

REGULATION OF BANKING SECTOR THROUGH BASEL NORMS- A COMPLIANCE ANALYSIS

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ABSTRACT

Banks play an important role in the development of a country. A financial crisis in 2008 led policymakers to think about regulation of banking system and adopt policies to reduce the level of risk in the sector. BASEL committee on banking supervision was formed as a primary global standard setter for the prudential regulation of banks. This committee laid its first regulatory norms in the year 1988 termed as BASEL accord, which is a set of three regulations (Basel -1,2 and 3). This paper is an attempt to measure the level of compliance of BASEL norms in India. Top 10 banks according to market capitalization and profitability are taken as sample and the extent to which the banks complied with BASEL norms is studied.

Research limitation and implications-This research have considered only quantitative information for understanding the compliance of BASEL in Indian Banks and qualitative aspects like process and systems in banking is not taken into consideration. This research will help in understanding the level of Compliance and result development of suitable guidelines.

KEYWORDS: *Capital Adequacy, BASEL Compliance, Liquidity Ratio, Banking Risks*

INTRODUCTION

A sound financial system is of significance importance for the economic development of a country. Banking systems and institutions hold primary position in the financial system of a nation and an intrinsic element for development of market economies (Rajan and Zingales, 1998; Levine, 2005) Financial institutions are bestowed to carry forward the responsibility of acting as mediators between surplus and deficit units in the economy thus, making their role as mediators of critical significance for efficient allocation of resources in the new economy (El-Hawary et al., 2007). An unmatched number for errors in the bank's regulatory system resulting in bank failures across the world in the past has brought in focused attention to the need of determining appropriate ways to enhance the stability and better performance of the financial systems. These failure necessitated reforms to eliminate or at least reduce banking risk and ensure stability in the financial service sectors.

Researchers examined financial crisis experienced around the world in past such as Savings and Loan crisis in 1987, Japan Property Bubble Crisis (1989) in 1997 the Asian Financial crisis, Russian financial crisis in 1998,

Dot Com crash (2001), Global Financial Crisis(2007) and the is the Eurozone crisis (2009) which has necessitated the improvement of regulatory rules in the banking sector. A financial crisis of 2008 brought to the foray inefficiency of the financial regulatory norms which failed to protect the system from the failures numerous times in the history. Banking systems in any economy are built on confidence and trust and are also important for economic growth as it administers the funds supply to various sectors in an economy (Mejbel Al-Saidi, Bader Al-Shammari, 2013).

Post financial US crisis in 2008 proved that sturdiness of financial institutions is of vital importance. IMF (2008) anticipated a total loss of \$945 billion globally and the write-offs assessed by the World Bank stand at \$274 billion in a followed by the credit crunch. Leveraged loans and mortgages assessed to reach \$1 Trillion as the outcome of the subprime crisis (Kollewe, 2008). Stability of the entire economy got affected by a crumple of the few financial Institutions leading to the mandatory application of robust risk management systems (BNM, 2008; Blunden, 2005).

The components which were found essential to regulate the banking sector through the regulatory norm range from Limiting the size of the bank to the payment of bank managers and Imposing the financial transaction Tax and creating a version of FDA for Prior Approval of Financial Products. The proposed reforms differ in some of the important aspects but most those proposed changes in the existing financial regulations and supervisory standards. (Ofoeda et al., 2012; Barth et al., 2004; Hosono et al., 2004, Holmstrom and Tirole, 1997).

Compulsory Capital Regulation though effective in improving the banking sectors Capital Buffer but may contain uncertain impact on risk levels (Blum, 1999). Banks may take higher risks in response to capital regulation (Kim and Santomero, 1988). In some countries impacts from Market Discipline may outweigh government regulation (Barrios and Blanco, 2003)

Customers and other external stakeholders might implicitly punish banks for Prudential risk management techniques by demanding higher investment returns or withdrawing deposits. So far there is no clear indication as to which is a better financial safety net to impact the bank's capital and risks. (Flannery and Rangan, 2008).

The financial crisis in 2008 negatively affected most of the countries in the world as they were connected by the US because of the size of the financial system and interconnectedness with other countries. The impact on global financial and real economies induced the debate about improving financial system stability and prevention of excessive risk in the banking industry. The consequence of the global financial crisis highlighted the need to develop an improved understanding of the factors that affect risks at banks in order to prevent future such instances (Katina Gregory, Gerhard Hambusch, 2015).

The research undertaking to assess and eliminate factors of risk in the banks by and large explored the relationship between single factors (Keeley, 1990; Blum, 1999; Faccio et al., 2006) and there is very less research done to know the combination of multiple risk-enhancing factors for example its evident from the research that the introduction to minimum capital requirements reduce risk (Arnold et al., 2012; Berger & Bouwman, 2013) and complying with capital requirements can lead towards banks reduced market share effectively resulting in reduction in the franchise value (Frame and White, 2007). Some authors also identified that a reduction in franchise value can result in increased risk (Keeley, 1990; Konishi and Yasuda, 2004).

Market risk, Credit risk, and Operational Risk are some of the important risks financial institutions usually face (Eccles et al., 2001) indicating that risk management practices are inevitable and one of the most important forms of risk is the management of credit risk particularly for banks and other financial institutions. Increase in the type of counterparties ranging from individual & governments and the ever-increasing variety in the forms of obligations from Auto loans to complex derivatives transactions suggest that credit risk management plays an important role in the overall risk management activities carried out by firms in the financial service industry (Fatemi and Fooladi, 2006).

Efforts to reduce possibilities of further financial crisis across the world economy has forced to improve regulatory norms and brought forward BASEL Accords I (1998)II (2004) and III (2010) (Lei Xu, Shih-Cheng Lee, Yishu Fu,2015). The latest and rigorous BASEL-III reinforces buffer capital requirement along with extended risk-weighted capital regulation and market discipline to support the improvement and stability of financial systems like 2 sided safety mechanisms (Kane, 2000, Demircuc-Kunt and Huizinga, 2004).

Acknowledging this reality and the need for a comprehensive approach to deal with bank risk management, the Basel Committee on Banking Supervision adopted the Basel I Accords, followed by the Basel II Accords and recently by the Basel III, to deal with the matter. Moreover, risk management is found to be one of the determinants of returns of banks' stocks,

The Basel II (1999) Committee agrees, emphasizing that Effective risk management is accepted as a major cornerstone of bank management by academics, practitioners, and regulators.

Basel III was the rule book formulated as a repercussion of the subprime crisis in the year 2007-2009(BCBS, 2009a).Basel III insisted upon taking a number of measures to reinforce the resilience of the banking sector. A crash of Lehman Brothers kicked off bursting the subprime crisis bubble which is the tragic reminder of the past leading to the formulation of new banking rules and revisited customer-bank relationship. This new rulebook devised the aftermath of the 2008 financial crisis includes several measures to strengthen the resilience of the banking sector. Efforts were put into designing new capital requirements that would provide banks sufficient reserves to withstand any financial crisis in the future. It's found that most of the losses suffered by financial institutions in the recent upheaval stemmed from their securities portfolios. New capital adequacy framework has insisted emphasis on regulation of trading book risks, specifically market risk and in normal and stressed condition liquidity and credit risks.

REVIEW OF THE LITERATURE

In the context of the structural existence of nationalized banks, academic studies on the performance play an important role. Research in banking in India is at a very nascent stage in India and most of the research conducted is related to institutional functional and developmental activities. Research on the risk and risk management in the banks is very negligible. In the book perspectives of Banking Karakal (1977) author analyzed the difficulties and problems faced by banks especially public-sector banks in India. The author analyzed the scenario in a changed economic environment where post 34 years of independence reforms in the banking sector were initiated (Montek S 2002). Banking sector comprising of both retail and commercial banking is facing severe competition during the reform period thus banking sector needs constant innovation in the banking sector and therefore needs product development, differentiation customization up gradation in terms of technology, effective risk management and techniques to manage asset and liability. (Sharma 2015). BASEL norms were the beginning of the regulatory regime to help banks in reducing risk and improving performance.

Most of the articles reviewed presented a content analysis pertaining to BASEL norms. This paper is an attempt to quantitatively present compliance of top 10 banks in India for the better understanding of the BASEL norms and the level complied.

Need for the Study

Banking sector needs mechanism and systems to identify credit risk so as to reduce the uncertainties and risks of lending. Banks need to comply with BASEL norms in order to reduce the risks and uncertainties this study is an attempt to examine the level of compliance of Basel norms by top 10 Indian banks.

OBJECTIVE OF THE STUDY

This study is an attempt to examine the level of compliance of Basel norms by the sample banks.

METHODOLOGY

This is an analytical study intended to examine the level of compliance of BASEL-III norms amongst the top 10 in India which are selected based on market capitalization and net profit. Financial data to study the compliance of BASEL is collected from the websites of the respective banks. Latest available data on the websites is considered to understand the levels of BASEL. Some banks provided 2017 data while some banks also updated 2018 data in the websites based on the latest data available 2017 data is used for the banks which did not update 2018. Ratios and Percentages are used in comparison with the given BASEL-III norm to examine the compliance level of the banks.

List of Sample Banks Taken for the Study

- HDFC Bank
- State Bank of India
- ICICI Bank
- Kotak Mahindra Bank
- Axis Bank
- IndusInd Bank
- Yes Bank
- Bank of Baroda
- Punjab National Bank
- Canara Bank

Basel Committee on Banking Supervision

The central bank of G-10 countries in the year 1974 incorporated a committee “*BSEL committee on banking supervision*” came under the patronage of the bank for international settlements (BIS), Basel Switzerland. This committee was established to formulate guidelines and recommendations on banking regulation based on capital risk market risk and

operational risk. Chaotic liquidation of Herstatt Bank in Cologne, Germany (1974) illustrated the presence of settlement risk in international finance and resulted in the formation of this committee.

Sudden failure of the Bretton Woods system in 1973 resulted in the occurrence of casualties such as withdrawal of banking license Bankhaus Herstatt in Germany in 1974 and closure of Franklin national bank in New York and other similar disruptions. Governors of Central banks of G 10 countries took initiative to establish a committee on banking regulations and supervisory practices in order to address risk in financial sector named later as BASEL Committee formed to develop norms for banking supervision. This committee acts as a forum to invite regular cooperation between member countries with respect to banking regulations and supervisory practices. This committee was established to improve supervisory know how and banking supervision quality worldwide. There are 27-member-countries in the committee worldwide since 2009. Member countries in this committee are represented by their central bank and the authority of the prudential supervision of banking business. Besides banking regulation, this committee also focuses on closing the GAP in international supervisory coverage.

Introduction to BASEL

The first set of BASEL Accords was issued in 1988 known as BASEL 1 which primarily focused on credit risk. This accord proposed the creation of a banking asset classification system on the basis of the inherent risk of the asset.

The first set of the Basel Accords, known as Basel I, was issued in 1988 with the primary focus on credit risk. It proposed the creation of a banking asset classification system on the basis of the inherent risk of the asset. Basel II, the second set of the Basel Accords, was published in June 2004 – in order to control misuse of the Basel I, norms, most notably through regulatory arbitrage. The Basel II norms were intended to create a uniform international standard on the amount of capital that banks need to guard themselves against financial and operational risks. This again would be achieved by maintaining adequate capital proportional to the risk the bank exposes itself to (through its lending and investment practices). It also laid increased focus on disclosure requirements. The third installment of the Basel Accords (Basel III) was introduced in response to the global financial crisis, is scheduled to be implemented by 2018. It calls for the greater strengthening of capital requirements, bank liquidity and bank leverage. However, critics argue that these norms may further hamper the stability of the financial system by providing higher incentive to circumvent the regulations. The Indian banking system has remained largely unscathed in the global financial crisis. This is mainly amongst others, on account of the relatively robust capitalization of Indian banks. The Reserve Bank of India (RBI) had scheduled the start date for implementation of Basel III norms over a 6-year period starting April 2013. The recent requirement of infusion of additional equity in view of the low economic growth and increasing non-performing assets of Indian banks paint a gloomy picture.

BASEL-I (1988)

Basel-I primarily focused on the credit risk of banks divided into a four-pillar framework as follows-

- Constituents of capital
- Risk weighing system
- Target standard ratio

- Transitional and implementation arrangement

BASEL Committee on Bank Supervision (BCBS) put forth a set of international Banking regulation termed as BSEL-I. This committee sets out the minimum capital requirements of financial institutions intending to minimize credit risk. Banks that operate internally are required to maintain a capital of 8% based on risk-weighted assets. Basel 1 is the first set of regulations introduced by this regulatory body.

Basel 1 classification system groups banks assets into five risk categories classified as percentages 0%, 10%, 20%, 50% and 100% and a bank's assets are placed into one of the categories based on the nature of the debtor.

PILLAR-1 Constituents of Capital

Tier -1 Capital: Paid up share capital /Common stock and disclosed reserves

Tier-2 Capital: Designated as supplementary capital and is composed of items such as revaluation reserves, undisclosed reserves, hybrid instruments and subordinated term debts

Bank Asset Classification System

Table 1

Percentage Classification	Type of Debt
0%	Cash, Central Bank, Government debt and any other organization for economic Cooperation and development.
20%	Public sector debt category depending on the debtor. Development bank debt, OECD bank debt, OECD securities, form debt non-OECS bank debt (under one year of maturity) Non-OECD public sector debt and cash in collection.
50%	Residential mortgages
100%	Private sector debt non-OECD bank Debt (Maturity over a year), Real estate Plant and equipment and capital instruments issued at other banks

The bank must maintain Tier 1 and tier 2 capital equal to 8% of its risk-weighted assets if a bank has risk-weighted assets of \$ 100 million its required to maintain the capital of at least 8 Million to be implemented by the end of 1992.

Implementation

Basel norm did not have legal enforceability and members were responsible for implementation in their home countries. Prime risk regulatory norm in Basel-I is the capital ratio of capital to risk-weighted assets.G10 countries claimed that they were meeting the minimum requirements set out in Basel-I.

BASEL-II

Basel, I norms was revised in June 2004 and new norms i.e.BASEL-II norms were laid by the committee. BASEL Committee revised standards governing the capital adequacy of internationally active banks.

BASEL-II expanded the rules for minimum capital requirements established under BASEL-I and incorporated the credit risk of assets held by financial institutions to determine regulatory capital ratios standing on three pillars as presented in the table below.

Basel II is based on three main pillars i.e. Minimum capital requirements, regulatory supervision and market discipline. Minimum capital requirements play an important role in this updated regulatory accord and obligate banks to maintain minimum capital ratios of regulatory capital over risk-weighted assets. BASEL norms were an effort to provide and standardize banking regulations which significantly varied.

Table 2

PILLAR-I	PILLAR –II	PILLAR-III
Minimum capital requirements	Supervisory review process	Market Discipline
Establishes minimum standards for management of capital on a more risk-sensitive basis listed below I. Credit Risk II. Operational Risk III. Market Risk	Increases the responsibilities and levels of discretion for supervisory reviews and controls covering the following. IV. Evaluate banks capital adequacy strategies V. Certify internal models level of capital charge VI. Proactive monitoring of capital levels and ensuring remedial action	Bank will be required to increase their information disclosure especially on the measurement of the credit and operational risks Expands the content and improves the transparency of financial disclosures to the market

Because banking regulations significantly varied among countries before the introduction of Basel accords, a unified framework of Basel I and, subsequently, Basel II helped countries alleviate anxiety over regulatory competitiveness and drastically different national capital.

Minimum Capital Requirements-Guidelines provided by BASEL-II for calculation of minimum regulatory capital ratios and confirms the definition of regulatory capital and 8% minimum coefficient for regulatory capital over risk-weighted assets. Basel –II divides the eligible regulatory capital into 3 tiers. The higher the tier the less subordinated securities a bank are allowed to include in it. Each tier must be of the certain minimum percentage of the total regulatory capital and is used as a numerator in the calculation of regulatory capital ratios as mentioned in the table below.

Table 3: Three Pillars Dimension of BASEL-II

Tier-1 Capital	Tier-II Capital	Tier-III
most strict definition of regulatory capital that is subordinate to all other capital instruments, and includes shareholders' equity, disclosed reserves, retained earnings and certain innovative capital instruments	Tier 2 is Tier 1 instruments plus various other bank reserves, hybrid instruments, and medium- and long-term subordinated loans	Tier 2 plus short-term subordinated loans.

Definition of risk-weighted assets as per Basel –II=Sum of Assets *Respective weights

Risk weights are allotted as per the risk factor of the assets i.e. High weight age is given to high-risk assets. Risk -weighted asset is intended to punish the banks for holding high-risk assets which significantly increases risk-weighted assets and lowers regulatory capital ratios.

Basel-III

Basel –III is a part of the continuous effort to enhance the banking regulatory framework. It builds on the Basel-I and Basel-II documents and seeks to improve the banking sector's ability to deal with financial stress, improve risk

management, and strengthen the bank's transparency. A focus of Basel III is to foster greater resilience at the individual bank level in order to reduce the risk of system-wide shocks.

BASEL-III COMPLIANCE OF TOP 10 BANKS IN INDIA

Table 4: Component-Wise Capital ADEQUACY of Top Ten Selected Banks India (In Percentage)

Banks	HDFC (%)	SBI (%)	ICICI (%)	Kotak Mahindra(%)	AXIS (%)
CAPITAL FUNDS	14.82	12.60	18.42	16.8	16.57
Common equity TIER I(CET I)	12.25	9.68	14.43	15.9	11.68
TIER I Capital	13.25	10.36	15.92	15.9	13.04
Banks	Indus Ind	YES	Bank of Baroda	PNB	Canara
CAPITAL FUNDS	15.31	17.0	12.24	11.66	12.86
Common equity TIER I(CET I)	14.02	11.4	8.98	7.87	8.92
TIER I Capital	14.72	13.3	9.93	8.91	9.77

Table 4 above comprises capital adequacy of the sampled Top Banks operating in India. As per the BASEL III requirement, the Banks have to maintain a minimum capital adequacy of 8%. &6% CET I. It can be clearly seen from the above tables that all banks are well above the minimum limit relating to total capital, CET I and TIER I Capital. It is also found that the private sector banks have higher ratios than the public-sector banks. This may be because of the fact that public sector banks are backed by the Indian Government while private sector banks are self-dependent.

Table 5: Calibration of Capital Framework in BASEL-III

Capital Requirement/buffer	Common Equity Tier1 (%)	TIER 1 Capital (%)	Total Capital(%)
Minimum	4.5	6.0	8.0
Conservation Buffer	2.5		
Minimum+ Conservation Buffer	7.0	8.5	10.5
Countercyclical Buffer Range	0.25		

Table 5 above gives the Capital Framework in BASEL III to be followed by Banks and table 5 below presents the compliance report of BASEL-III

Table 6: Compliance of BASEL-III Capital Framework by the Top Banks in India

Banks	HDFC			SBI			ICICI		
Capital Requirement/Buffer	CET 1	Tier 1 Capital	Total Capital	CET 1	Tier 1 Capital	Total Capital	CET 1	Tier 1 Capital	Total Capital
Minimum	12.25	13.25	14.82	9.68	10.36	12.6	14.43	15.92	18.42
Conservation Buffer	1.875			1.875			1.875		
Minimum + Conservation Buffer	14.125	15.125	16.695	11.555	12.235	14.475	16.035	17.795	20.295
Countercyclical Buffer Range	0.0			0.00			0.0		
Banks	Kotak Mahindra			AXIS			IndusInd		
Capital Requirement/Buffer	CET 1	Tier 1 Capital	Total Capital	CET 1	Tier 1 Capital	Total Capital	CET 1	Tier 1 Capital	Total Capital

Minimum	15.9	15.9	16.8	11.68	13.04	16.57	14.02	14.72	15.31
Conservation Buffer	1.25			1.88			1.250		
Minimum + Conservation Buffer	17.15	17.15	18.05	13.56	14.92	18.45	15.250	15.970	16.560
Countercyclical Buffer Range	0.0						0.00		

Table 7: Compliance of BASEL-III Capital Framework by the Top Banks in India

Banks	YES			Bank of Baroda		
Capital Requirement/Buffer	CET 1	Tier 1 Capital	Total Capital	CET 1	Tier 1 Capital	Total Capital
Minimum	11.4	13.3	17.0	8.98	9.93	12.24
Conservation Buffer	1.875			1.875		
Minimum + Conservation Buffer	13.275	15.175	18.875	10.855	11.805	14.115
Countercyclical Buffer Range	0.00			0.00		
Banks	PNB			Canara		
Capital Requirement/Buffer	CET 1	Tier 1 Capital	Total Capital	CET 1	Tier 1 Capital	Total Capital
Minimum	7.87	8.91	11.66	8.92	9.77	12.86
Conservation Buffer	1.88			2.5		
Minimum + Conservation Buffer	9.75	10.79	13.54	11.42	12.27	15.36
Countercyclical Buffer Range	0.00			0.00		

Tables 7 and 5Presents BASEL III compliance of the Top banks in India. The RBI has allowed the banks in India to meet the BASEL III norms in a phased manner from 2013 onwards. All the banks have met the minimum capital requirements. The banks are yet to meet the conservation buffer of 2.5% excepting Canara bank. Though all the banks achieved the target set for 2018 excepting Kotak Mahindra & IndusInd Bank. The banks are above the BASEL III limit relating to the sum of minimum and conservation buffer.

Leverage Ratio

Minimum leverage ratio as per BASEL-III is 3% Minimum leverage ratio by RBI is 4.5%

Table 8: Leverage Ratios of the Top 10 Banks in India

Banks	BASEL III Leverage Ratios	Liquidity Coverage Ratio (LCR)
HDFC	9.19	104.52
SBI	5.38	134.05
ICICI	9.83	97.67
Kotak Mahindra	12.6	92.92
AXIS	8.64	93.61
IndusInd	9.26	94.61
YES	8.84	88.1
Bank of Baroda	5.89	129.42
PNB	3.85	111.23
Canara	5.24	110.02

As per table 6, all the banks have maintained a good leverage ratio. It can also be seen that the private sector banks have higher leverage ratios compared to their public-sector counterparts.PNB is able to meet the BASEL III

compliance but its leverage ratio is less than 4.5% which is the minimum limit set by RBI.

Liquidity coverage ratio of the Top banks operating in India. According to the BASEL III norms banks should have an LCR 100% or more. But as BASEL III is being implemented in a phased manner as per the instruction of RBI few banks have not achieved the 100% limit. The limit set by RBI is 90% for 2018. YES, bank is not able to achieve the 90% limit while all the other banks crossed the mark. It can be seen from the table that some banks have crossed the 100limit.

Table 9: Asset Quality of Top 10 Banks

Banks	Gross NPA In Millions	Net NPA In Millions	Gross NPA Ratio	Net NPA Ratio
HDFC	92996.0	30181.7	1.32	0.43
SBI	2251045.1	1115233	10.85	5.69
ICICI	567038.0	292920.0	9.54	5.17
Kotak Mahindra	38039.2	18142.3	2.25	1.09
AXIS	342870	165983	7.38	3.69
IndusInd	10549	4389	0.93	0.39
YES	20185.6	10722.7	1.52	0.81
Bank of Baroda	469739.048	198099.345	11.05	4.99
PNB	866200.53	486842.89	18.38	11.24
Canara	344067.40	2173286	9.66	6.34

Its evident from Table 8that the Public-Sector banks are having higher gross NPA ratio and Net NPA ratio compared to their foreign and private sector counterparts. This is because of the fact that they have not made enough provisions for their non-performing assets.

Table 10: Capital Requirements for various Risks Faced by the Top Banks in India

Capital Requirement for Various Risks	HDFC Rs Millions	SBI Rs Crore	ICICI Rs Millions	KOTAK Mahindra Rs Millions	AXIS Rs Millions
CREDIT RISK					
Capital Requirements for Credit Risk					
Portfolios subject to standardized Approach	769,283.8	1,35,025.34	622501.4	164357.9	109832
Securitization Exposure	20399.0	NIL	3990.6	141.1	NIL
Total	789,682.8	1,35,025.34	626492	164499	109832
MARKET RISK					
Capital Requirements for Market Risk					
Standardized Duration Approach					
Interest rate risk	31,179.1	14,481.78	50434	6225.0	4851
Foreign exchange risk(including gold)	1,174.5	173.77	1435.3	709.9	304
Equity risk	27,333.5	4,959.00	21529.8	7477.6	847
Total	59,687.1	19,614.55	73399.1	14412.5	6002
OPERATIONAL RISK					
Capital Requirements for Operational Risk					
Basic indicator Approach	79,644.3	17,971.97	73772.2	22112.8	13342
Standardized Approach	-	-	-	-	-
Total	79644.3	17,971.97	73772.2	22112.8	13342

Table 11: Capital Requirements for Various Risks Faced by IndusInd Bank

Capital Requirement for Various Risks	Indus Ind Rs Millions	YES Bank Rs Lakhs	Bank of Baroda Rs Lakhs	PNB Rs Millions	Canara Bank Rs Millions
CREDIT RISK					
Capital Requirements for Credit Risk					
Portfolios subject to standardized Approach	109832	1623696	3848913.30	350999.50	296438.20
Securitization Exposure	NIL	NIL	NIL	NIL	NIL
Total	109832	1623696	3848913.30	350999.50	296438.20
MARKET RISK					
Capital Requirements for Market Risk					
Standardized Duration Approach					
Interest rate risk	4851	101379	212563.92	23427.94	16810.51
Foreign exchange risk(including gold)	304	11250	11545.43	180.0	69.20
Equity risk	847	19693	121797.19	11864.72	10267.17
Total	6002	132322	345906.54	35472.66	27146.88
OPERATIONAL RISK					
Capital Requirements for Operational Risk					
Basic indicator Approach	13342	106632	350470.26	31033.65	25798.50
Standardized Approach	-	-	-	30752.38	-
Total	13342	106632	350470.26		25798.50

The Banks are subject to the capital adequacy guidelines stipulated by RBI, which are based on the framework of the Basel Committee on Banking Supervision. The banks face mainly 3 kinds of Risks namely Credit risk, market risk & operational risk (Table 8 and 9). While deciding upon the minimum capital requirement the banks have to take into consideration the above three risks. The banks are following the Internal Capital Adequacy Assessment Process (ICAAP) as stipulated by RBI in tandem with the BASEL norms. Banks are following the Standardized Approach for Credit risk, Standardized Duration Approach for Market risk & Basic Indicator Approach for operational risk measurement. Some banks are having securitization exposure only. PNB also follows a standardized approach apart from Basic Indicator Approach for measuring operational risk.

FINDINGS

- The BASEL III norms are implemented by the RBI in a phased manner from 2013 onwards.

- It can be clearly seen that the banks have effectively and efficiently able to incorporate and implement the BASEL III norms as stipulated by the RBI.
- ICICI bank has the highest Capital Adequacy Ratio and SBI has the lowest Capital Adequacy Ratio among the Top banks though all have met the prescribed limit by BASEL.
- Canara bank has achieved the minimum conservation buffer of 2.5% as prescribed by BASEL III.
- The other banks have achieved the conservation buffer of 1.875% as fixed by the RBI excepting Kotak Mahindra Bank and IndusInd Bank which are still at 1.25%.
- All the top banks are well above the limit set by BASEL for the total of Minimum and Conservation Buffer.
- Kotak Mahindra bank has the highest leverage ratio of 12.6 while PNB has the lowest ratio of 3.85.
- All the top banks are in compliance with BASELIII and the RBI except PNB which has not achieved the limit set by RBI.
- SBI has the highest LCR (Liquidity Coverage Ratio) of 134.05 and YES have the lowest LCR of 88.1.
- HDFC, SBI, Bank of Baroda, PNB and Canara bank have LCR above 100% as per the BASEL III LCR requirement.
- The other banks are yet to touch the 100% limit but they have achieved the 90% limit as set by the RBI.
- All the Banks are following the approaches stipulated by the BASEL III and RBI for Measuring Credit Risk, Market Risk & Operational Risk.

CONCLUSIONS

The main focus of BASEL III is to build a solid foundation for financially sound banking by providing a new risk management culture for the banks. BASEL III is an evolution and extension of BASEL II. The main difference being the introduction of liquidity and leverage ratios and enhanced minimum capital requirement. From the above study, it is evident that banks operating in India are quite successful in implementing the BASEL III framework in a phased manner as planned by the RBI. But the banks have to go a long way to achieve full compliance. The RBI has to be more vigilant and strict on the banks to make them achieve the compliance within the stipulated time.

REFERENCES

1. Arnold, B., Borio, C., Ellis, L. and Moshirian, F. (2012), "Systemic risk, macroprudential policy frameworks, monitoring financial systems and the evolution of capital adequacy", *Journal of Banking & Finance*, Vol. 36 No. 12, pp. 3125-3132.
2. Barrios, V.E. and Blanco, J.M. (2003), "The effectiveness of bank capital adequacy regulation: a theoretical and empirical approach", *Journal of Banking and Finance*, Vol. 27 No. 10, pp. 1935-1958.
3. Berger, A.N. and Bouwman, C.H. (2013), "How does capital affect bank performance during financial crises?", *Journal of Financial Economics*, Vol. 109 No. 1, pp. 146-176.

4. Blum, J. (1999), "Do capital adequacy requirements reduce risks in banking?", *Journal of Banking and Finance*, Vol. 23 No. 5, pp. 755-771.
5. Blum, J. (1999), "Do capital adequacy requirements reduce risks in banking?", *Journal of Banking & Finance*, Vol. 23 No. 5, pp. 755-771
6. Demirguc-Kunt, A. and Huizinga, H. (2004), "Market discipline and deposit insurance", *Journal of Monetary Economics*, Vol. 51 No. 2, pp. 375-399
7. Eccles, R., Herz, R., Keegan, M. and Phillips, D. (2001), "The risk of risk", *Balance Sheet*, Vol. 9 No. 3, pp. 28-33.
8. Faccio, M, Masulis, R.W. and McConnell, J. (2006), "Political connections and corporate bailouts", *Journal of Finance*, Vol. 61 No. 6, pp. 2597-2635.
9. Fatemi, A. and Fooladi, I. (2006), "Credit risk management: a survey of practices", *Managerial Finance*, Vol. 32 No. 3, pp. 227-233.
10. Flannery, M. and Rangan, K. (2008), "What caused the bank capital build-up of the 1990s?", *Review of Finance*, Vol. 12 No. 2, pp. 391-429.
11. Kane, E. (2000), "Designing financial safety nets to fit country circumstances", *Policy Research Working Paper No. 2453*, the World Bank Development Research Group, Washington.
12. Katina Gregory, Gerhard Hambusch, (2015) "Factors driving risk in the US banking industry: The role of capital, franchise value and lobbying", *International Journal of Managerial Finance*, Vol. 11 Issue: 3, pp. 388-410, <https://doi.org/10.1108/IJMF-02-2015-0017>
13. Keeley, M. (1990), "Deposit insurance, risk, and market power in banking", *American Economic Review*, Vol. 80 No. 5, pp. 1183-1200
14. Kim, D. and Santomero, A.M. (1988), "Risk in banking and capital regulation", *Journal of Finance*, Vol. 43 No. 5, pp. 1219-1223.
15. Lei Xu, Shih-Cheng Lee, Yishu Fu, (2015) "Impacts of capital regulation and market discipline on capital ratio selection: evidence from China", *International Journal of Managerial Finance*, Vol. 11 Issue: 3, pp.270-284, <https://doi.org/10.1108/IJMF-02-2014-0021>.
16. Kaur Mandeep and Kapoor S (2015) "Adoption of Basel norms: a review of empirical evidences", *Journal of Financial Regulation and Compliance*, Vol. 23 Issue: 3, pp.271-284, <https://doi.org/10.1108/JFRC-02-2014-0010>
17. Mejbel Al-Saidi, Bader Al-Shammari, (2013) "Board composition and bank performance in Kuwait: an empirical study", *Managerial Auditing Journal*, Vol. 28 Issue: 6, pp.472-494, <https://doi.org/10.1108/02686901311329883>.
18. Ofoeda, I., Abor, J. and Adjasi, C.K.D. (2012), "Non-bank financial institutions regulation and risk-taking", *Journal of Financial Regulation and Compliance*, Vol. 20 No. 4, pp. 433-450.

19. Rajan, R. and Zingales, L. (1998), "Financial development and growth", *The American Economic Review*, Vol. 88 No. 3, pp. 559-586.
20. Sensarma, R. and Jayadev, M. (2009), "Are bank stocks sensitive to risk management?",
21. *The Journal of Risk Finance*, Vol. 10 No. 1, pp. 7-22.
22. Shweta Sharma (2015) *Perception of Risk Factors in Indian Retail Banking: A Case Study Based Approach*, IRACST- *International Journal of Research in Management & Technology (IJRMT)*, ISSN: 2249-9563 Vol. 5, No.1, pp 174-179.

23. Karkal Gopal (1977), *Perspectives of Indian Banking*, Popular Prakashan Private Limited, Bombay.
24. <https://www.investopedia.com/terms/b/baselcommittee.asp>
25. <https://www.embibe.com/exams/top-10-largest-banks-in-india/>
26. <https://www.bankindia.org/2013/04/top-banks-india.html>
27. <https://www.hdfcbank.com/>
28. <https://www.onlinesbi.com>
29. <https://www.icicibank.com>
30. <https://www.kotak.com/en.html>
31. <https://www.axisbank.com/>
32. <https://www.indusind.com/>
33. <https://www.yesbank.in/>
34. <https://www.bankofbaroda.co.in/>
35. <https://www.pnbindia.in/>
36. <https://www.canarabank.in/>