VOLUME-9, ISSUE-4, APRIL -2020 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper

Commerce

THE ISSUES, CHALLENGES AND SUITABILITY IN IMPLEMENTATION OF BASEL-III REGULATIONS

Dr. Sanjay Kumar Hooda

Assistant Professor, Department of Commerce, Indira Gandhi University, Meerpur, Rewari, Haryana, India

ABSTRACT

Bureau of International Settlement (BIS,) was established to enhance the financial stability and the quality of banking supervision by improving cooperation among Central Banks of the Group of 10 Countries. In 1974, a Committee was established by the Governors of Central Banks of the Group of 10 Countries after the major financial crisis globally. Later on, the committee was renamed as Basel Committee on Banking Supervision (BCBS). In 1988, the BCBS evolved formal framework of banks capital structure of the introduction to the "International Convergence of Capital Measurement and Capital Standards", worldwide known as Basel-I. In 2004, Basel Committee on Banking Supervision (BCBS) came out a comprehensive framework of capital regulation after several discussions and revising multiple drafts which known as Basel-II. But after the world-wide financial crisis in 2007-08, the Basel-II became inappropriate to cover the different types of hurdles and risks in the banking supervision. To get over that major problem, the BCBS introduced Basel-III framework of year 2010 and further revised in June 2011. The main aim of the implementation of Basel-III were to improving the banks loss absorption capacity, increase in the short term liquidity coverage, to remove the capital growth barriers, increase the ROE and ROA and proper implementation of conservation buffer and counter cyclical buffer with the comparison of 0% level of Retained Earnings (Conservation Ratios).

KEYWORDS : BIS, BCBS, Basel-III, ROI, ROE, Liquidity Ratio Coverage Ratios and Risk Management.

INTRODUCTION

Basel is a city of Switzerland; it is the headquarters of Bureau of International Settlement (BIS), which was established to enhance the financial stability and the quality of banking supervision by improving cooperation among Central Banks of the Group of 10 Countries. In 1974, a Committee was established by the Governors of Central Banks of the Group of 10 Countries after the break downs of Bretton Woods System led to the development of casualties such as withdrawal of Backhaus Herstatt Banking License in Germany and the same year closed down of Franklin National Bank in New York. In 1975, for that the Central Banks of the Group of 10 Countries took the initiative to establish a committee on banking regulation and supervision practices. Later the committee was renamed as Basel Committee on Banking Supervision (BCBS) (Mega Joshi, 2016, "Basel-II Norms and Implementations on Indian Banking Industries", ISSN No. 2277-8160). Basel Committee on Banking Supervision (BCBS) mainly focused on risks of banks and the financial system is called Accords/ Basel Norms.

In 1988, the formal framework was evolved into banks capital structure of the introduction to the "International Convergence of Capital Measurement and Capital Standards", worldwide known as Basel-I issued by Basel Committee on Banking Supervision (BCBS). When the Basel Accord was signed, only by the Ten Countries plus two more Nations were accepted and implemented to these norms and now more than hundred countries across the world have made these norms mandatory in their domestic/local banking system. In India, the Reserve Bank of India (RBI) implemented to Basel-I Norms from 1992 after implementation of the economic liberalization program during mid-1991.

Basel-I norms were criticized for its rigidity of 'one-size fits' approach and absence of risk-sensitivity in capital requirements estimation. In 2004, Basel Committee on Banking Supervision (BCBS) came out a comprehensive framework of capital regulation after several discussions and revising multiple drafts which known as Basel-II. Basel-II norms were built up on three mutually reinforcing pillars; Minimum Capital Requirements, Supervisor Review Process and Market Discipline. Basel-II was a very comprehensive and effective capital regulation framework architected on advanced hazard evaluation models and as a result, it fails to cover certain issues which emerged as the financial crisis in 2007-08 (Fratiani and Marchionne, 2009), Achariya et al (2011), and Reddy (2009). First Basel-II, was a risk sensitive framework, end up being ace patterned; in favorable business time, when banks were progressing nicely, and advertise was eager to put capital in them. Basel-II didn't force additional capital requirements on banks. Then again, in unfavorable business times, when banks required extra capital and markets were carefully about providing the capital, Basel-II expected banks to get a greater amount of it.

During the financial crisis, it was the inability to get extra capital that constrained major international banks of an endless loop of deleveraging, thereby hurtling global financial markets into seizures and economies around the whole world into recession.

The subsequent issue was absence of any explicit regulation to governed leverage. Basel-II pretended that its risk based capital requirement would implicitly amalgamate the risk excessive leverage. Unfortunately, excessive leverage of banks was one of the prime reasons for the crisis. The next important issue was that Basel-II didn't consider liquidity risk as part of the capital regulation. Lastly, Basel-II focused more on individual financial institutions and disregarded the systematic risk arising from the interconnectedness across institutions and markets, which led the crisis to spread to several financial markets (Acharya and Richordson 2009). Since the start of the money related disturbance in 2007, total reported wrote downs and losses of banks globally have more than 888 billion Dollars. In light of 2007-09 world-wide financial crisis BCBS gave Basel-II, which was intended to appraise capital requirements for credit risk of exchanging book of a bank. Basel-II was expected to prevent inappropriate placement of securities in the book that would give the best accounting treatment of securities at a specific point of time. In a specific order, the Basel Committee gave a series of documents to address explicitly counterparty risk in derivative transactions, fortifying with liquidity standards and market risk framework. Solidifying all these the Basel Committee on Banking Supervision (BCBS) discharged the Basel-III framework entitled "Basel-III: A Global Regulatory Framework for more Resilient Banks and Banking Systems" in December 2010 and further revised in June 2011.

In the year last 2013, all the 27 Basel Committee Members has implemented Basel Risk Capital Regulations. Efforts in adoption of Basel-III Regulations for liquidity and coverage ratio had made in systematically manners for Global Systematically Important Banks (G-SIBs) as well as for Domestic Systematically Important Banks (D-SIBs). In 2014, final draft was ready on liquidity coverage ratio (LCR) and Basel Committee on Banking System (BCBS) had also been discussed the challenges for banks during the implementation of Basel-III standards. Globally active banks continue to make progress of meetings the fully phased-in minimum Basel-III capital requirements ahead of the 2019 deadline ("Implementation of Basel-III standards", November- 2014, A Report to G-20 Leaders on Implementation of Basel-III Regulatory Reforms).

Review of Related Literature:-

Fielder Robert and Mahlknecht, Michle (2013); in his study entitled "Basel-III: Solving the Liquidity Business Challenges" has revealed that the Basel-III Norms which adopted for liquidity and funding will have a positive impact on different areas of the banking industry. As an outcome, it is helpful to identify the key areas inside a bank where Basel-III has the greatest effect and to characterize the fundamental methodologies, forms and new items to handle the individual business challenges.

PEPY J´er´emy and Benjamin Williams (2018); in his study entitled "Assessing the Impact of Basel-II on Bank Behavior: A Micro Founded Approach" has found that the drawbacks of the banking sector to promote sustainable lending and lack of strong capital base and liquidity buffers prior to the 2008 financial crisis and to the purpose of strengthening and consolidating all these, the BCBS released the Basel-III framework with the new Business Guidelines.

Mohammad Kalloub and Ayhan Kapusuzoglu and Nidhi Basak Ceylan (2018); in his study entitled "The Impact of Basel-III Adoption by G-20 Members on their Credit Ratings" have analyzed that the effect of Basel-III framework adopted by G-27 Countries on their credit rating and as a result that the statistical effect of Basel-III found very favorable in credit rating of these members countries.

Adesina Kolade Sunday (2019); in her study entitled "Basel-III Liquidity Rules: The Implication for Bank Lending Growth in Africa" found that the possible loan growth impact of the Basel-III on Net Stable Funding Ratio (NSFR) and Liquidity Coverage Ratio (LCR) requirement in Africa and seek to determine differently in different regions. The study has also revealed that how the relation between the performance of loan portfolios and the new Basel-III liquidity requirements may shape bank loan growth rates.

Basel-III Issues, Challenges and Suitability:

Basel-III is a world-wide banking regulatory framework which was published in 2009, largely in response to the credit crisis associated with the great recession. Basel-III introduced a set of reforms designed to improve the regulation, supervision and risk management within the banking sector (BCBS, 2011, p.-2). I would like to focus on five main areas of Basel-III which were framed by Basel Committee on Banking Supervision (BCBS) and the areas are:

1. Changes in Capital Definitions
2. Capital Requirements Changes
3. Risk Coverage
4. Leverage Ratio and
5. Liquidity Management Changes:
   (i) Liquidity Coverage Ratio and
   (ii) Net Stable Funding Ratio (NSFR).

Changes in Capital Definitions:

In the Basel-III, the Basel Committee on Banking Supervision (BCBS) introduced much stronger capital requirements in comparison to Basel-I and Basel-II. Banks regulatory capital is divided into Tier-1 and Tier-2 Capital. Tier-1 Capital is divided into Common Equity Tier-I Capital and additional Tier-I Capital. Common Equity Tier-I Capital is considered the core capital base of a bank, which includes Equity Capital and Disclosed Reserves, while additional Tier-I Capital comprises that is subordinated to most subordinate debts, have no maturity and their dividends can be cancel at any time. The Equity Capital and Disclosed Reserved includes are fully paid-up equity shares or Common Stock and Non-Cumulative Perpetual Preferred Stock (but excluding Cumulative Preferred Stock). Non-Cumulative irredeemable Preferred Stock dividends do not accumulate if left unpaid, whereas cumulative preferred stock dividends accumulate. Disclosed Reserves are meant primarily to mean retained earnings. Tier-2 Capital is supplementary capital and consists of reserves excluded from Tier-1 Capital that are accepted by bank regulatory capital and subject to the original maturity period of at least five years. (https/www.bis.org/press/p, 1009/2.htm)

2. Capital Requirements Changes:

The Basel Committee on Banking Supervision (BCBS) accepted that one important point of causes of failure of Basel-II was inconsistent definition of capital across jurisdictions, which together the limited information disclosure, preventing markets from evaluating and comparing quality of bank capital (BCBS,2011, p.2).

Capital Conservation Buffer: The capital conservation buffer, which is designed to ensure that banks build up capital buffers outside periods of stress which can be draw down as loss is incurred. The requirement is based on simple capital conservation rules designed to avoid breaches of minimum capital requirements. Outsides of periods of stress, bank should hold buffers of minimum regulatory capital. When buffers have been drawn down, one way banks should look to rebuild them is through reducing discretionary distributions of earnings. This could include reducing dividend payments, share-backs and staff bonus payments. Bank may also choose the raise new capital from private sector as an alternative to concerning internally generated capital. (*BCBS (2011), "Basel-III Regulatory Framework for more resilient Banks and Banking Systems", Banks for International Settlements (BIS), June 2011, p-54.)*

The table 1.1 shows that the capital conservation buffer of 2.5%, comprises of Common Equity Tier-1 is established as per the regulatory of minimum capital requirements. The key objective of the capital conservation buffer are to ensure that banks maintain a buffer of capital the can be used to absorb losses during of financial and economic stress.

TABLE-1.1: Capital Framework

	Common Equity Tier-1	**Tier-1 Capital**	**Total Capital**
Minimum Capital	4.5%	6.0%	8.0%
Conservation Buffer	2.5%	-	-
Minimum Capital plus Conservation Buffer	7.0%	8.5%	10.5%
Counter Cyclical Range	0-2.5%	-	-

Source: *Max Kubat (2014), "Does Basel-III Bring Anything New? A Comparison Between Capital Accords Basel-II and Basel-III", 2nd Economics & Finance Conference, Vienna, 03 June 2014, ISBN 978-80-87927-01-4, IIES, p.-348 [cit. BCBS Document].*

The Basel Committee on Banking Supervision (BCBS) introduced additional tool to reduce the risk in the name of Countercyclical Capital Buffer. The BCBS introduced the Countercyclical Capital Buffer on similar principle of capital conservation buffer to reduce the risk and due to the possibility of sustaining substantial losses in the banking sector. The market risk is changed due to change in market demand of same manner. When the market is in good condition, the requirements of capital will also increase equally and vice versa. In this, one point is also stated in Basel-III. The countercyclical buffer may also introduce to the increase or decrease in demand of capital requirements.

TABLE-1.2: The Connection between Common Equity Tier-1 Ratio (Capital Conservation Buffer) and Retained Earnings (Conservation Ratio)

Common Equity Tier-1 Ratio	Minimum Level of Retained Earnings (in %)
4.5% - 5.125%	100%
>5.125% - 5.75%	80%
>5.75% - 6.375%	60%
>6.375% - 7%	40%
>7.0%	0%

Source: *Max Kubat (2014), "Does Basel-III Bring Anything New? A Comparison Between Capital Accords Basel-II and Basel-III", 2nd Economics & Finance Conference, Vienna, 03 June 2014, ISBN 978-80-87927-01-4, IIES, p.-348 [cit. BCBS Document, 2011, p.-56].*

The table 1.2 shows that the capital conservation buffer of 2.5%, comprises of Common Equity Tier-1 is established as per the regulatory of minimum capital requirements The Countercyclical Capital Buffer size is optimal from 0% to 2.5% of Risk Weighted Assets (RWA) into the category of Common Equity Tier-1. As per the recommendation of BCBS, the table 1.2 shows that the Common Equity Tier-1 should be achieving 4.5% Risk Weighted Assets (RWA) and the last and final value of Common Equity Tier-1 Ratio is 7% Risk Weighted Assets (RWA) then the level of retained earnings (Minimum capital Conservation Ratio) will be 0%.

TABLE-1.3: Individual Bank Minimum Capital Conservation Standards, when a Bank is subject to a 2.5% Counter cyclical Capital Buffer Requirement.

Common Equity Tier-1 Ratio (including other fully loss First Absorbing Capital)/ Counter cyclical Buffer	Minimum Capital Conservation Ratios (Expressed as a %age of Earnings)
4.5% – 5.75%	100%
>5.75% - 7.0%	80%
>7.0% - 8.25%	60%
>8.25% - 9.5%	40%
.9.5%	0%

Source: *BCBS, (2011), "Basel-III Regulatory Framework for more resilient Banks and Banking Systems", Banks for International Settlements (BIS), June 2011, p-60.*

The principle of Countercyclical Capital Buffer is very similar to above mentioned capital conservation buffer. The Counter cyclical Capital Buffer size is optimal from 0% to 2.5% of Risk Weighted Assets (RWA) into the category of Common Equity Tier-1. As per the recommendation of BCBS, the table 1.3 shows that the Common Equity Tier-1 should be achieving 4.5% Risk Weighted Assets (RWA). In case of the final value of Common Equity Tier-1 Ratio increases to 9.5% Risk Weighted Assets (RWA) then the level of retained earnings (Minimum capital Conservation Ratio) will be 0%.

3. Risk Coverage:

While banks have faced challenges throughout to the years for a huge number of reasons, the significant reasons for genuine financial issues keep on the being careless credit guidelines for borrowers and counterparties, poor portfolio risk management, and an absence of consideration regarding changes in monetary and different conditions that can prompt a weakening in the credit remaining of a bank counterparties. Such type of situation is found in both types of countries like developing and developed countries.

After the financial crisis of 2007-08, the Basel Committee on Banking Supervision (BCBS) introduced additional tools to reduce the risk of the banking supervision. They have provided a stark reminder of the need for banks to effectively identify measures monitors and control credit risk, as well as to understand how risk interacts with other types of risk (including market, liquidity and reputational risk). The basic component of a comprehensive credit risks management program include (i) Operating under a sound granting process (ii) establishing an appropriate risk environment and (iii) maintain an appropriate credit administration, measurement and monitoring process.

4. Leverage Ratio:

One among the underlying features of the crisis was the build-up of excessive On- and Off-balance Sheet Leverage within the banking industry. In many cases, bank build-up excessive leverage while still showing strong risk based capital ratios. During the foremost serve a part of the crisis, the banking sector was forced by the market to scale back its leverage during a manner that amplified downward pressure on assets prices, further exacerbating the regeneration loop between losses, declines from bank capital, and contraction in credit availability. Therefore, the committee agreed to introduce an easy, transparent, non risk based leverage ratio that's calibrated to act as a reputable supplementary measure to the risk based capital requirements. The leverage ratio meant to realize the subsequent objectives:

- Constrain the build-up of leverage within the banking sector, helping avoid establishing deleveraging process which can damage the broader economic and financial system and therefore the economy.
- Reinforce the risk based requirements with an easy, non risk based "backstop" measure.

Definition and calculation of the leverage ratio, which would functions the idea about testing for the parallel, run period. The idea of calculation is the average of the monthly leverage ratio of the quarter supported the definitions of the capital (the capital measure) and total exposure measure (BCBS, 2011, P.-61).

The leverage ratio changed time frame started on the first January, 2011, since banks are monitored on a six month basis. In corresponding with this stage, the application stage began from first January 2013, enduring to first January 2017. The two stages should assist in responding to the inquiry whether the selected 3 percent leverage ratio is suitable. In the event that things being what they are, it isn't, the ratio has looked into and has been implemented finally in the first pillar of first January 2018 (BCBS, 2011, p.-63). The leverage ratio is defined with the help of following formula:

$$\textbf{The Leverage Ratio} = \frac{\textit{Tier-1}}{\textit{ON-Balance and Off- Balance Sheets exposures of Bank}} > 3\%$$

Source: *Max Kubat (2014), "Does Basel-III Bring Anything New?", A Comparison between Capital Accords Basel-II and Basel-III", 2nd Economics & Finance Conference, Vienna, 03*

June 2014, ISBN 978-80-87927-01-4, IIES, p.-348 [cit. BCBS Document, 2011, p.-63].

On-balance Sheet leverage is the leverage incurred from financial transactions reflected on the balance sheet according to accounting standards. Off-balance sheet transactions are financial transactions that are not observable on the balance sheet of the financial institution conducting the transaction. Financial derivatives such as futures contracts are included in Off-balance sheet transactions. As such, Off-balance sheet Leverage is a leverage that is not reflected on the balance sheet because usually leveraging is a part of a financial derivatives transaction. [As details in *"A Glossary of Terms used in Payments and Settlements"; March, 2003. Retrieved from, http:www.bis.org/publ./cpss00b.pdf.]*

5. Liquidity Management Changes:

When contrasting of Basel-III and Basel-II, there is basically nothing to analyze, as Basel-II didn't utilize any comparable instrument. Then again, it ought to be noticed that the liquidity management is similar to banks since it was utilized even before Basel-III for internal purpose. BCBS itself admits that the importance of liquidity was thought little and that absence of liquidity caused trouble even to saves money with great degree of capital(BCBS, 2011, p.-8).

Presently Basel-III is presenting the BCBS Standards that is spoken to by two markers specifically Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR).

1. Liquidity Coverage Ratio: Liquidity coverage ratio aim is to ensure that the banks has sufficient liquidity for a period of 30 calendar days according to measurement of risk as specified by supervisor. Moreover, it is expected that the mention time is enough for come up a solution to the crisis of the bank. Formula for liquidity coverage ratio is as follows:

$$\textit{Liquidity Coverage Ratio} = \frac{\textit{Stock of High Quality Liquid Assets}}{\textit{Total Net Cash Outflows over the next 30 calendar days}} \geq 100\%$$

Source: *Max Kubat (2014), "Does Basel-III Bring Anything New?", A Comparison between Capital Accords Basel-II and Basel-III", 2nd Economics & Finance Conference, Vienna, 03 June 2014, ISBN 978-80-87927-01-4, IIES, p.-348 [cit. BCBS Document, 2010, p.-03].*

The Liquidity coverage ratio is meant to market resilience to potential liquidity disruptions over a 30 calendar days as specified by supervisor. It will help make sure that global banks have sufficient unencumbered high quality liquid assets to offset the net cash outflows it encounter with the acute shortage of short term liquidity. The required scenario is made upon circumstances experience within the global financial crisis that began in 2007 and the following situations were showed:

- The institution's credit rating position was very poor;
- a partial loss of deposits;
- a loss of unsecure wholesale funding;
- a significant increase in secured funding haircuts and
- Increase in derivative collateral calls and substantial calls on contractual and non contractual off-balance sheet exposures, including committed credit and liquidity facilities (BCBS 2010, p.-9).

2. Net Stable Funding Ratio (NSFR):

Net Stable Funding Ratio (NSFR) require a minimum amount of stable source of funding at a bank relative to the liquidity profiles of the assets, also because the potential for contingent liquidity needs arising from off-balance sheets commitments, over a one year duration. Net Stable Funding Ratio (NSFR) aims to limit over reliance on short term whole sale funding during times of floats market liquidity and encourage better assessment of liquidity risk across all on- and off- balance sheet items(BCBS 2010, p.-9). With the help of following formula, we can measure the relationship of NSFR:

$$\textbf{Net Stable Funding Ratio} = \frac{\text{Available Amount of Stable Funding}}{\text{Required Amount of Stable Funding}} > 100\%$$

Source: *Max Kubat (2014), "Does Basel-III Bring Anything New?"; A Comparison between Capital Accords Basel-II and Basel-III", 2nd Economics & Finance Conference, Vienna, 03 June 2014, ISBN 978-80-87927-01-4, IIES, p.-348 [cit. BCBS Document, 2010, p.-25].*

The Net Stable Funding ratio is expressed as the amount of available amount of stable funding to the amount of required stable funding. This ratio must be greater than 100%. Stable funding is defined as the portion of those types and amounts to equity and liability financing expected to be reliable sources of funds over a one-year duration under conditions of extended stress.

Conclusion and Suggestions:

Implementation of Basel-III Regulations, Banking Committee on Banking Supervision (BCBS) has introduced much stronger definition of capital requirements in comparison to Basel-I and Basel-II. After the financial crisis of 2007-08, BCBS introduced the additional tools for reduced the risk and increase the higher loss absorbing capacity for the banking supervision. Banks have included the 'On-balance sheet' items using their accounting record of the needs of the leverage ratio, additionally, the exposure means have included for subsequent treatments.

The BCBS was introduced the capital conservation buffer and counter cyclical buffer on the same principles to reduce the risk and due to the possibility of sustaining substantial losses in the banking sector, reason being the market are changed due to change in market demand in same manner. The final value of Common Equity Tier-1 Ratio, were fixed 7% Risk Weighted Assets (RWA) and 9.5% RWA in case of conservation buffer and counter cyclical buffer respectively on the 0% level of Retained Earnings (Conservation Ratio).

Suggestions:

Same as to the BCBS guidelines, it is suggested that the individual banks should try to access the capital market to raise the capital and they should also try to increase the demand of credit with maintaining the lowest cost of credit.

Central Banks and Regional Banks should concentrate on strengthening of risk management capacities with the help of adequate and qualitative data.

Government's monetary policies should be supportive to meet the authorization of higher quantum of liquid funds and liquidity standards of Basel-III Regulations.

Banks should try to increases the capital raising proposals for the help of current ownership structure and valuations.

For adoption of Basel-III Regulations for liquidity and coverage ratio, the BCBS should adopt same the fixed criteria for classification of Domestic Systematically Important Banks (D-SIBs) for both the develop and developing countries.

Central Banks should be more active to maintain the high level of the Liquidity Coverage Ratio and Net Stable Funding Ratio (NSFR).

REFERENCES:

1. Basel Committee on Banking Supervision. Basel III: A global regulatory

framework for more resilient banks and banking systems - revised version June 2011. (online). *Bank for International Sattlements*. Available from: http://www.bis.org/publ/bcbs189.htm.
2. Basel Committee on Banking Supervision. Instructions for Basel-III monitoring. January 2020. (online). *Bank for International Sattlements*. Available from: http://www.bis.org/publ/bcbs/qis/.
3. Basel Committee on Banking Supervision. Implementation of Basel-III standards. November-2014. *A Report to G-20 Leaders on Implementation of Basel-III Regulatory Reforms*. Available from: http://www.bis.org/publ/bcbs/impl_moni_g.20/htm.
4. Mohammad Kalloub, Ayhan Kapusuzoglu and Nidhi Basak Ceylan (2018).The Impact of Basel-III adoption by G-20 Members on their credit ratings *Eurasian Journal of Economics and Finance*, 6(1), 2018, 47-55. Available on https://EconPapers.**repec**.org/**RePEc:ejn:ejefjr:v:6:y:2018**:i:1:p:**47-55**.
5. Fiedler, Robert & Mahlknecht, Michael, (2013). Basel III: solving the liquidity business challenge," *Journal of Financial Transformation, Capco Institute, vol. 37, pages 77-94*. Available on https://ideas.repec:ris:jofitr:1557.
6. PEPY J´er´emy and Benjamin WILLIAMS (2018).Assessing the impact of Basel-II on bank behavior: A micro founded approach. Available on http://credi.ucb.frimedias/fi.22852784448-pdf.
7. Adesina Kolade Sunday (2019). Basel-III liquidity rules: The implication for bank lending growth in Africa. *Economic System 43*(2) Available on https://doi.org/10.1016/j.ecosys.2018.
8. Banking Committee on Banking Supervision (2011). Basel-III Regulatory Framework for more resilient Banks and Banking Systems. *Banks for International Settlements (BIS), June 2011*, 54. Available on ba repec:ris: jofitr:1557sel.
9. Banking Committee on Banking Supervision (2011). Basel-III Regulatory Framework for more resilient banks and banking systems. *Banks for International Settlements (BIS), June 2011*, 60. Avilable from, http:www.bis.org/publ./cpss00b.pdf.
10. Max Kubat (2014). Does Basel-III Bring Anything New?: A Comparison between Capital Accords Basel-II and Basel-III. *Second Economics & Finance Conference, Vienna, 03 June 2014, ISBN 978-80-87927-01-4, IIES*, 348.
11. Vighneswara Swamy (2019), "Basel-III: Implications for Indian Banking", Associate Professor, Department of Finance, *IBS Hyderabad, Basel-III Framework, 2019*, 221-222.
12. Anastasia Gromova Schneider, Caroline Niziolek (2011).The Road to Basel-III- Quantitative impact study, the Basel-III framework and implementation in the EU". *Fianancial Stability Report-June 2011*, 58-61.
13. M. Jayadev (2013). Basel-III implementation: Issues and challenges for Indian banks. *IIMB Management Review, SciVerse ScienceDirect, ISSN No. 0970-3896,2013*, 115-130.
14. Megha Joshi (2016). Basel-III norms and its implications on Indian banking industry. *Global Journal for Research Analysis, volume-5(12), December 2016, ISSN No. 2277-8160*.
15. Basel Committee on Banking Supervision. International Convergence of Capital Measurement and Capital Standards: Basel II: (online). *Bank for International Settlements, 2004*. Available from: http://www.bis.org/publ/bcbs107.pdf.
16. Basel Committee on Banking Supervision. International Convergence of Capital Measurement and Capital Standards: Basel II: A Revised Framework of Comprehensive Version. (online). Available from: http://www.bis.org/publ/bcbs128.htm.
17. Basel Committee on Banking Supervision. Basel III: International framework for liquidity risk measurement, standards and monitoring. (online). *Basel: Bank for International Settlements*, 2010. Available from: http://www.bis.org/publ/bcbs188.pdf.
18. Basel Committee on Banking Supervision. Basel III: A global regulatory framework for more resilient banks and banking systems - revised version June 2011. (online). *Bank for International Settlements*. Available from: http://www.bis.org/publ/bcbs189.htm.
19. European Parliament Press release: 16-04-2013 Parliament votes reform package to strengthen EU Banks. Available from: http://www.europarl.europa.eu/news/en/newsroom/ content /20130416IPR07333/html/Parliament-votes-reform-package-tostrengthen-EU-Banks.
20. DEWATRIPONT, Mathias, Jean-Charles ROCHET a Jean TIROLE(2010). Balancing the banks: Global lessons from the financial crisis. 1. *Issue, Princeton: Princeton University Press, 2010. ISBN 978-0-691-14523-5*.
21. Lalit, Ranjit Why Basel-II Failed and why any Basel-III is Doomed. GEG Working Paper (online). 2009. Available from http://www.globaleconomicgovernance.org.
22. Financial Stability Institute. 2010 FSI Survey on the Implementation of the New Capital Adequacy Framework: Summary of responses to the Basel II implementation survey. In: Financial Stability Institute. Available from: http://www.bis.org/fsi/fsipapers09.pdf, p. 6.