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Impact of Basel-III implementation on profitability of banks

Rooful Nisa[1*], Mushtaq Ahmad Darzi[2]
[1] Scholar, Department of Management Studies, University of Kashmir, Srinagar, Jammu and Kashmir, India
[2] Professor and Head, Department of Management Studies, University of Kashmir, Srinagar, Jammu and Kashmir, India

Abstract
The purpose of the study is to analyse the impact of Basel III implementation on profitability of banks. One of the basic requirements of Basel III is increased capital adequacy ratios to be maintained by the banks. The study has found that the banks are showing declining trend in their profitability ratios which implies Basel III implementation has hit the Indian banks hard. However, the effective and successful implementation of Basel III norms are going to make Indian Banks stronger, stable and sound. It was also found that Indian banks are better placed as they are able to maintain high capital adequacy ratios and are having enhanced proportion of high quality common equity capital.

Keywords: basel-III, capital adequacy, return on equity, net interest margin, cost to income ratio, net profit ratio, operating profits to total assets ratio

1. Introduction
With the advent of globalisation and the rapidly changing business environments worldwide have led to identification of the need to protect the banking industry from the various risks that they are exposed to, when they perform their functions. In the backdrop of Herstatt Bank Debacle, G-10 countries along with Luxembourg met at Basel in Switzerland and established a committee namely Bankers for International Settlement (BIS) to address the issues regarding bankers all over the world. The Basel Committee on Banking Supervision (BCBS) provides standard and establishes a framework for bank supervision for strengthening financial stability throughout the world. The regulators of a few non-G-10 countries including India framed the core principles for effective banking supervision in the form of minimum requirements to reinforce current supervisory management.

The Capital Accord of 1988 designed Basel-I framework for capital adequacy to establish minimum levels of capital for internationally active banks. The aim of Basel I was to strengthen the soundness and stability of the international banking system in a consistent way. In order to address the shortcomings of Basel I, the Basel Committee on Banking Supervision introduced the banking industry to Basel II. Basel II presented a unique III Pillar approach focussing more identifying risks mainly under Pillar I – operational, market and credit. Pillar 2 deals with supervisory review process by the central bank and Pillar 3 underlines the need for market discipline and disclosures required thereunder. Supervisory Review Process necessitates banks to implement a framework for measuring their capital adequacy in relation to their risk profiles and also a strategy to maintain their capital levels. The purpose of the Supervisory Review Process is to create a better integration between the banks overall risk profile, its risk management system and its regulatory capital. For improving the quality of regulatory capital, the capital will largely comprise of Common Equity Tier1 (CET1) under Basel III. The common capital introduced by Basel III measures core equity capital in relation to its risk weighted assets for assessing the bank's strength. However, the new accord is going to push up the capital needs of the banks for doing the same level of business which may result in sharp decline in return on assets.

The purpose of Basel III reform is to raise the quality and transparency of the capital base by enhancing risk coverage and at the same time improving their financial stability. Tier I capital under Basel III largely consists of common shares, retained earnings and subordinated debt instruments that have fully noncumulative dividends or coupons without maturity dates or incentives to redeem. Tier II capital shall be harmonised while as Tier III capital which was available to cover market risk, is eliminated under new reform. However, the three mutually supporting pillars continue to exist.

The purpose of Basel-III norm is to:

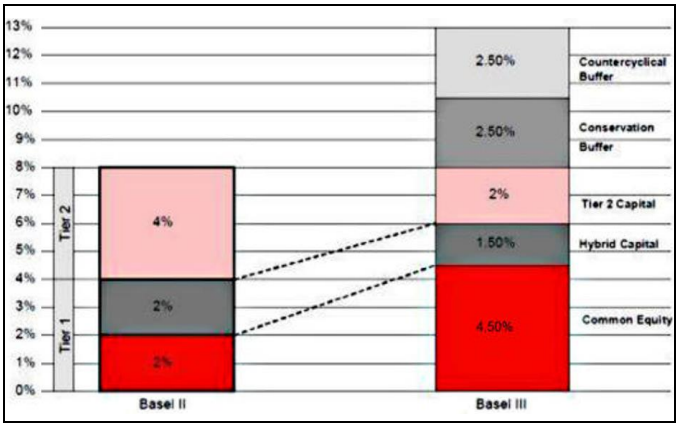
- Raise the transparency, quality and consistency of capital in order to ensure the banks are proficient to absorb losses on both as going concern and as gone concern basis.
- Enhance risk coverage by increasing the risk weight on credit exposures
- Supplementing the risk based capital requirement with leverage ratio of 3%.
- Reducing procyclicality and promoting countercyclical buffers.

The macro prudential characteristics of Basel III are largely treasured in the capital buffers. Both the buffers namely the capital conservation buffer and the countercyclical buffer are intended to safeguard the banking sector from stressed situations and business cycles. The countercyclical capital surplus will be between 0 and 2.5 per cent and applies only to periods of excessive credit growth. These set of measures are

introduced with an intention to raise the flexibility of the banking sector in good times and diminishing any excess cyclicality of the minimum capital requirement to conserve capital for building buffers to be used in case of stress at individual. This rule ensures correction of the pro-cyclicality of Basel II particularly in phases of economic growth. The changes are represented in Figure 1.

The transitional arrangement of capital for scheduled commercial banks under Basel III is shown in the table 1. As a key part of this process, there is a need for banks to engage in capital planning, which is an internal process for taking a thoughtful approach to ensure that capital is adequate not just today, but also for the foreseeable future. Hence it is about establishing a robust and dynamic integrated risk management culture within the bank. The ultimate objective is to check whether interests of the key stakeholders, i.e. the Board and management of the banks together with the financial authorities, are aligned in their business objective. The present study attempts to analyse the impact of Basel III implementation on the profitability of Banks.

The findings of this research will lead to an important conclusion that whether these norms are suitable for Indian banks and whether they serve the whole purpose of protecting the banks with its sophisticated approaches which will in turn protect them and the economy from a major collapse.



***Source*:** Georgios, 2015

Fig 1: Basel III Compared to Basel II

Table 1: Capital Arrangement for Scheduled Commercial Banks

Minimum Capital Ratios	April 1, 2013	April 1, 2014	April 1, 2015	April 1, 2016	April 1, 2017	April 1, 2018	April 1, 2019
Minimum Common Equity Tier I	4.5	5	5.5	5.5	5.5	5.5	5.5
Capital Conservation Buffer	-	-	-	0.625	1.25	1.875	2.5
CET1+CCB	4.5	5.0	5.5	6.125	6.75	7.375	8.0
Minimum Tier 1 Capital	6	6.5	7	7	7	7	7
Minimum Total Capital*	9	9	9	9	9	9	9
Minimum Total Capital + CCB	9	9	9	9.625	10.25	10.875	11.5
Phase-in of all deductions from CET 1 # (in %)	20	40	60	80	100	100	100

2. Literature review

Balin (2008) [3] points out that both Basel I & Basel II ignore the effect of implementation on the emerging market economies. The study assesses the influence of Basel norms on the international financial system with special reference to the developing nations. As per the research, developing nations are still facing several difficulties in coping up with the advanced approaches while the smaller banks in these nations are still on Basel I leading to a huge discrepancy in the financial and banking sector. This discrepancy can also lead to smaller banks becoming sick or unable to grow while the larger banks will gain more risk as their markets transform from emerging to developed. A research paper by Karacadag & Taylor (2000) [20] aims to establish a relationship amongst the revised capital regime and the Basel doctrine.

Chaudhary (2012) [10] in his research paper "BASEL III: A tool of risk management in banking sector, 2012" outlined the several reasons why Basel II failed to meet the requirements of the dynamic and globalizing banking environment and protect them from the financial meltdowns. These are the factors which are now being implemented in Basel III Accord:

- Emphasis on common equity and loss absorbing capacity & obligation of higher quality capital.
- Accurate assessment of market risks particularly for capital market activities.
- To restrict increased risk exposure & to serve as a booster to the capital adequacy regime, an internationally harmonized leverage ratio is introduced.
- To have capital buffers during boom phases to reduce the impact of stress scenarios
- To enhance the risk management systems, supervision and public disclosures by setting stronger and prudent norms.

Adeyemi (2006) [1] presented that capitalization improves banks performance by ensuring solvency and profitability and at the same time improving financial intermediation competence. The various methods to capitalization have been acknowledged to be raising extra capital from existing or new owners. This includes using capital market or raising capital using insurance fund, write down certain debt, merger and acquisition among others. All these approaches were found to be effective in livening bank performance.

Gilbert & Wheelock (2007) [16] and Moffitt & Suberly (2008) [24] also indicated that in determining the profitability of a bank, bank regulators and analysts use ROA and ROE approaches to evaluate industry performance and estimate trends in market structure as inputs in statistical models to forecast bank fiascos and mergers and for a diversity of other purposes where a measure of profitability is anticipated. A study by the Bank of Namibia (2000) [4] revealed that gross

margins translate into return on Assets thus banks with the highest gross margins had the highest ROA.

From bank's perspective, the net interest margin is an important determinant of profitability (Dumicic & Ridzak, 2012) [13]. Claeys & Vennet (2008) [11] concluded that higher net interest margins usually infer a lower banking sector efficiency, marked by higher costs which reflect poor efficiency of banks to control its operating expenses. Schwaiger & Liebeg (2009) [28] emphasized that the benefits of a lower cost of financial intermediation will only be effectuated if banks price risks in a prudent manner.

Hess & Francis (2004) [17] observed that there occurs an inverse relationship between the cost Income Ratio and the bank's profitability. Ghosh *et al*., (2003) [15] also observed that the expected negative relation between efficiency and cost-income ratio seems to exist. The study concludes with the remark that the cost-income ratio is negative and also strongly significant in all estimated equations, indicating that more efficient banks generate higher profits depicting that the cost income ratio also affects the profitability of the bank. A Study by David (2015) [12] also concluded that the higher the CIR, the lower the profitability.

Emerging economies face greater survival challenges because of their underdeveloped financial systems and vulnerability to volatile international capital flows, especially sudden stops or reversals of capital inflows, (Kuwai & Morgan, 2012) [22]. Thus, the vulnerability can be reduced by adhering to adequate capital regulations. The authors highlighted that emerging economies will easily succumb to financial shocks since their governments have limited capacity to intervene with bailouts packages. The adoption of Basel accords by most developing nation has attracted the consequences on their domestic credit provision. Most developing nations are affected by the provisions through their effects on the international capital flows (Barell, 2005) [5].

With regards to the macro-economic impact, there is a belief among some researchers that capital adequacy will not improve the financial stability of banks and may even deteriorate it (Juan, 1996) [19]. Researchers have found that although Latin American countries have adopted the Basel 1 accords in the early 1990s some have experienced severe banking crisis during the decade.

Jimenez (2001) [18] examined the consequences of increases in capital requirements using data from the recent experience of Spain. This study was able to isolate the effects of loan demand, and found dramatic effects on the profitability of bank. The study found that increases in dynamic provisioning requirements essentially, requirements that banks increase their regulatory reserves for loan losses, which is akin to, but less costly to banks than an increase in capital-ratio requirements showed responses roughly half the size of those observed in the study of the United Kingdom. That smaller magnitude is consistent with the findings for the U.K, since an increase in a capital-ratio requirement should have a larger effect than a similarly sized increase in a dynamic provisioning requirement.

Berrospide & Edge (2010) [8] analyzed the interactions between the business cycle and bank capital to study the effect of bank capital on lending in bad and good times. For instance, Ongena *et al*., (2010) [27] find that conditioning on several loan applications of a firm in a month to new banks, banks with lower capital on average grant more loans in the extensive margin of lending to new clients, but in bad times the reverse occurs. Bernanke & Lown (1991) [7] could also find stronger effects.

Amjad & Tufail (2013) [2], Bokhari *et al*., (2012) [9], Mathuva (2009) [23] and Oluitan (2014) [26] argued that inadequate capital significantly and negatively affect bank's financial health and profitability. Oppose to that research results Koch & Macdonald (2010) [21] claimed that lower level of capital enhances bank's ability to make more investment by providing greater financial leverage which will in return generate satisfactory returns for shareholders. To some extent by supporting these results Berger (1995) [6] argued that the bank which has lower amount of capital than equilibrium has more exposure towards the insolvency but their return on equity is higher. On the other hand, banks with capital higher than equilibrium have more solvencies but less return on equity. Naceur & Goaied (2001) [25] claimed that any bank can only achieve its optimal performance in term of profitability when it holds required amount of capital.

3. Research methodology

The present research study adopted a panel longitudinal survey and involves quantitative descriptive methodologies. The Commercial Banks operating in India include 6 State Bank of India & its subsidiaries, 21 nationalised banks, 21 private sector banks and 44 foreign Banks. However, among these banks, foreign banks follow different classification for Common Equity Tier I capital and additional Tier I capital for Regulatory Purposes. In most of public sector banks capital is being infused by RBI to boost their efficiency and financial stability. The government of India has earmarked Rs. 12517crore funds to be injected in Public Sector Banks to increase the liquidity of these banks as well as enable them to meet stringent capital requirements under Basel III norms. (Hindustan Times. 10 January 2013). In the year 2012-13 infusion of Rs. 7900crore was undertaken by the government to enhance the Tier I capital of India's apex bank- State Bank of India, thereby the government's shareholding increased in the bank to 61.58% from 59.4%. (Economic Times. January 19, 2013). Therefore, each bank was not having the same probability of being chosen to impact of Basel III implementation on profitability of banks. Hence this study adopted non-probability sampling technique.

The J&K Bank having a dominant presence in the state has been chosen for study along with 12 other private sector banks having similar balance sheet size as that of J&K Bank. The main reason behind choosing banks of similar size was to avoid the interference of huge capital base of big banks and research arrives at a logical conclusion. Specifically, the present study adopted purposive sampling technique. The financials of these banks were studied for seven consecutive years from FY2010-2011 to FY2016-17. However, data for one of the selected banks namely ING Vysya bank is available till FY2014-15 only due to its merger with Kotak Mahindra Bank ('Kotak') on April 2015 as a result of which legal entity ING Vysya ceased to exist.

The data required was collected from secondary sources. The sources mainly include annual reports and Basel III Disclosures of the selected 13 banks.
The study used average, standard deviation, ratio and percentage analysis to analyze and interpret the data.

4. Results and discussions

The profitability ratios that were studied include Return on Equity (ROE), Net Interest Margin (NIM), Cost to Income Ratio (CIR), Net Profit Ratio (NPR) and Operating Profit to Total Assets Ratio (Op. Profit to T. Assets).
Table 2 shows that ROE of City Union Bank has increased from 23.47% during FY2010-2011 to 24.91% during FY 2011-12 however the same continuously deteriorated afterwards and was recorded to be 15.18% during FY2016-17. The ratio increased from FY2011 (12.86%) to FY2013 (14.24%) for ING Vysya Bank Ltd. and decreased for the two consecutive years till it was recorded at 6.85% during FY2015. The ROE of Tamilnad Mercantile Bank continuously increased from 19.96% during FY2010-11 to 24.08% during FY2012-13, however the ratio decreased drastically thereafter to 14.02% & 10.27 during FY14 and FY17 respectively. For catholic Syrian Bank Ltd., the ROE increased from 2.6% during FY2011 to 4.94% during FY2013 which improved to 6.41 in FY2015 but highly deteriorated to -16.81% during FY16. However, the bank has taken steps to cope up as the ratio is showing improvement. The ROE of Dhanlaxmi Bank Ltd. Is showing a fluctuating behaviour but overall depicting a poor performance as long as this ratio is concerned. The ratio of Dhanlaxmi Bank was recorded to be 4.06 during FY2011 but the same dipped to -34.01% during FY2016, though signs are recovery and are seen in FY2017as the ratio is recorded at 2.13%. The ROE of Federal Bank was stable till FY2015 ranging from 14.37 to 12.60%, however same decreased to 6.01% in FY2016 and increased again to 9.75% in FY2017. The ratio for The J&K Bank was showing an increasing trend from 18.96% during FY2011 to 23.056% in FY2013 but the ratio showed a declining trend and was recorded at -26.98 by the end of FY2017 due to negative Net Profit Ratio. The ROE of Karnataka bank is showing fluctuations throughout the period of study but is overall satisfactory and recorded at 10.24% during FY17. The ratio of Karur Vysya bank has decreased from 22.26% during FY2011 to 12.61% in FY2017. The ratio of Lakshmi Vilas Bank & RBL Bank has improved from 12.40% and 1.71% during FY2011 to 13.13% and 12.18% during FY2017 respectively. Similarly, ROE of Nainital Bank and South Indian Bank has declined from 16.24% and 17.57% during FY2011 to 8.69% and 9.03% during FY2017 respectively.

Table 2: Return on Equity (%)

Banks	2011	2012	2013	2014	2015	2016	2017	Avg. of 7 Years
City Union Bank Ltd.	23.47	24.91	22.33	18.94	16.74	15.47	15.18	19.58
ING Vysya Bank Ltd	12.86	13.82	14.24	11.25	6.85			11.80
Tamilnad Mercantile Bank Ltd.	19.96	20.89	24.08	14.02	15.60	14.53	10.27	17.05
The Catholic Syrian Bank Ltd.	2.60	4.66	4.94	3.52	6.41	-16.81	0.16	0.78
Dhanlaxmi Bank Ltd	4.06	-14.70	0.35	-33.54	-33.07	-34.01	2.13	-15.54
The Federal Bank Ltd.	11.98	14.37	13.89	12.60	13.69	6.01	9.75	11.76
The J&K Bank	18.96	21.22	23.56	22.34	8.60	6.64	-26.98	10.62
The Karnataka Bank Ltd.	9.60	9.79	12.76	10.53	14.02	11.73	10.24	11.24
The Karur Vysya Bank Ltd.	22.26	20.81	19.00	13.4	12.26	12.87	12.61	16.17
The Lakshmi Vilas Bank Ltd.	12.40	11.56	9.28	5.77	10.14	10.86	13.13	10.45
Nainital Bank Ltd.	16.24	17.75	13.31	15.47	14.29	9.21	8.69	13.57
RBL Bank	1.71	5.90	6.73	5.31	10.07	11.21	12.18	7.59
The South Indian Bank Ltd.	17.56	19.99	19.41	15.92	8.82	8.96	9.03	14.24

Table 3 shows NIM of 13 selected banks from FY2010-11 to FY2016-17. It was observed that the NIM fluctuated for City Union Bank Ltd. throughout the period but remained stable maintain an average of 2.96%. ING Vysya Bank maintained NIM at 0.02% throughout the five years which is very less in comparison to other banks. It has been observed from the table that NIM of all banks is stable and doesn't fluctuate much. The average ratio of all banks ranged from 2.09% to 3.37% with an exception of ING Vysya Bank for which NIM was recorded to be 0.02%.

Table 3: Net Interest Margin (%)

Banks	2011	2012	2013	2014	2015	2016	2017	Avg. of 7 Years
City Union Bank Ltd.	2.87	2.72	2.71	3.03	2.89	3.13	3.39	2.96
ING Vysya Bank Ltd	0.02	0.02	0.02	0.02	0.02			0.02
Tamilnad Mercantile Bank Ltd.	3.02	3.57	3.91	3.52	3.15	3.21	3.19	3.37
The Catholic Syrian Bank Ltd.	1.67	2.81	2.64	2.58	2.27	1.99	1.91	2.27
Dhanlaxmi Bank Ltd	1.85	1.68	2.00	1.90	2.08	2.44	2.68	2.09
The Federal Bank Ltd.	3.39	3.22	2.81	2.98	2.87	2.73	2.65	2.95
The J&K Bank	3.05	3.05	3.22	3.41	3.48	3.37	3.06	3.23
The Karnataka Bank Ltd.	1.93	2.04	2.17	2.24	2.25	2.3	2.32	2.18
The Karur Vysya Bank Ltd.	2.71	2.43	2.47	2.49	2.75	3.08	3.35	2.75

The Lakshmi Vilas Bank Ltd.	2.74	2.28	2.21	2.35	2.13	2.24	2.22	2.31
Nainital Bank Ltd.	3.52	3.88	3.71	3.39	3.2	3.02	2.8	3.36
RBL Bank	2.94	2.59	1.98	1.87	2.05	2.09	2.5	2.29
The South Indian Bank Ltd.	2.41	2.53	2.57	2.54	2.31	2.38	2.25	2.43

Table 4 shows the Cost to Income ratio of selected 13 commercial Banks from FY2011 to FY2017. It is observed from the table that CIR of City Union Bank Ltd. was 4.84% during FY2011 which abruptly increased up to 7.01% during 2014 but improved to 3.85% during FY2015 which again showed increasing trend and was recorded at 6.46% during FY2017. For ING Vysya, the ratio was slightly fluctuating, recording an average of 12.46% for 7 years. The CIR for Tamil Nadu Mercantile bank was 8.00% during FY2010-2011 which increased slightly to 8.14% during FY2017. The CIR of Catholic Syrian Bank was recorded at 28.15% during FY2011 and the same improved to 12.11% during FY2017. The Ratio for Dhanlaxmi bank showed slight fluctuations but maintained the same at 21.81% during FY2011 as well as FY2017. The CIR of Federal Bank Ltd. is showing increasing trend which was recorded at 7.88% during FY2011 and 13.00% during FY2017. Similarly, the ratio of The J&K Bank is has deteriorated over the period under review as the same has increased from 10.62% during FY2011 to 18.21% during FY2017. The CIR of Karnataka Bank and Lakshmi Vilas Bank has improved from 10.85% and 8.56% during FY2011 to 9.54% and 5.22% during FY2017 respectively. The ratio for Karur Vysya Bank increased from 7.50% during FY2011 to 8.94% during FY2017. The CIR for RBL Bank was recorded at 40.12% during FY2011 which was the highest in comparison to other selected banks for the year, however the same improved remarkably to 8.10% during FY2017. The ratio for South India Bank has shown improvement from 10.87 during FY2011 to 7.88% during FY2017.

Table 4: Cost to Income Ratio (%)

Banks	2011	2012	2013	2014	2015	2016	2017	Avg. of 7 Years
City Union Bank Ltd.	4.84	4.28	4.59	7.01	3.85	5.02	6.46	5.15
ING Vysya Bank Ltd	13.77	11.42	11.23	12.02	13.86			12.46
Tamil Nadu Mercantile Bank Ltd.	8.00	6.24	6.87	9.96	9.74	9.79	8.14	8.39
The Catholic Syrian Bank Ltd.	28.15	19.85	17.96	18.87	19.80	22.08	12.11	19.83
Dhanlaxmi Bank Ltd	21.81	24.78	17.20	21.21	21.29	25.26	21.81	21.91
The Federal Bank Ltd.	7.88	8.04	8.43	10.77	10.14	13.99	13.00	10.32
The J&K Bank	10.62	9.68	8.23	11.6	11.54	15.23	18.21	12.16
The Karnataka Bank Ltd.	10.85	7.16	7.13	8.81	8.42	8.98	9.54	8.70
The Karur Vysya Bank Ltd.	7.50	5.85	7.30	8.72	9.52	8.79	8.94	8.09
The Lakshmi Vilas Bank Ltd.	8.56	8.94	8.00	8.92	7.15	9.27	5.22	8.01
Nainital Bank Ltd.	17.36	14.6	12.68	15.49	12.7	17.41	13.47	14.82
RBL Bank	40.12	15.47	11.47	12.05	10.05	10.09	8.10	15.34
The South Indian Bank Ltd.	10.87	10.33	9.75	10.26	9.16	11.34	7.88	9.94

Table 5 shows the year on year change in the Net Profit Ratio of the selected banks with an average of last seven years. It is observed that the NPR of City Union Bank has decreased from 17.65% during FY2011 to 15.84% during FY2017. ING Vysya showed a good growth with increasing NPR throughout the period under review while as the NPR for Tamil Nadu Mercantile Bank decreased from 18.30% during FY2011 to 9.37% during FY2017. The ratio for Catholic Syrian bank shows many ups and downs as was recorded to be 1.60% during FY2011 which decreased to a level of -10.10% during FY2016 but regained to be positive during FY2017 as the same was recorded to be 0.12% during the said year to maintain average of -0.74%. Dhanlaxmi Bank is showing poor performance as NPR has been highly unstable recording an average of -8.48% for the years under review. The NPR of Federal bank has decreased from 14.48% during FY2011 to 9.57% during FY2017 but was stable and performing good. The ratio of The J&K Bank has shown a positive growth from 16.56% during FY2011 to 17.45% during FY2014 but the same highly deteriorated to an alarming level of -24.41% during FY2017. The NPR of Karnataka Bank and Karur Vysya Bank decreased from 8.63% and 18.73% during FY2011 to 8.07% and 10.77% during FY2017 respectively. The NPR of Lakshmi Vilas Bank decreased from 9.49% during FY2011 to mere 3.00% during FY2014 but improved to 8.99% during FY17. The ratio for Nainital Bank also decreased from 17.79% during FY2011 to 8.66% during FY2017. The only bank that showed the upward trend was RBL for which ratio increased from 6.51% during FY2011 to 12.01% during FY2017. South Indian Bank also showed the negative growth of NPR which decreased from 11.96% during FY2011 to 6.71% during FY2017.

Table 5: Net Profit Ratio (%)

Banks	2011	2012	2013	2014	2015	2016	2017	Avg. of 7 Years
City Union Bank Ltd.	17.65	16.51	14.71	13.63	14.63	15.1	15.84	15.44
ING Vysya Bank Ltd	11.82	11.83	12.6	12.63	12.63			9.78
Tamilnad Mercantile Bank Ltd.	18.30	16.65	17.82	11.13	13.38	12.37	9.37	14.15
The Catholic Syrian Bank Ltd.	1.60	2.41	2.47	1.79	-3.44	-10.10	0.12	-0.74

Dhanlaxmi Bank Ltd	3.28	-8.29	0.2	-19.49	-18.81	-17.39	1.13	-8.48
The Federal Bank Ltd.	14.48	13.97	13.58	12.07	13.55	6.14	9.57	11.91
The J&K Bank	16.56	16.61	17.19	17.45	7.20	6.53	-24.41	8.16
The Karnataka Bank Ltd.	8.63	7.9	9.24	7.42	9.60	8.31	8.07	8.45
The Karur Vysya Bank Ltd.	18.73	15.87	12.97	8.39	8.60	10.42	10.77	12.25
The Lakshmi Vilas Bank Ltd.	9.49	7.05	5.2	3.00	5.97	7.01	8.99	6.67
Nainital Bank Ltd.	17.79	17.90	13.00	28.13	13.24	8.76	8.66	15.35
RBL Bank	6.51	13.99	10.55	6.85	10.6	10.65	12.01	10.17
The South Indian Bank Ltd.	11.96	11.2	11.32	10.11	5.81	5.99	6.71	9.01

Table 6 indicates the average of Operating Profit to Total Assets Ratio of the selected banks from FY2011 to FY2017. It has been observed that the ratio did not fluctuate much among various banks except the Catholic Syrian Bank and Dhanlaxmi Bank for which ratio turned to be negative once in seven years. However, a common observation made in the trend of Operating Profit to Total Assets is that the ratio decreased during FY2014 as compared to FY2013 in almost all banks.

Table 6: Operating Profit to Total Assets

Banks	2011	2012	2013	2014	2015	2016	2017	Avg. of 7 Years
City Union Bank Ltd.	2.76	2.59	2.53	2.42	2.66	2.79	2.96	2.67
ING Vysya Bank Ltd	1.74	1.79	1.95	1.96	1.84			1.33
Tamilnad Mercantile Bank Ltd.	2.92	2.93	3.14	2.45	2.16	2.23	2.42	2.61
The Catholic Syrian Bank Ltd.	0.38	0.85	0.79	0.66	0.32	-0.02	0.95	0.56
Dhanlaxmi Bank Ltd	0.60	-0.68	0.36	0.04	0.18	0.00	0.76	0.18
The Federal Bank Ltd.	3.00	2.69	2.21	2.03	2.07	1.6	1.84	2.21
The J&K Bank	2.47	2.47	2.74	2.53	2.38	2.14	1.60	2.33
The Karnataka Bank Ltd.	1.21	1.5	1.63	1.55	1.56	1.58	1.65	1.53
The Karur Vysya Bank Ltd.	2.39	2.2	2.01	1.70	1.82	2.32	2.60	2.15
The Lakshmi Vilas Bank Ltd.	2.30	1.60	1.48	1.61	1.62	1.53	1.98	1.73
Nainital Bank Ltd.	2.32	2.51	2.34	2.01	1.86	1.38	1.59	2.00
RBL Bank	0.72	2.2	1.55	1.15	1.59	1.64	2.1	1.56
The South Indian Bank Ltd.	1.8	1.78	1.88	1.69	1.55	1.43	1.76	1.70

Table 7 shows the descriptive statistics of the extracted profitability ratios of the selected banks depicting their minimum and maximum values throughout a period of 7 years with their standard deviation and variance. On the basis of these values, best and poor performing banks with respect to specific Profitability ratio mean is shown in Table 8. Top performer banks in respect of average ROE are City Union bank (19.58%) followed by Tamilnad Mercantile Bank Ltd. (17.05%) and South Indian Bank (14.24%). Best performer bank in respect of NIM is Tamilnad Mercantile Bank (3.37%), followed by Nainital Bank (3.36%) and The J&K Bank (3.23%). City Union Bank is the best performer with respect to the CIR (5.15%) followed by Lakshmi Vilas Bank (8.01%) and Karur Vysya Bank Ltd (8.09%). Top performing bank with respect to average NPR is City Union Bank (15.44%) followed by Nainital bank (15.35%) and Tamilnad Mercantile Bank (14.15%) while as Dhanlaxmi Bank is the poor performer with Average NPR of -8.48%. The top performing banks with respect to operating Profit to Total Advances ratio is City Union Bank (2.67%) followed by Tamilnad Mercantile bank (2.61%) and The J&K Bank (2.33%) while as Dhanlaxmi Bank is the poor performer.

Table 7 shows that the variability in the ROE is found to be highest in Dhanlaxmi Bank followed by The J&K Bank with variance of 320.34 And 320.07 respectively. The variability in the NIM is found to be highest in ING Vysya Bank with variance of 9.30 while as variability in the CIR is higher for RBL bank with variance of 124.64. Highest variability of NPR and Operating Profit to profitability Ratio is found to be in J&K Bank with a variance of 229.03 and RBL with a variance of 0.26.

Table 7: Statistics of Profitability Ratios

Banks		ROE	NIM	CIR	NPR	Op. Profit to Total Assets Ratio
City Union Bank Ltd.	Mean	19.58	2.96	5.15	15.44	2.67
	St. Deviation	4.00	0.24	1.16	1.34	0.18
	Variance	15.97	0.06	1.34	1.79	0.03
	Minimum	15.18	2.71	3.85	13.63	2.42
	Maximum	24.91	3.39	7.01	17.65	2.96
ING Vysya Bank Ltd	Mean	11.80	1.39	12. 46	12.55	1.86
	St. Deviation	3.00	3.05	1.27	0.83	0.10
	Variance	8.99	9.30	1.62	0.69	0.01
	Minimum	6.85	0.03	11.23	11.82	1.74
	Maximum	14.24	6.85	13.86	13.86	1.96

Tamilnad Mercantile Bank Ltd.	Mean	17.05	3.37	8.39	14.15	2.61
	St. Deviation	4.77	0.31	1.49	3.48	0.38
	Variance	22.71	0.10	2.23	12.11	0.15
	Minimum	10.27	3.02	6.24	9.37	2.16
	Maximum	24.08	3.91	9.96	18.3	3.14
The Catholic Syrian Bank Ltd.	Mean	0.78	2.27	19.83	-0.74	0.56
	St. Deviation	8.01	0.43	4.80	4.61	0.35
	Variance	64.11	0.18	23.05	21.29	0.12
	Minimum	-16.81	1.67	12.11	-10.1	-0.02
	Maximum	6.41	2.81	28.15	2.47	0.95
Dhanlaxmi Bank Ltd	Mean	-15.54	2.09	21.91	-8.48	0.18
	St. Deviation	17.90	0.35	2.66	10.11	0.47
	Variance	320.34	0.12	7.09	102.22	0.22
	Minimum	-34.01	1.68	17.2	-19.49	-0.68
	Maximum	4.06	2.68	25.26	3.28	0.76
The Federal Bank Ltd.	Mean	11.76	2.95	10.32	11.91	2.21
	St. Deviation	2.97	0.27	2.44	3.03	0.49
	Variance	8.82	0.07	5.94	9.19	0.24
	Minimum	6.01	2.65	7.88	6.14	1.6
	Maximum	14.37	3.39	13.99	14.48	3
The J&K Bank	Mean	10.62	3.23	12.16	8.16	2.33
	St. Deviation	17.89	0.19	3.43	15.13	0.37
	Variance	320.07	0.03	11.78	229.03	0.14
	Minimum	-26.98	3.05	8.23	-24.41	1.6
	Maximum	23.56	3.48	18.21	17.45	2.74
The Karnataka Bank Ltd.	Mean	11.24	2.18	8.70	8.45	1.53
	St. Deviation	1.66	0.14	1.31	0.76	0.15
	Variance	2.76	0.02	1.72	0.58	0.02
	Minimum	9.6	1.93	7.13	7.42	1.21
	Maximum	14.02	2.32	10.85	9.6	1.65
The Karur Vysya Bank Ltd.	Mean	16.17	2.75	8.09	12.25	2.15
	St. Deviation	4.34	0.35	1.27	3.86	0.32
	Variance	18.86	0.12	1.61	14.90	0.10
	Minimum	12.26	2.43	5.85	8.39	1.7
	Maximum	22.26	3.35	9.52	18.73	2.6
The Lakshmi Vilas Bank Ltd.	Mean	10.45	2.31	8.01	6.67	1.73
	St. Deviation	2.44	0.20	1.42	2.23	0.30
	Variance	5.96	0.04	2.02	4.95	0.09
	Minimum	5.77	2.13	5.22	3	1.48
	Maximum	13.13	2.74	9.27	9.49	2.3
Nainital Bank Ltd.	Mean	13.57	3.36	14.82	15.35	2.00
	St. Deviation	3.45	0.38	2.02	6.76	0.42
	Variance	11.94	0.15	4.09	45.66	0.18
	Minimum	8.69	2.80	12.68	8.66	1.38
	Maximum	17.75	3.88	17.41	28.13	2.51
RBL Bank	Mean	7.59	2.29	15.34	10.17	1.56
	St. Deviation	3.73	0.39	11.16	2.68	0.51
	Variance	13.95	0.15	124.64	7.16	0.26
	Minimum	1.71	1.87	8.1	6.51	0.72
	Maximum	12.18	2.94	40.12	13.99	2.2
The South Indian Bank Ltd.	Mean	14.24	2.43	9.94	9.01	1.70
	St. Deviation	5.13	0.12	1.15	2.73	0.16
	Variance	26.34	0.02	1.33	7.45	0.03
	Minimum	8.82	2.25	7.88	5.81	1.43
	Maximum	19.99	2.57	11.34	11.96	1.88

Table 8: Performance of Selected Banks on the Basis of Mean Profitability Ratios

Ratio	Best performing bank	Poor Performing Bank
ROE	1. City Union Bank	1. Dhanlaxmi Bank
	2. Tamilnad Mercantile Bank	2. J&K Bank
NIM	1. Tamilnad Bank	1. ING Vysya
	2. Nainital Bank	2. Dhanlaxmi Bank

CIR	1. City Union Bank	1. Dhanlaxmi Bank
	2. Laxmi Vilas Bank	2. RBL Bank
NPR	1. City Union Bank	1. Dhanlaxmi Bank
	2. Nainital Bank	2. Catholic Syrian bank
OP Profit to T. Assets	1. City Union Bank	1. Dhanlaxmi Bank
	2. Tamilnad Mercantile Bank	2. Catholic Syrian bank

Dhanlaxmi Bank is showing negative return on equity (Average -15.54%) and Catholic Syrian Bank is also showing a poor Return on equity (Average 0.78%) which is not a good sign especially when Basel III implementation is in progress. Meanwhile, The J&K Bank's ROE has greatly deteriorated after FY2014 and the same is recorded at -26.98% during FY2017 which is a matter of concern. City Union bank has the highest average of ROE for the seven years which is 19.58% showing good performance of the Bank.

City Union Bank has emerged at the best performer with respect to the CIR (5.15%) followed by Lakshmi Vilas Bank (8.01%) and Karur Vysya Bank Ltd (8.09%) where as Dhanlaxmi Bank as the poor performer as the CIR is 21.91%. Average NPR of City Union Bank (15.44%) is highest followed by Nainital bank (15.35%) and Tamilnad Mercantile Bank (14.15%) while as Dhanlaxmi Bank is the poor performer with Average NPR of -8.48%. The top performing banks with respect to Operating Profit To Total Assets ratio is City Union Bank (2.67%) followed by Tamilnad Mercantile bank (2.61%) and The J&K Bank (2.33%) while as Dhanlaxmi Bank is the poor performer. Moreover, Operating Profit to Total Assets ratio slowed down during FY2014.

5. Conclusion

As has been seen by the declining profitability ratios of most of the banks, Basel III implementation has hit the Indian banks hard. However, the banks have to go beyond compliance and restore profitability and attain stability. The effective and successful implementation of Basel III norms are going to make Indian Banks stronger, stable and sound. All the banks under study are using simpler approaches for measuring capital charge, but they need to role over to advanced approached as per the guidelines of RBI to so that capital is managed more effectively and at the same time profitability is also increased. The study depicts that with the onset of implementation of Basel III, the profitability of the Indian banks declined during FY2014. It was seen that City Union bank has exceptionally good profitability ratios whereas Dhanlaxmi bank has very poor profitability ratios. Overall it was found that Indian banks are better placed as they are maintaining high capital adequacy ratios and are have enhanced proportion of high quality common equity capital.

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