level of all public-sector banks was increasing in initial years and decreasing after 2013 but still above 11%. The average CAR level of all bank groups shows that public-sector banks in India are operating at high level of CAR which is above the international standards. During the period of 2017, nationalized banks, state bank group and other public-sector banks shows a little rise in average CAR. The difference in the CAR of each group of the banks was observed over the 10 years of the study.

One sample t-test has been used to compare the mean value of CAR for each type of bank. To determine the extent of change in the CAR level of each group of the banks, one sample t-test is applied.

The computed t-value in respect of various groups of banks shows that there is significant difference in the value of CAR as compared to the mean value of the CAR for each group of banks.

TABLE 1.2: OUTPUT OF ONE SAMPLE T-TEST

Groups of banks	Test Value =0						
	T	df	Sig. level (2-tailed)	Mean Difference	S.D	95% confidence interval of the difference	
						Lower	Upper

Nationalized banks	42.68	9	0	12.16	0.90	11.515	12.804
State bank group	47.24	9	0	12.39	0.82	11.796	12.983
Other public banks	40.79	9	0	12.54	0.97	11.846	13.231
All PS banks	47.87	9	0	12.24	0.80	11.661	12.818

H1: There are not significant differences between the mean values of CAR of each category of banks.

The null hypothesis H1 is rejected because the mean values of CAR of different groups of banks are not the same, it differs significantly. The mean value of CAR is recorded highest for other public-sector banks, followed by state bank group. The mean of CAR of each group of banks is significantly different. The findings of one sample t-test reveals that mean of capital adequacy ratio of all banks are different. Basel III capital norms have been implemented in Indian banks since March 2013. It will be comfortable for Indian banks to comply with the other components of Basel III norms due to higher capital ratio maintained by banks. Indian public-sector banks were stable and well capitalized because of stronger capital base hold by banks.

Summary statistics for CAR of each group of banks

The table 1.3 presents various statistics for CAR of three types of groups viz. nationalized banks, state bank group and other public-sector banks for the period of 10 years (2008-2017).

TABLE 1.3: SUMMARY STATISTICS FOR CAR

Groups	Count	Average	Standard deviation	Coeff. of variation	Minimum	Maximum	Range	Skewness
Nationalized	19	12.16	0.9	7.4	11.1	13.4	2.3	0.293
State bank	6	12.39	0.82	6.4	11.3	13.5	2.2	0.049
OPSBs	2	12.54	0.97	7.7	11.3	14.5	3.2	0.838
All banks	27	12.24	0.8	6.5	11.2	13.3	2.1	0.196

Descriptive statistics of capital adequacy ratio of all public-sector banks has been shown the table 1.4 which depicts the overall statistical results of CAR value during the period of study. The descriptive statistics comprises the measure of central tendency and measure of dispersion of observations. The descriptive analysis of CAR depicts the average, median, variance, maximum, minimum, range, skewness, kurtosis at 95% confidence level.

TABLE 1.4: DESCRIPTIVE STATISTICS OF CAR OF PUBLIC-SECTOR BANKS OVER THE PERIOD OF 10 YEARS

Nationalized banks	State bank group	OPSBs	All PSBs
Mean	12.16	12.39	12.54
Standard Error	0.28	0.26	0.3
Median	11.85	12.35	12.35
Standard Deviation	0.9	0.82	0.972
Sample Variance	0.81	0.68	0.94
Kurtosis	-1.82	-1.9	0.51
Skewness	0.29	0.04	0.838
Range	2.3	2.2	3.2
Minimum	11.1	11.3	11.3
Maximum	13.4	13.5	14.5
Sum	121.6	123.9	125.4
Count	10	10	10
Largest(1)	13.4	13.5	14.5
Smallest(1)	11.1	11.3	11.3
Confidence Level (95.0%)	0.644	0.593	0.695

ANOVA test has been employed to analyze whether there are significant differences between various groups of banks for CAR. The null hypothesis H₂ has been tested using ANOVA test. It measures at what extent the differences in CAR value of various groups of banks (nationalized banks, state bank group and other public-sector banks) come out.

H₂: There is no considerable difference in CAR of nationalized banks, SBI group and other public-sector banks.

As shown in table that the computed F-value (10.24) is more than the table value (2.86) means rejecting the null hypothesis H₂ as significant difference in CAR of nationalized banks, SBI group and other public-sector banks has been observed. In other words, (F-value > f critical) so, there is statistically significant difference between the mean CAR from one level of group to another at the 95% confidence level. The CAR values of nationalized banks have been found different from the CAR of SBI group and other public banks.

TABLE 1.5: OUTPUT OF ANOVA FOR CAR

Source of Variation	Sum of square	df	Mean Square	F-value	Table value
Between Groups	94.43	3	31.478	10.243*	2.866
Within Groups	110.63	36	3.0731		
Total	205.06	39			
*F-value is significant at 5% level of significance					

Measurement of consistency in CAR of public-sector banks

Table indicates the CV of different categories of Indian public-sector banks. The CV (Coefficient of variation) has been calculated to measure the consistency in CAR of selected public banks.

TABLE 1.6: CONSISTENCY IN CAR

All Banks	Mean	S.D.	Coefficient of variation %
Nationalized	12.16	0.90	7.4
SBI Group	12.39	0.82	6.4
OPSBs	12.54	0.97	7.7
All PSBs	12.24	0.80	6.5

Source: Compiled from the annual reports of the banks

It is evident from the above table that average CAR of all banks is more than 12% which is above the international standard. Other public-sector banks had highest standard deviation which reveals the variations in CAR from the mean value. CAR of other public-sector banks is found different from the average CAR. The highest CV is recorded in other public-sector banks, followed by nationalized banks which indicate the more variations and less consistency in CAR. The state bank group has lowest CV, which shows less variations and more consistency in CAR.

Distribution of CAR

The analysis of table exhibits that all public banks have met the capital norms as stipulated under Basel III regulatory framework. By the year end March 2017, ten public-sector banks have CAR of more than 12% and nine public banks have achieved CAR level of above 11% whereas three banks have maintained CAR of more than 13% but less than 14%.

Only four banks have CAR of above 10.5% but below 11%. One bank could not achieve the CAR of 10%, the CAR maintained by State Bank of Bikaner & Jaipur has been recorded at 9.25%. But, the associate banks of State bank group have been merged into State Bank of India since April, 2017. Therefore, low CAR maintained by this bank will not much affect the Indian Public-sector banks.

The present analysis concludes that Indian public-sector banks except few banks have met the capital norms as per Basel III guidelines. The 17 public-sector banks viz. Punjab National Bank, Allahabad Bank, Union Bank, State Bank of India, Indian Bank, Bhartiya Mahila bank, Andhra Bank, Bank of Baroda, Bank of India, Canara Bank, Syndicate Bank, Vijaya Bank, Oriental Bank of Commerce, State Bank of Patiala, State Bank of Mysore, State Bank of Hyderabad and State Bank of Travancore have complied with the Basel III capital regulations. These banks have CAR of more than 11.5% as prescribed under Basel III. The five banks namely Corporation Bank, Dena Bank, United Bank of India, Punjab & Sind Bank and Bank of Maharashtra are on the way of implementing Basel III capital regulation and attained the level of CAR of 11%. These banks are working on new capital norms to meet the standard of 11.5%. The capital adequacy ratio of these banks is varying between 11% to 11.39%.

TABLE 1.8: DISTRIBUTION OF CAR IN PUBLIC-SECTOR BANKS

Banks CAR above 12% but below 13%	Banks CAR between 11%-12%	Banks CAR above 10.5% but below 11%	Banks CAR between 13%-14%	Banks CAR between 9%-10%
Andhra Bank	Allahabad Bank	Central Bank of India	State Bank of India	State Bank of Bikaner & Jaipur
Bank of Baroda	Corporation Bank	Indian Overseas Bank	Indian Bank	
Bank of India	Dena Bank	UCO Bank	Bhartiya Mahila Bank	
Canara Bank	Punjab National Bank	IDBI		
Oriental Bank of Commerce	Punjab & Sind Bank			
Syndicate Bank	Union Bank of India			
Vijaya Bank	United Bank of India			
State Bank of Patiala	State Bank of Hyderabad			
State Bank of Mysore	Bank of Maharashtra			
State Bank of Travancore				

Source: Compiled from the annual reports of the banks

As on March 2017, five banks such as Central Bank of India, UCO Bank, IDBI, Indian Overseas Bank and State Bank of Bikaner & Jaipur could not meet the prescribed norm of 11.5%. But these banks reflected the CAR of more than 10.5. The CAR of these banks varied between 10.5% to 10.95%.

The banks which are operating at the low level of CAR (less than 11.5%) are the nine nationalized banks namely Corporation Bank, Dena Bank, Punjab & Sind Bank, United Bank, Bank of Maharashtra, Central Bank, UCO Bank, IDBI and Indian Overseas Bank. Out of nine, five nationalized banks viz. Corporation Bank, Dena Bank, Punjab & Sind Bank, United Bank, Bank of Maharashtra are on the verge of attaining 11.5% CAR level as these banks have already maintained the CAR of more than 11% and remaining four banks as follows Central Bank, UCO Bank, IDBI and Indian Overseas Bank are facing only the difference of 1% in achieving the prescribed level of CAR. These banks need to focus on raising the required amount of fund to meet the new capital adequacy of 11.5%.

The present study found out that Indian public-sector banks have implemented Basel III capital regulations. The banks are highly well capitalized with reasonable level of capital. The public-sector banks in India have disclosed their capital ratio as specified under Basel III minimum

capital requirements. In 2017, on an average the present status of CAR of Indian public-sector banks are varying between 10.5% to 13.64%.

VI CONCLUSION & RECOMMENDATIONS

It is concluded that Indian public-sector banks are stronger and stable due to high CAR recorded by all banks. Indian public-sector banks are positively moving towards the implementation of Basel III norms. The capital norms stipulated under Basel III have been achieved by public-sector banks. Nowadays, liquidity standards, leverage requirements and other Basel III components are being implemented in banks. But, the entire process is revolving around the requirement of huge amount of capital. As far as capital adequacy ratio is concerned, Indian public-sector banks have complied with international capital regulations. Now, banks have hold capital adequacy ratio of 11.5% showing the strong capital base.

To conclude that Indian public-sector banks have achieved strong capital base and complied with international capital norms. The CAR of all public-sector banks is above 11% except few banks. Sixteen public-sector banks are highly well capitalized with reasonable amount of capital indicating the strength and stability of banks. These banks would not face any hindrance in enforcing all phases of Basel III standards. Higher CAR would enable the Indian public-sector banks to meet other elements of Basel III norms. Moreover, banks with adequate CAR can easily absorb the unexpected losses and shocks.

Recommendations

Basel III norms will benefit the Indian public-sector banks in number of ways. So, it is desirable for public-sector banks to become Basel III compliant because banks will enjoy high competitiveness in international market. An effective and proper implementation of international banking norms can be possible when banks have supportive environment, no financial pressure, improved asset quality and high profitability.

The study recommended that international regulations should be well balanced and comprehensive. The key elements of an effective regulation must be focused on the individual features of banks such as reducing the chance of bankruptcy and all elements are necessary that should be enforced uniformly over the world. The study concluded that for effective implementation of Basel Accord, the proper coordination is necessary at international level which would enhance the productivity and profitability of banks all over the world.

It is recommended that Indian public-sector banks should build a strong technological infrastructure so that data quality and availability can be upgraded. In the same way, the regulators need to provide the financial and technical supports to banks for effective compliance of Basel III and regulators should develop continuous monitoring mechanism for banking activities.

VII PRACTICAL IMPLICATIONS

This research would assist the bankers to identify the financial strength and capital base of their banks which would help the government in decision making related to merger of public-sector banks, capitalizations of banks and reducing the government's stake in banks. To recapitalize the Indian public-sector banks, the government will have to identify those banks which have weak capital profile, low profitability and banks on the verge of bankruptcy. In this regard,

findings of this study can assist the government to identify those banks which require special attention. Moreover, the present study is anticipated to furnish the effective framework to regulators while formulating various policies, making structural changes in banks and implementing the international banking norms properly..

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