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Financial risk management based on Basel III

Lei Lei[1], Yuan Yue[2,*]

[1]*Southampton Business School, University of Southampton, Southampton, UK*

[2]*Adam Smith Business School, University of Glasgow, Glasgow, UK*

*Corresponding author: yy980925@outlook.com

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Abstract: The objective of this paper to providing critical ensuring effective financial risk management and working as a safeguard to protect the entire financial system. Many scholars hold the view that the purpose of introducing Basel III regulations is to promote the establishment of capital buffer, which will help overcome the financial pressure that the global financial system may encounter. In addition, the improvement of Basel III appears in the form of counter cyclical capital, and its buffer capacity is higher than the minimum capital requirement; In turn, this may help significantly reduce the systemic risk that banks could have seen.

1. Introduction

Basel is a set of voluntary global regulatory standards that have been created and implemented at the global level with the objective of strengthen the banking sector as it helped in the better management of risk exposure [1]. Although efforts in this regard were underway since the late 1940s, a crucial development in this regard has been witnessed through the development of Basel regulations. Essentially, the Basel regulations use the capital to manage the risk exposure of financial service providers, and thus necessary safeguard need to be in place to ensure the smooth functioning of the entire financial system. The Basil committee of 'Banking Supervision' was formed in 1974 after the break down of Bretton wood System, and the members include representatives of 27 countries that meet four times a year to evaluate the existing regulation and further improvement [2]. The committee was originally represented by the central banks from 10 different countries. Since the formation of the Basel Committee, it has been working as the main forum for regular chalking out and implementing best practices regarding supervisory matters [3].

Basel regulations are implementing the capital emphasising on financial service of organisations that has been agreed at the global level. Basel has created three major accords that are known as Basel I, Basel II, and Basel III [4]. The first Basel regulations were agreed in 1988, various amendments and improvements have been made to the regulations since the first draft. The regulations were mainly regarding credit risk management as the capital accord was made in Basel I [5]. The Basel II framework was developed in 2004, where improvements to Basel I have been made. The Basel II accord was mainly regarding capital requirements, risk management, and disclosure of central banks [6]. However, since the regulations had various weaknesses that led to the unfortunate 2007/08 Global Financial Crisis, further improvements in the Basel have been made in the form of Basel III in 2010.

However, the regulations have been actually implemented in 2013. Currently, all banks around the world have to comply with the Basel III regulations [7].

As the default of a financial service provider like a commercial bank could pose significant risks to the stability of the entire financial system, the need for regulations has been felt for a long [8]. By realizing the significance of Basel regulations, this report has been organized with the objective of providing critical ensuring effective financial risk management and work as a safeguard to protect the entire financial system.

2. Basel III Development

The Basel Committee was set up in1974; but the first accord was introduced in 1988, which published a set of capital requirements that was termed as "Basel I". The main focus of the regulations was to manage credit risk as it group and classified bank assets using the credit risk [9]. The risk level of banks could vary within the range of 0% to 100% and classified under one of the five categories of risks, which were 0%, 10%, 20%, 50% and 100% depending on the complexities that the organisation encounter and the risk of the securities held by the organisation [10]. However, there were certain weaknesses that gave banks the opportunity to control the amount of capital they required even though the regulations were designed by professionals [11]. In addition, there were no regulations concerning on bank risk-taking as banks were able to acquire capital more than the minimum requirements [7]. This led to the development of new regulations that were labeled as 'Basel II' that take into force in 2004. However, the regulations still had loopholes that banks exploited, and that led to the ultimate 2007/08 Global Financial Crisis [5]. The loopholes were identified and eradicated subsequently through a new set of regulations that were termed as 'Basel II'. Currently, Basel III regulations are followed around the world [12].

The analysis of Basel II regulations could reveal that the major issues with the regulations were the use of a single global risk factor [13]. An entity operating in different locations could be confronting to different risks that are counterbalanced if a single global risk factor is used. And this was the main weakness of the system [1]. Furthermore, Basel II also lacked of uniformity regarding the treatment of financial promises, which in turn suggests the lack of standardization. Although Basel II regulations were designed to provide standardized risk management processes around the world, however there was different treatment of financial promises was observed around the world [14]. In addition, the Basel II regulations also failed to account the bank capital market activities while analyzing the risks that the organization encounter. Other issues with the Basel II that led to the need of development of Basel III regulations include pro-cyclicality, subjective inputs used in the process,unclear and inconsistent definitions of different terms used in the risk management and capital regulation process [15]. Due to the range of these weaknesses, the need for improving regulations were felt that led to the development of Basel III regulation and subsequent implementation at the global level [4].

The analysis of Basel III could reveal that the set of regulations has three major pillars. The first pillar is 'enhanced minim capital and liquidity requirements' [16]. The risk thus covered through the first pillar includes securitization, trading book, counterparty credit risk, and bank exposure to central counterparties counter-cyclical buffer. The second pillar is 'enhanced supervisory review process for the firm's wide risk management and capital planning process (Rubio and Carrasco-Gallego, 2016). The quality and level of capital is ensured through risk management and supervision. The third pillar is 'enhanced risk disclosure and market discipline'. The revised pillar 3 disclosure requirements are observed to ensure the desired disclosure regarding the risk and market discipline that banks have to observe [9].

The Tier 1 capital requirements in Basel II was 4% but increased to 6% in Basel III [17]. The

capital buffers of 2.5% have been made mandatory in Basel III; and banks are encouraged to have up to 2.5% discretionary capital buffers in addition to the mandatory ratio [3]. Furthermore, the common equity requirement ratio in Basel III has been changed from 2% in Basel II to 4.5% in Basel III. In turn; this means that the total banks under Basel III are now required to maintain 7% to 9.5% for common equity, 8.5% to 11% for tier 1 capital, and 10.5% to 13% of their total capital [8]. On the other hand, the leverage ratio proposed in Basel III, which refers to the amount of capital to a bank's non-risk weighted asset, has been set 3% [5]. Considering the extended capital ratio that the banks are required to maintain, the regulations could be termed as more conservative in nature as it pushed maintaining a higher capital than what was required under Basel II [7]. Experts estimate that due to increased prudence exercised under Basel III, the GDP at the global level could have declined by 0.5% to 1.5%. However, the trade-off is not bad, considering the extended protections of the entire financial system ensured under Basel III [8].

The risk management and supervision process that has been used in Basel III could reveal that the regulations have been designed with the aim to effectively manage the operational risks, market risks, and credit risks [17]. The risk management process that has been incorporated in the regulations includes regulatory capital requirements, where the risk-weighted assets figures are used, which is the sum of operational risks, market risks, and credit risks [3]. Furthermore, Basel III also has inherited regulations that aim to reduce the systemic risk with cross-border operations. Furthermore, the concept of supervision has been introduced in Basel III, which in turn helped in the effective monitoring and reporting of the different types of risks that a bank could be encountering [2].

3. The Impact on Bank

The main impact of the Basel III regulations on banks is that it has further limited the loanable amount of the commercial banks as further limitations in terms of capital ratio have been implemented in the regulations [8]. This restricted the amount of loans that the banks could be extending in the market and further affecting the total profit of banks adversely [18]. This is because the profit of the banks is derived from the interest earned by extending loans. However, the total loan amount that banks could extend [19].

Basel III has been designed with the objective of strengthen the resilience of the banking sector, where some of the loopholes found in Basel II have been identified and eradicated [20]. Particularly during the global financial crisis, it has been observed that part of the crisis could be attributed to the housing crisis, through the increase of capital requirements suggested in Basel III, the weaknesses have been eradicated and the system has been further strengthened [21]. The Basel III voluntary regulations are mainly aimed to improve the overall stability and resilience of the financial sector, thus helping to overcome the significant risk exposure that the sector could have otherwise been witnessing. Furthermore, the set of regulations helped in reducing the systemic risks significantly that has been observed during the 2007/08 Global Financial Crisis [6]. Particularly, the set of regulations have been very successful in improving the overall risks of banks that led to panic situations [10].

In the Basel III regulations, some of the main issues that the banking industry confronted and that led to the unfortunate global financial crisis have been addressed and significant improvements have been made in the regulations [22]. Particularly, Basel III could help in strengthening the quality of capital and loss absorbance capacity of banks through risk weight assets calculation [11]. This improved the resilience of the banking sector and has certainly helped in overcoming the emergence of a financial crisis. Furthermore, Basel III also increased the capital requirements that could help in safeguarding against potential risk exposure [7]. By raising the quality of capital base suggested in Basel III, the regulations have been helping banks to better absorb losses [1]. For the Tier 1 capital, the regulations suggested that common equity could be used to write off losses. The 'Tier 1' capital

in the regulations includes common shares plus retained earnings plus equity-like debt instruments. On the other hand, the Tier 2 category used in the regulations includes capital that has 5-year minimum maturity that without incentive to redeem [15]. This capital is subordinated to depositors and creditors, but it increased the quality of the capital base held by banks. Significant improvement in Basel III in terms of quality of capital base has been made through eradication of Tier 3 capital that was used in the previous regulations and it no longer exists due to its significant low quality [4].

Essentially, the analysis of Basel III could reveal that changes within the voluntary regulations that have been brought forth in response to the dynamics witnessed in the global financial crisis [8]. Three main issues that have been worked out in Basel III concerning the global financial crisis include under-capitalization, over-leverage, and liquidity issues [2]. Under-capitalization is the risks that banks confront related to the loan. The weighted risks concept has been introduced, where principles have been laid down for the assessment of risks. The second category that improved in response global financial crisis is 'over-leverage, which the banks usually have high leverage ratios [9]. In Basel III, it has been suggested that the banks should have a leverage ratio of 3%, in limiting the size of activities that banks could engage in. The third main improvement in Basel III made in response to the 2007/08 Global Financial Crisis was liquidity [9]. Banks received deposits and extend loans that create equilibrium but with the problem of ease in retaining cover assets, they held into cash so that it could fulfill its obligations. The 30-day stress test was introduced with the purpose of help in measuring capital flight and loan default [9].

One main-specific change in regulation that has been suggested in Basel III is related to the liquidity requirement that the banks are required to maintain [15]. Basel III introduced a range of short-term and long-term liquidity measures that are believed to reinforce the resilience of banks to liquidity risks that they could have been otherwise encountering [19]. One main measure that has been suggested in this regard was the liquidity coverage ratio that has been implemented since 2015. The liquidity coverage ratio has been introduced with the objective of better cope with the short-term liquidity, whereas banks are required to hold amount of high-quality liquid assets that are equal to the net cash outflow in the 30 days stress period [18]. On the other hand, the net stable funding ratio concept has been introduced and implemented in 2018 to enhance the long-term liquidity [9]. The net stable funding ratio is on long-term strategic and structural liquidity of a bank. The ratio defines the minimum acceptable amount of a bank asset and activities over a period of 1-year time horizon [8].

One additional change in the regulations that have been suggested in Basel III was the introduction of the leverage ratio. The leverage ratio refers to the amount of capital to non-risk weighted asset of a bank [7]. As the Basel III regulations have been suggested in the aftermath of 2007/08 Global Financial Crisis, this leverage ratio was determined to be 3% so that bank could better cope with the extended risks posed by the global financial crises [8]. However, the Group of Central Bank Governor and Head of Supervision (GHOS) agreed in January 2016 that the ratio is permanently set to be 3% rather than temporary. The permanent leverage ratio has been implemented since January 1,2018 [5].

4. Conclusion

Based on the discussions presented in the report, it could be argued that Basel III regulations have been introduced with the aim to promote the build-up of capital buffers that could help in overcoming the financial stress that the global financial system could have been otherwise encountering. Basel III has been designed with the objective of strengthen the resilience of the banking sector, where some of the loopholes found in Basel II have been identified and eradicated. Particularly, in the global financial crisis, it has been observed that part of the crisis could be attributed to the housing crisis. Through increased capital requirements suggested in Basel III, the weaknesses have been eradicated and the system has been further strengthened. The Basel III regulations strengthened the quality of

bank capital and introduced the leverage ratio that provided additional backup than the measures that were suggested in Basel II. Furthermore, according to the analysis presented in the report, Basel III enhanced the quality, consistency and transparency of the Tier 1 capital base, besides introducing the global minim standard for funding liquidity that includes stressed liquidity measures and overage ration requirements. The measures thus introduced in Basel III could certainly help in bringing the long-term structural liquidity ratio and overcome the extended risks that banks could have been otherwise encountering. Moreover, improvements in Basel III have been brought in the form of countercyclical capital, which buffers above the minimum capital requirements; in turn, this could help in significantly reducing the systemic risks that banks could have been otherwise witnessing.

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