

RISK MANAGEMENT IN BANKS: A SAFEGUARD TO INNOVATIVE BANKING

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Abstract

Risk is natural and expected in every walk of life, be it is the personal life or the industry. The Basel Committee on Banking Supervision (BCBS) took initiative to strengthen the soundness and stability of banks all over the world by introducing Basel norms. Over the years, Basel I and Basel II framework became outdated, due to their risk confined coverage. Financial Crisis 2008–2009 insisted BCBS to plug the regulatory loopholes of Basel II Accord and bring in Basel III regulations characterised by micro and macro prudential outlays. Indian banks have been adopting Basel III norms since 2014 under the mentorship and proactive guidelines of RBI. Therefore, the present study discusses the changing paradigms of banking in India and the need of risk management—which acts as a shield to innovative banking. Capital adequacy ratio (CAR) as a tool of risk management has also been assessed for the selected five large public sector banks during the (Basel III) period 2013–14 to 2015–16. The results indicate that all the banks are maintaining CAR above the prescribed level by RBI. Bank of Baroda and State Bank of India witness higher CAR having more shock absorbing capacity than Canara Bank and Punjab National Bank.

Keywords: Innovative Banking, Risk Management, Capital Adequacy Ratio, Public Sector Banks.

1. Introduction

The Indian banking industry has experienced a complete transformation since the advent of liberalisation, privatisation and globalisation (LPG) wave in 1991. Reserve Bank of India (RBI) has always been proactive, hence issued guidelines from time to time for delicensing of banks, their on-site supervision and move towards risk based supervision of banks. Apart from this, RBI has set up benchmarks for Basel norms as per recommendations of Basel Committee on Banking Supervision's (BCBS) recommendations. The contemporary developments in banking evidence paradigms of banking in India, which have totally revolutionized, as discussed forward.

1.1 Changing Paradigms in Banking

1.1.1 **Rising Demand:** Last two decades has witnessed the rise of Indian consumerism by accelerating the demands for homes, consumer goods, financial services, etc. These in turn have droned economic activity and upward migration of incomes, creating a virtuous cycle of growth (Kamath, 2012).

1.1.2 **Financial Inclusion:** Recently, the focus on financial inclusion has been magnified, which is the affair of ensuring access to financial services and timely credit, where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost.

1.1.3 **Innovations in Banks:** Banks in India have evidenced a radical change from 'Conventional Banking to Convenience Banking'. The journey of digital Indian banking started in 1988, when RBI set up a committee on computerisation in banks headed by Dr. C. Rangarajan. Core Banking Solutions (CBS) enabled banks to increase the comfort feature to the customers as a promising step towards enhancing customer convenience through 'Anywhere and Anytime Banking'.

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Online banking has changed the face of Indian banking and brought a noteworthy transformation in the banking operations. According to the RBI's report in 2016–17 there are 2, 22,475 Automated Teller Machines (ATMs) and 25, 29,141 Point of Sale Devices (POS). Implementation of electronic payment system such as NEFT (National Electronic Fund Transfer), ECS (Electronic Clearing System), RTGS (Real Time Gross Settlement), Cheque Truncation System, Mobile Banking System, Prepaid Cards have all gained wide acceptance in Indian Banks. These are all remarkable landmarks in the digital revolution in the banking sector (Weschool, 2017).

1.2 **Risk Management in Banks: A Safeguard to Innovative Banking**

Increasing global competition, rising deregulation, introduction of innovative financial products, delivery channels and frauds in banking business have pushed risk management to the forefront of today's challenges. Thus, a proper risk management structure is required now a days. Risk taking is an inherent part of the banking business, although, all over the world, banks have been practicing risk management ever since they have existed. But the contemporary requirement of risk management is a degree of sophistication to reflect the more complex and changing environment. Asian Financial Crisis of 1997 has illustrated that ignoring basic risk management can also contribute to economy-wide fluctuations.

Financial crisis of 2007–2008 has highlighted the need for greater risk management in all the areas of banking functions. Banks in the process of financial intermediation are confronted with various kinds of financial and non-financial risks, viz. Credit, Market, Liquidity, Interest Rate, Foreign Exchange Rate, Commodity Price, Legal, Regulatory, Reputational and Operational risks, etc. The RBI was conscious of the ever increasing dimensions of various risks faced by the banking system in India and have been initiating steps in direction of risk management.

1.2.1 **Capital Adequacy as a Tool of Risk Management:** Since the initiation of Basel Norms in 1988, capital adequacy ratio has turned out to be crucial parameter to assess the financial soundness and strength of banks. The capital adequacy requirement and risk constraints were pointed out by Narasimham Committee on Financial Sector Reforms (1991) which proposed the concept of risk management in India through devising necessary prudential norms by RBI. The Basel I Capital Accord in 1988 focused on reducing credit risk, prescribing a minimum capital to risk adjusted ratio (CRAR) of 8% to the risk weighted assets. Reserve Bank of India has always taken a conservative view and set up capital adequacy standards more than international standards.

Basel Committee on Banking Supervision (BCBS) during Basel II Accord in 2004 emphasized on 8% of CAR of risk weighted assets but RBI has set a standard of maintaining 9% CRAR in comparison to minimum 8% CRAR for Indian banks. Basel III also walked upon the same lines, in contrast to Basel II the minimum capital requirement has been unchanged i.e. 9% of Risk Weighted Assets but capital conservation buffer of 2.5% of risk weighted assets over and above the minimum capital requirement has been introduced in the phases. Basel III capital regulations has been initiated in India from April 1, 2013 in phases and will be fully implemented as on March 31, 2018 further extended March 31, 2019 (Arora and Kaur, 2017).

Capital Adequacy Ratio is arrived at by dividing the sum of Tier I and Tier II capital by aggregate of Risk Weighted Assets (RWA) symbolically.

$$\text{CAR/CRAR} = \frac{\text{Capital Funds (Tier 1 Capital + Tier 2 Capital)}}{\text{RWA}} \times 100$$

• **Tier-1 Capital:-**

Tier-1 capital (core capital) is the most reliable form of capital. The major components of Tier-1 capital are—paid up equity share capital and disclosed reserves viz. statutory reserves, general reserves, capital reserves (other than revaluation reserves) and any other type of instrument notified, by the RBI as and when for inclusion in Tier-1 capital, examples of Tier-1 capital are common stock,

preferred stock that is irredeemable and non cumulative, and retained earnings (Pasha and Swamy, 2012).

• **Tier-2 Capital:-**

Tier-2 capital (supplementary capital) consists many of undisclosed reserves, revaluation reserves, general provisions, subordinated debt, and hybrid instruments. This capital is less permanent in nature. The reason for holding capital is that it should provide protection against unexpected losses. This is different from expected losses for which provisions are made (Pasha and Swami, 2012).

§ **Risk Weighted Assets:-**

Funded Risk Assets i.e., On Balance Sheet items and Non – Funded Risk Assets, i.e., Off Balance Sheet items are ranked from less risky to more risky categories. Bank of International Settlements (BIS) has prescribed five categories of risk weights viz., 0,10,20,50,100. The higher the risk, greater is the weightage. Funded Risk Assets are those appearing in the balance sheet excluding equity investments in subsidiaries and intangible assets and losses. Non-funded are contingent liabilities viz. guarantees, letters of credit, forward exchange contract, etc. (Nathwani, 2004).

The present study probes the deeper insights in changed Indian banking scenario and need of risk management in banks. Besides it, capital adequacy ratio of selected public sector banks is assessed for Basel III period, viz. 2013–14 to 2015–16, which is an important tool of risk management.

2. **Review of Literature**

- Avasthi (2001) in his study observed that technology advancements are set to change the face of banking business. In retail banking, technology has transformed delivery channels. He also discussed the challenges that banking industry and its regulators are facing.
- Rekha and Kumar (2005) in their case study examined credit risk management practices, non-performing assets and risk based supervision in the light of Basel norms between public and private sector banks for the period 1994–2003. They explained that 70% of the risk is from credit risk, the remaining 30% is from market risk and operational risk. They recommended that better portfolio equilibrium, establishing risk management information system, redesigning the internal rating system and early warning signals can be better management methods for handling risks.
- Makesh (2008) in his research paper discussed the financial management practices of Federal Bank and Dhanalakshmi Bank, along with SBI, for the financial year 2006–2007. He evaluated that all the three banks maintained capital in excess of stipulated norms of the RBI. Federal Bank had the lowest NPA ratio to net advances and had the maximum return on equity. Dhanalakshmi Bank maintained a very high liquidity. But Federal Bank performed well in cost management, as compared to the SBI and Dhanalakshmi Bank.
- Singh and Vyas (2009) in their research paper given the importance to one of the banking regulations i.e. capital to risk weighted asset ratio (CRAR). They attempted to analyse the capital to risk weighted assets ratio for public, private and foreign banks for the period 1996–1997 to 2006–07. They described that in India, the average CRAR of foreign banks group operating in India is the highest during the period of the study.
- Thorat (2010) in her opening remarks in speech on risk management pointed out that risk is inherent in banking as banks essentially trade in risk in the process of maturity transformation. She has pointed out some critical issues relevant to risk management policies such as choice of business models, need of intuitive approach to risk, pricing of risk, importance of internal records, corporate governance and robust stress testing. She concluded that Indian banking system which has shown resilience in withstanding the global crisis is well placed to meet the requirement of the rapid inclusive growth.

- Jagirdar (2012) in her article described the role of banking and financial sector in Indian economy. She pointed out various opportunities in the banking sector in the forthcoming years such as demand of wealth management services, expectation of two fold increase in bank branches and increase in number of ATMs. She also made an attempt to discover the various challenges in the banking sector like asset quality, recovery management, financial inclusion, sustainable banking, regulatory reforms, compliance and the most vital is risk management, which has emerged on the horizon and its management requires skills of higher order.
- Kamath (2012) in his speech regarding changing paradigms in Indian banking discussed the evolution of the Indian economy and banking sector in recent years, and the opportunities and challenges that lie ahead, with a special focus on the role of technology in banking. He suggested that Indian banks should focus on human resource need, should continue to innovate, seize the opportunities that a rapidly transforming country provides and most importantly be a fundamental force in driving inclusive development of the nation.
- Aspal and Nazneen (2014) in their empirical analysis of capital adequacy in the Indian private sector banks investigated the determinants of capital adequacy ratio in Indian private sector banks. They examined whether specific bank performance factors particularly loan, asset quality, management efficiency; liquidity and sensitivity have an impact on capital adequacy requirements among private sector banks of India. The study period is 2008–2012 and multiple regression analysis is applied to explain the effect of explanatory variables. They revealed with the help of regression analysis that loans, management efficiency, liquidity and sensitivity have statistically significant influence on the capital adequacy of Indian private sector banks. They also concluded that private banks of India have excessive funds to meet their obligation and have opportunity to give more advances to public by protecting owner's stake.
- Anbalagan (2015) in his theoretical study highlighted the new technological changes in Indian banking sector such as ATMs, EPS, RTGS, risk management, e-learning and corporate banking. He concluded that banking system has improved manifolds in terms of products, services, technology, trading facility, etc.
- Shakdwipee and Mehta (2017) in their article regarding impact of Basel III on Indian banks have theoretically explained the Basel III framework in detail. They found the considerable uncertainty about the exact magnitude of the effect, but suggested on the basis of evidences that enhanced capital and liquidity requirements can significantly reduce the possibility of crisis. They explored that stringent capital regulations can result in positive long run effect on GDP growth, but there can be reduction in lending. They analysed that more capital will be needed from the government, over and above the Indradhanush reform, to restore market confidence in PSBs, which will have a negative effect on ROE. They realised that Public Sector Banks urgently need to improve their systems of risk management and skill development of the officials to achieve Basel III Norms.

3. Objectives of the study

Following are the objectives of the study.

- To discuss the changing paradigms of banking in India and need of risk management in banks.
- To assess the Capital Adequacy Ratio of selected Public Sector Banks in the light of Basel norms in India.

4. Research Methodology

The research works is analytical in nature as it is based on secondary data only. A major portion of data is extracted from Statistical Tables relating to Banks in India—RBI Publications and Annual Reports of respective banks. The study is conducted over a period of three years of Basel III regime, i.e. from 2013–2014 to 2015–2016. For the purpose of study five public sector banks which

are chosen on the basis of five year average of gross assets ranging from 2007–2008 to 2011–2012 have been considered. The selected public sector banks are - State Bank of India (SBI), Punjab National Bank (PNB), Bank of Baroda (BOB), Bank of India (BOI) and Canara Bank. Capital adequacy ratio is evaluated statistically by Mean, Standard Deviation (SD) and Compound Annual Growth Rate (CAGR).

5. Results and Discussion

The perusal of Table 1 exhibits Capital Adequacy Ratios (CAR) of selected public sector banks under Basel III for the period 2013–2014 to 2015–2016. It is found that public sector banks over the years under study hold the sufficient amount of capital under Basel III scenario recommended by RBI, viz. 9% and the Tier-1 capital, which is the core capital, is also above the prescribed level of 6%. The underneath results are discussed year-wise and bank-wise.

Table 1: Trends in Component-wise Capital Adequacy Ratios (CAR) of Selected Public Sector Banks under Basel III for the period 2014 to 2016 (in %)

Year	Capital Adequacy Ratios Banks	SBI	BOB	BOI	PNB	Canara Bank
2014	Tier-1 Capital	9.72	9.28	7.24	8.87	7.68
	Tier-2 Capital	2.72	3.00	2.73	2.65	2.95
	CAR	12.44	12.28	9.97	11.52	10.63
2015	Tier-1 Capital	9.60	9.87	8.17	9.30	8.02
	Tier-2 Capital	2.40	2.74	2.56	2.91	2.54
	CAR	12.00	12.61	10.73	12.21	10.56
2016	Tier-1 Capital	9.92	10.79	9.03	8.41	8.80
	Tier-2 Capital	3.20	2.39	2.98	2.87	2.28
	CAR	13.12	13.18	12.01	11.28	11.08
Mean		12.52	12.69	10.90	11.67	10.76
SD		0.56	0.46	1.03	0.48	0.28
CAGR		1.79%	2.39%	6.40%	-0.70%	1.39%

Source: Statistical Tables relating to Banks in India—RBI Publications and Annual Reports of respective banks from their web-sites for the period 2014 to 2016.

Note: (i) CAR stands for Capital Adequacy Ratio.

(ii) SD stands for Standard Deviation and CAGR stands for Compound Annual Growth Rate.

Capital adequacy ratio (CAR) in the year 2014 is the highest in case of SBI (12.44%), followed by BOB (12.28%), PNB (11.52%), Canara Bank (10.63%) and the lowest in BOI (9.97%). Tier-1 capital is also depicting the same trend of CAR in the year 2014. BOB (12.61%) has the largest CAR in the year 2015, obeyed by PNB (12.21%), SBI (12.00%), BOI (10.73%) and lastly by Canara Bank (10.56%). Year 2015 shows that Tier-1 capital is the highest in case of BOB, followed by SBI, PNB, BOI, and Canara Bank above the benchmark of 6%. In the year 2016, CAR for every bank has increased except PNB, the highest ratio is for BOB (13.18%), followed by SBI (13.12%), BOI (12.01%), PNB (11.28%) and the lowest for Canara Bank, viz. 11.08%. In the same year there is little variation in maintenance of Tier-1 capital ratio. BOB holds the maximum Tier-1 ratio, while SBI, BOI, Canara Bank and PNB are the followers.

Bank-wise analysis shows that among Public Sector Banks, BOB (12.69%) has the highest

average capital adequacy ratio, followed by SBI (12.52%), PNB (11.67%), BOI (10.90%) and Canara Bank (10.76%). BOI (1.03) has the highest variation from Mean, whereas Canara Bank (0.28) has the least variability from the mean value. Compound Annual Growth Rate of BOI (6.40%) is the highest, followed by BOB (2.39%), SBI (1.79%), Canara Bank (1.39%) and PNB (-0.70%). The negative growth rate in PNB during Basel III period has resulted in declining trend. Public Sector Banks are strictly following Basel guidelines and maintaining the capital adequacy ratios as per enhanced capital requirements of Basel III, which includes extra buffer i.e., capital conservation buffer of 0.625% to make banks more risk prone, in their capital adequacy ratio of risk weighted assets (RWAs) in the year 2016.

Thus, Bank-wise analysis examines that BOB and SBI in public sector banks are the high performer banks in terms of CRAR, whereas Canara Bank is the least performer bank in Public Sector Banks. It is found that all the selected public sector banks are maintaining their capital adequacy ratio comfortably in Basel III time period above the mandatory level recommended by RBI. Canara Bank and BOI must try to maintain the CAR at par with other large banks as capital adequacy ratio aids to more tractability towards forthcoming risks.

6. Conclusion

Banking sector in India is the well-known eyewitness of the prodigious growth of Indian financial system in terms of size, volatility, satisfaction and complexity. Banks now consist of multiple innovative products, customer groups and concentrate on non-fund based activities. In this study, the changing paradigms of banking in India and requirement of risk management has been explored. Besides it, capital adequacy ratio—which is the significant tool of managing risks in banks has been assessed for five large public sector banks (PSBs) during the period 2013–14 to 2015–2016 (Basel III).

The results indicate that all the five banks are depicting increasing trend of CAR during the study period. These banks are adequately maintaining the CAR level prescribed by RBI, viz. 9%. BOB and SBI are the top performer banks, while Canara Bank and PNB are the least performers in terms of CRAR. It is concluded that public sector banks have sufficient funds against unforeseen risks and ample of resilience towards the uncontrollable factors. Thus, it is suggested that PSBs should reduce its non-performing assets or bad loans from their books of accounts, as bad asset quality put pressure on banks to maintain CAR and also depletes profitability in banks. Therefore, efficient management of credit risk is the key to increase returns in banks.

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