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Impacts of Basel III on Islamic Finance

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Abstract: The Basel Committee on Banking Supervision (BCBS) has introduced Basel III which was initiated after the recent global financial crisis in an effort to strengthen the regulatory regime of the banking sector. Basel III has introduced several modifications such as added liquidity requirement ratios in addition to strengthening capital requirements. This paper examines the impact of Basel III regulatory framework on Islamic Finance from a theoretical point of view. Using content analysis, this study finds that the impact of Basel III on Islamic Finance is relatively smaller than conventional finance since their model does not support short selling and non-Shari'ah complaint derivatives and thus they are having this competitive advantage over their conventional counterpart. However, it is important to highlight that deep examination of Islamic Banks' nature, specifications, and the way they conduct business is required to identify issues not considered by the Basel III framework. As Islamic Banks will not be able to fully adopt Basel III framework without any modifications that are in line with their specifications and nature. Thus, recommending IFSB to adapt these new requirements and issue new standards by considering Islamic finance industry when doing so. There is also a need for a robust infrastructure for Islamic financial institutions for their sound liquidity and smooth functioning, which will include development of Islamic money market and securities market. In addition, there is need for innovating new Shari'ah compliant products for Islamic financial institutions instead of just mimicking conventional products.

Keywords: Basel III, liquidity, Islamic Finance, Risk, Capital adequacy ratio

JEL Classification: G20, G21

1. Introduction

Due to outcome of disturbances in banking markets and international currency at the end of 1974, an initiative was put into action by establishing the Basel Committee on Banking Supervision (BCBS) with the purpose of ensuring reliability of the banking system.

The passing of Basel I framework entailed that financial institutions hold the capital of at least 8% of their risk weighted assets. Banks' capital consist of two sections, the first section which includes the shareholders' equity and retained earnings called Tier 1 Capital and the second section consisted of all inter external resources are called Tier 2 capital. Post implementation there were various changes in finance, technology etc. that were not addressed by Basel I resulting in framework weaknesses.

After reflecting on such weaknesses the Basel II framework was introduced by the BCBS that was tweaked to be more risk sensitive (Akhtar, 2006). The Basel II framework was addressing the gaps of its predecessor such as including aspect of operational risk (Ahmad, 2008). However, the framework failed again as it faced complications factoring in pro-cyclical process aspect (Teply, 2010).

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BCBS, in its response to the recent financial crisis has introduced some reforms to their framework. Basel III Accord is global regulatory standards issued by Basel Committee on Banking Supervision (BCBS) in 2010-2011, in response to global financial crises of 2008. Basel III was issued mainly to improve and thus strengthen the previous regulatory requirements under Basel II, which were not strong enough to control 2008 financial crisis. In order to prevent any such crisis in future the BCBS has set forward set of financial reforms on capital requirements, leverage ratio and liquidity requirements, aiming to strengthen bank's corporate governance and risk management practices along with improvement in bank's transparency and disclosures (Islamic finance development report, 2014).

This continuous process of enhancing regulations from Basel I to Basel II and then to Basel III is to prevent banks and thus banking industry, from taking on more risk than they can handle. Because their excessive risk taking activities may hurt the economy, as it did in 2007-2008 financial crises through draining up of liquidly in the market and lack of sufficient capital to absorb these losses. As banking industry globally is composed of both conventional and Islamic banks, Islamic banks are also required to comply with Basel III accord as does their conventional counterparts. However, these new regulations do not take into consideration different financial structures of these banks. BCBS designed these regulations based on conventional banking system without taking into account different characteristics of Islamic banking system. Thus, there is need to adjust Basel III regulations while keeping in mind the different balance sheet components of Islamic banks. Balance sheet products of Islamic banks include instruments which require different treatment than conventional products (Spinassou & Wardhana 2018).

According to Ozkan and Zamir, among some of the challenges; one of the challenges to Islamic banks will be to make sure that profit sharing investment accounts (PSIA) are not treated like pure deposits nor like owners' equity but as separate accounts under restricted and unrestricted investment account holders. Another challenge will be difficulty to find sharia complaint instruments to fulfill new liquidly requirements under Basel III regulations. Therefore, it is important to study the impacts of this new regulatory framework on Islamic banks, as these regulations will affect Islamic banks quiet differently than conventional banks.

According to Hidayat these Basel III regulations are for both micro and macro prudential levels, used to address risks at both bank level and at wider scale at system level. Capital, leverage and quantitative liquidity requirements demanding stricter definition of capital, higher capital ratios and capital buffers, together with suitable leverage, liquidly coverage and net stable funding ratios are adjusted at micro prudential level. However, at macro prudential level regulations are used to protect the banking sector from the period of extreme credit growth. There by, encouraging banks to accumulate sufficient capital buffers during their good times; to be used later in their bad times or during stress periods.

The object of this paper is to do theoretical investigation of impacts of Basel III regulations on Islamic banks and to recommend possible steps for its implementation. This paper is divided into five sections. The first section of this paper introduces background of Basel III, explains why Basel III has impact on Islamic banks and why is it important to discuss this topic, along with the objective of this study. Second section of this paper will review previous studies examining the impacts of the Basel III framework on Islamic Finance. In the third section research methodology was introduced. The fourth section consists of analysis of the new Basel III framework's capital requirements and ratios, the risk computation, leverage ratios, presenting the impact of the introduced buffers and stating the impact of new liquidity ratios stipulated by the Basel III framework. The fifth section will conclude the impacts analyzed and recommend how Islamic Banks should approach to Basel III implementation.

2. Literature review:

This section discusses the impacts of Basel III on Islamic finance with the help of previous literature.

According to Mahmood, Gan, & Nguyen (2017) the one of the major cause of recent financial crisis was, maturity transformation risk (where banks acquire short term deposits to finance long term financing).To control this transformation function Basel III has proposed regulations of liquidity requirements for banks. This study was used to analyze the effect of several factors that might affect maturity transformation risk in Islamic banks. The methodology used was according to guidelines given by Basel III to measure maturity transformation risk .They took a sample of 68 full-fledged Islamic banks from 11 different Islamic countries (from Asia and MENA region) and applied 2-step system GMM estimation technique on unbalanced panel dataset , for the period of 10 years (from 2005-2014). It was found that banks capital, size, credit risk, financing and market power were significant bank specific factors in determining maturity transformation risk whereas GDP and inflation are among significant macro-economic factors. From the results of this study it was seen that higher capital adequacy ratio helps Islamic banks to minimize their maturity transformation risk exposure at all levels. Due to their restrictions in terms of refinancing along with limited asses to interbank market, they are required to keep additional capital buffer for period of stress which in turn lowers their liquidity creation function and thus transformation risk. This is in accordance with the new Basel III regulations to improve capital requirements in order to better manage liquidly risk. It was also found that there is positive relationship between banks loans to total assets ratio and maturity transformation risk indicating that financing activities of banks should be closely monitored by regulators in accordance with financing polices.

In another journal article Bello and Hasan (2017) explored various issues relating to implementation of Basel III by Islamic banks. They did systematic literature review on 56 scholarly peer-reviewed articles which were related to Basel III implementation in Islamic banks and were published in the period of 2010-2016.From the results it was concluded that in general, the introduction of Basel III regulations has led to global shift in banks risk management practices but it didn't had much impact on Islamic banks since they were already meeting capital adequacy levels required by Basel III. However, it was found that Islamic banks were required to hold more liquid assets in order to support higher liquidity coverage ratio requirements under Basel III, but as it is known that Basel Committee (BCBS) did not develop these regulations considering uniqueness and features of Islamic banks, it has become challenging for Islamic banks to develop sharia complaint instruments to fulfill Basel capital adequacy requirements. This new regulatory framework however benefited Islamic banks to gain global competitiveness and helped Islamic financial markets in gaining market confidence.

According to Azeem, Marsap & Ozari (2015) banks regulatory authorities play important role in economic and financial stability of the economy. They used several past studies and did annual time series and cross sectional analysis of nine Islamic banks in Pakistan from the period of 2010-2013 to discuss the impact on Islamic banking in terms of three parameter which are financial size, spread, as well as non performing financing provisions and it also investigates impacts of Basel III on Islamic banks and conventional banks mainly to see that will these new regulations be flexible for Islamic banks to adopt as they differ from conventional banks. It was found that financial size, spreads and provision for non-performing loans will have positive effect when capital adequacy ratio will be increased. It was also seen that Islamic banks are already more capitalized than conventional banks, whereas conventional banks are more effective in terms of liquidity ratios. It was also highlighted that BCBS and IFSB should collaborate to establish sharia complaint regulatory framework for Islamic banks.

In another journal article Al-Hares, AbuGhazaleh & El-Galfy (2013) did a comparative study between Islamic and conventional banks focusing on their financial performance and quality capital in compliance with the Basel III requirements. The authors conducted commentary study on Islamic and conventional banks operating in GCC by collecting recent "Bank-level" data from 75 banks of which 55 are conventional and 25 are Islamic. It uses financial ratios analysis to comment on their financial performance and determining their significance through T-test during the period of 2003 to 2011. The study findings conclude that Islamic banks have higher profitability due to cheaper source of funding though investment deposits and asset quality, higher liquidity due to higher liquidity reserves, higher solvency relatively less risky due to credit advancement cautiousness and higher Internal growth rate due to higher profits from reinvesting. However it was also concluded that Islamic banks have lower efficiency due to their inefficiency in cost management. The study concludes that majority of the banks in GCC meet capitalization requirements of Basel III and their (CAR) Capital adequacy ratios satisfy the additional capital requirements required by Basel III to absorb any impairment charges as well as any higher provisions. It also indicates that the capital standards of Basel III failed to add any materially large impact on the GCC banks but Islamic banks had relatively higher capital ratios due to higher liquidity reserves and capitalization.

Similarly, Ahmed (2015) discusses the implications of liquidity ratios of Basel III for Islamic banks in his article. It highlights the restrictions which will constrain the implementation of liquidity requirements of Basel III as well as the challenges faced and practices through which Islamic banks resolve their liquidity needs. The methodology used is literature review of a number of previous studies. The study discusses that the use of (PSIA) profit-sharing investment accounts on the liability side of balance sheet gives rise to many issues in regards to regulations. One unique feature of PSIA is that it cannot be treated as pure deposits as they don't guarantee any fixed return but instead they are considered as additional loss buffers for Islamic banks as their underlying mudaraba contract places the risk on individual account holders, thus they are not qualified for additional Tier 1 capital requirements. Furthermore it discusses the need to construct Islamic inter-bank markets to reduce market liquidity risk as well as the constraints liquidity requirements of Basel III will have due to an underdeveloped liquidity infrastructure and liquidity instruments in compliance of Shari'ah principles.

Basel III framework requires banks to strengthen the capital buffers by improving the quality, quantity, consistency and reliability of their capital adequacy ratios. According to Berger & Di Patti (2006) their agency cost hypothesis suggested that high leverage or low capital ratios diminish agency costs and increase efficiency, therefore such requirements may lead to lower efficiency. Their hypothesis states that higher financial leverage encourages management to act more closely with shareholders' interest due to the liquidation problem that high degrees of leverage accompany. The liquidation problem may lead to reduction in managers' remuneration or reputation hence managers engage in riskier activities to satisfy shareholders' appetite for risk/return partaken.

Some early banking studies claim that capital ratios would be negatively associated with bank performance due to high capital requirements that may alter investor's demands that usually require lower rates of return. According to Park and Weber (2006) it's because higher capital ratios increases banks' risk taking and lead investors to accept lower returns on their investments. These results are in line with those obtained by Staub, da Silva, and Tabak (2010) that suggest that there is a negative relationship between efficiency and bank capital. As for Islamic Banks a study by Alam (2012) examined the disputed relationship between banking regulations, risk and efficiency between Islamic banks and their conventional counterpart. Data on liquidity, capital, risk and efficiency were employed to argue that Islamic Banks were more adaptable to regulatory requirements than their conventional counterparts; however he found that there is a negative relationship between capital buffers and risk for both Islamic and conventional banks.

According to Bitar, Walker, and Pukthuanong (2014) capital ratios negatively affect the efficiency of Islamic Banks relative to conventional banks, on the other hand when using non-risk based capital measures they found that higher capital ratios are associated with lower efficiency for Islamic Banks than their conventional counterpart. They also found that liquidity ratios were negatively associated with Islamic Banks' efficiency suggesting that the framework they operate under consists of some constraints. Their results presented a positive relationship between leverage and Islamic Banks' efficiency and that during crisis periods Islamic Banks are not more capitalized than their conventional counterparts. A study by Chazi and Sayed (2010) claims that Islamic Banks demonstrate better leverage and gross revenue ratios than their conventional counterpart. Their study furthermore states that Islamic Banks are upholding superior capital ratio in contrast to their conventional counterparts.

Several papers discussed the Basel implementation in Islamic Banks and its challenges. According to Ahmad (2008) the transactions of Islamic Banks differ in terms of nature from their conventional counterpart resulting in different risks as well. He strengthens the claim by discussing the deposit product as an example of how Basel framework safeguards principal and interest by ensuring capital is available, however Islamic Banks' Mudaraba contract doesn't stipulate any guaranteed return to safeguard against by means of capital. He argued that there are several challenges to applying Basel III framework in Islamic Banks such as its treatment of asset side that are asset backed hence hold higher risk than conventional counterpart. His deductions are in line with results of (Turk, 2007).

Basel III states that leverage ratio should not be less than 3% and as Islamic banks depend on fixed assets so there is no leverage ratio problem for these banks. Already in October 2014, the Islamic Financial Services Board (IFSB) supported an international organization in the form of a standard body of regulatory and supervisory bodies aimed at ensuring the strength and stability of the industry of Islamic finance. This note (IFSB-GN-6) identified III main characteristics of high quality liquid assets (HQLA): low correlation with risky assets, an active market and low volatility. The Boards indicated that Islamic banks should implement the Liquidity Coverage Ratio (LCR) and Basel III net stable funding ratio, as well as the implementation schedule (Spinassou, 2017).

Liquidity is the biggest challenge for Islamic banks under Basel III proposals, the reason for this is the limited means of liquidity in Islamic financial transactions in general. Therefore, temporary solutions to the problem of the liquidity in the Islamic banks have been used; they are short-term instruments where they have been used by IILM (international Islamic liquidity Management Corporation).Yet, offers of liquidity management instruments remain limited in Islamic finance. The bulk of Islamic banks' liquidity management instruments consist of low-profit assets, such as cash, central bank deposits, etc. (Al-Haris, 2017).

In general, liquidity instruments in the Islamic financial market are less effective and liquid than conventional financial markets; it is the challenge for Islamic finance. In the long run, the introduction of new capital buffers will allow Islamic banks to better respond to the cyclical nature of the economies of the countries and sectors in which they operate. However, the major challenge for Islamic banks adopting Basel III standards will be: the regulatory treatment of Profile Sharing and Loss Sharing Accounts (PSIAs) in the calculation of long-term LCR and liquidity ratios. This treatment has the effect of having a direct impact on the bank's liquidity need (Spinassou, 2017).

3. Research methodology

This study uses qualitative research method using content analysis approach, analyzing various previous studies to evaluate and interpret impacts of Basel III on Islamic Finance. Our data is secondary data collected through studying various journals, reports, research's and conference papers examining impacts Basel III framework has on Islamic finance. In this study, we have reviewed 20 papers, which

include journals, research papers and some conference papers in order to gather adequate knowledge on the topic.

4. Impacts of Basel III on Islamic finance:

From the above literature review it was revealed that Islamic banks were not much affected in terms of Basel III Capital adequacy ratio (CAR) requirements when compared to conventional banks, as they were already generally more capitalized then conventional ones. This higher capitalization of Islamic banks as can be evident from above studies is due the Shari'ah compliant framework of Islamic banks, their Islamic banking framework discourage debt based financing and encourage risk sharing activities. Increased capital quality required by Basel III will also be easy for Islamic banks as their majority of capital is composed of Tier 1 capital and increasing this capital quality will result in positive Impact not negative. According to the BCBS and Basel III rules, the capital adequacy ratio shall be more than eight % according to the following formula:

$$CAD > \frac{\text{Regulatory capital}}{\text{Total Risk Weighted Assets for Credit Risk (CR), Market Risk (MR) and Operaional Risk (OR)}}$$

Source: Rizwan, S., Khan, N., & Khan, H. (2012).

Table 1: Classification of capital according to Basel II and III

BII (current version)		Proposed new standard	
Tier 1	Common Stock and other forms of Tier 1 (including perpetuals)	Tier 1	Common Equity (common stock plus retained earnings and OCI)
	Disclosed reserves (including from minority interests)		Additional going concern capital
	15% innovative instruments (Annex 1 to BII)		n.a.
	Deduct goodwill and equity from securitizations		Deduct goodwill and many other items 1:1 from common equity
	Deduct 50% of investments in other financial institutions		Transformed into 1:1 adjustment
Tier 2 max 100% of Tier 1	Undisclosed reserves and asset revaluation	Tier 2	Only one form of Tier 2 capital remains
	General loan-loss reserves		Unrealized gains will be reviewed by BCBS until y/e 2010
	Hybrid capital instruments		n.a.
	Subordinated debt (max 50% of Tier 1)		n.a.
Tier 3	For market risk coverage (limitations apply)	Tier 3	n.a.

Source: Rizwan, Khan & Khan. (2012).

Thus, as impacts of new capital requirements and ratios on Islamic Finance can be analyzed based on the new definition of own funds and the new regulatory ratios, the BCBS has decided to increase all capital ratios such as the minimum level of common equity ratio form 2% to 4.5% and minimum level of capital adequacy ratio from 9% to 12%. The importance of Tier 1 Capital which includes common equity and some hybrid capital was highlighted. Tier 2 definition of capital is reduced therefore, issuances without loss absorbency is excluded. However for Islamic Banks capital structures are not the same as they are required to operate within Shari'ah compliance. This means that the means of Islamic Banks for funds mobilization and utilization differs than their conventional counterpart. Islamic Banks' structure consists of mainly Tier 1 capital that is the bank's own capital, holding Tier 2 capital is very rare as it generally consists of capital linked to interest. The new definition of the capital may have a major impact on the conventional counterparts, however not for Islamic Banks. This new Basel III regulation has a positive impact (in terms of providing a competitive edge for the Islamic Banks), since conventional banks will be seeing their capital decreased by a larger share and will experience higher costs of compliance.

In terms of leverage ratio requirements it was seen that this ratio was not much relevant to Islamic banks when compared to conventional counter parts as they are generally less exposed to leveraged activities due to strict restrictions on using them in Islamic banks. These leverage ratio requirements under Basel III were intended to constrain the build-up of leverage in the banking sector. Islamic Banks shouldn't experience much constraint under the leverage ratio requirements since it's usually limited due to the nature of their assets and products that are generally less liquid than their conventional counterparts. Leverage ratio requirement under Basel III can be easily covered by their high capitalization.

One of the important Basel III implementation challenge that Islamic banks face is with the treatment of their PSIAs. They are Shari'ah complaint deposits that cannot be treated as pure deposits. As they do not guarantee any returns and the loss is not borne by banks, but investment account holders are the one that bare the risk, unless loss is due to negligence of the bank. As a result profit sharing investment accounts (PSIA) don't qualify for additional Tier 1 capital and thus are excluded from calculations of Capital adequacy ratio. As a result assets financed through these investment accounts are excluded from exposure in Tier 1 .However, they provide additional loss buffer to Islamic banks as under mudaraba contract the risk is on the investment account holders not on Islamic banks. The impact of profit sharing investment accounts (PSIA) on the risk weighted assets and capital adequacy computation can thus be analyzed based on treatment/computation. As Basel III framework is based on conventional banks and doesn't take into account specific nature of Islamic Banks' products (such as PSIA),thus PSIA doesn't imply as financial risk for the bank as the risk is borne by the investment account holders therefore it's not considered as equity capital. The Islamic Financial Services Board (IFSB) has issued a regulatory standard that aids Islamic Banks to compute a ratio equivalent that factors in the nature of PSIA. This would provide a positive impact on Islamic banks as this implies that assets funded by PSIAs should be excluded from the calculation of the capital ratio.

Basel III framework introduced measures to limit credit risk due to counterparty credit exposures, improve coverage of the risks related to capital market activities especially derivatives and the trading book. Islamic Banks usually do not stress much importance on trading books, as most of the derivative instruments used in the markets are non-Shari'ah compliant. Therefore, naturally Islamic Banks won't be negatively impacted by changes in this regulation. The overall impact of additional requirements such as counterparty credit risk in the trading book, asset value correlation, and additional requirements for the securitization in terms of RWAs will result in it being increased. We can claim that Islamic Banks will experience a far lesser RWA increase than their conventional counterpart; however it's

important to point that such impact is directly linked to trading portfolio structure of each bank.

The BCBS requirements include setting up two buffers that are counter-cyclical buffer and a capital conservation buffer, in order to avert issues during periods of financial strife. The objectives of these buffers were not the same as for investment risk reserve or profit equalization reserve. The impact for both Islamic Banks and their conventional counterparts are more or less the same since PSIA treatment is not a major factor for these buffers.

One of the critical challenges that Islamic banks face today is to comply with Basel III strict liquidity requirements. Due to limited number of Islamic liquidity instruments available to Islamic banks, liquidity is a serious challenge for Islamic banks all over the world. Currently available Islamic money market instruments are less liquid and low rated when compared to conventional banks. For the liquidity standard Basel III introduced Liquidity coverage ratio (used to cover short term liquidity requirement usually foe 30 days) and net stable funding ratio (used to cover long term liquidity from 31 days to 1 year). This LCR and NSFR do not take into account the specifications of Islamic banks for LCR Islamic banks lack short term liquid assets and for NSFR there is again lack of long term liabilities with short term that can be withdrawn in short term. But due to lack of high quality sharia complaint liquid assets and lack of Islamic interbank and money market fulfilling these Basel III requirements are challenging for Islamic banks.

The shortage and unavailability of Sharia complaint securities leads many Islamic financial institutions to hold higher level of cash then conventional banks with them in order to liquidate in short term when needed. Even in those countries where sharia complaint securities are present, they lack active trading secondary markets. It has also been seen that in most countries there are lack of lenders for last resort that can help Islam banks in times of liquidity dry ups.

Due to the stability of Islamic banks in 2007-2008 financial crisis Islamic finance industry had gained market confidence, their sound structure somewhat attracted global attention. These financial crises were the main reason the world had the chance to focus on how the Islamic banking industry was able to combat the liquidity shocks problems which led to the development of Basel III. However the need to develop a proper liquidity infrastructure and liquidity instruments is significant to further stabilize the industry. The most challenging task for Islamic banking institution is management of liquidity if a proper infrastructure is not developed it could be a possible setback for the flourishing of the industry.

One of the studies conducted by Al-Hares, AbuGhazaleh & El-Galfy (2013) about the financial performance and compliance with Basel III showed that Islamic and conventional banks in GCC already fulfilled the Basel III requirements by meeting their Capitalization requirements as well as having adequate (CAR) capital adequacy ratios. When comparing between Islamic and conventional the capital ratios, profitability, liquidity and solvency of Islamic banks where higher but the study also pointed out that Islamic banks were less efficient than conventional banks on the basis of poor cost management. The study showed higher asset utilization (AU) and less operating expense (OE) for conventional banks indicating that they have diversified methods to generate revenues as well as more efficient in managing their operating costs.

According to Mahmood, Gan, & Nguyen (2017) when studying maturity transformation risk (where banks acquire short-term deposits to finance long-term financing), it was found that higher capital ratio requirements under Basel III helped Islamic banks to reduce their maturity transformation risk. Total loan to asset ratio and maturity transformation risk showed positive relationship indicating financing policies of the banks should be strictly monitored by regulators in order to manage liquidity risk. Higher level of capitalization and thus stability of Islamic banks in latest 2007 financial crisis

increased their confidence in market along with its competitiveness.

Similarly Bello and Hasan (2017) concluded from its findings that Basel III regulations shifted the risk management practices of banks as it also took into consideration liquidity risk and required banks to save in periods of good time to compensate for any future unexpected losses. According to Azeem, Marsap & Ozari (2015) financial size, spread and provision for non-performing loans will have positive effect with the increase in capital adequacy ratio of the banks.

From all these impacts, it can be seen that Islamic banks in general are having adverse effect due to lack of Islamic short term money market instruments which is not the case when it comes with their conventional counterparts, as conventional have relatively active money markets. Where, Islamic banks hold advantage in Capital adequacy ratio side when implementing Basel III; conventional banks on other side have advantage in fulfilling their liquidity requirements.

5. Conclusion and Recommendations

Although the main purpose of Basel III regulations was to promote financial stability into the banking industry, its introduction bought forward many challenges towards Islamic banks. The main reason for these challenges had been lack of attention towards Islamic banks which are also part of global banking system while formulating these regulations. As the object of this study was to do theoretical investigation of impacts of Basel III Accord on Islamic banks, this paper has achieved its objective by reviewing previous literature and then coming up with impacts of these regulations on Islamic and to some extend to conventional banks.

Although Islamic Finance is one of the fastest growing industries in several countries it still lacks the liquidity infrastructure and instruments that are Shari'ah compliant. Even though some effort is undertaken in countries like Malaysia, many jurisdictions in which Islamic Banks function have no inter-Islamic Banks or organized money markets to access liquidity means. Some countries' central banks are playing an important role in supplying tradable instruments to meet Islamic Banks short term liquidity needs, however the scarcity of liquid assets that are Shari'ah compliant is still a serious issue forcing many Islamic Banks to hold cash. It's thus recommended that liquidity management should be the center of attention; as it's the major negative impact imposed by the Basel III framework. Islamic banks will face constraints while attempting to implement the Basel III liquidity requirements if the actual liquidity infrastructure and instruments are not even developed.

Some of the possible recommendations for Islamic banking industry will be to work together in collaboration with other financial institutions in order to develop new Shari'ah compliant short term money market instruments for filling the gap of short term liquidity requirements under Basel III, and to work together in order to develop Islamic interbank markets for interbank liquidity function in case of any liquidity shocks in future. But, most importantly it is important to develop Sharia complaint legal and regulatory standards for Islamic finance industry which will ensure Islamic banks resilience in case of any future crisis. Due to uniqueness of Islamic financial institutions instruments and activities the implementation of Basel III regulations will require better clarification. Islamic Financial Service Board has taken step to introduce a framework for capital and liquidity requirements IFSB-15 taking into consideration unique structure of Islamic banks. IFSB-15 provides guidelines for components of Tier 1 and Tier2 capital, common stock, perpetual musharakah sukuk is counted in Tier 1 capital whereas wakalah and mudaraba sukuk maturing in more than five years as components of Tier 2 capital. Thus development of active sukuk market will also help Islamic financial institution to better manage their liquidity requirements.

Thus a robust infrastructure for Islamic financial institutions is required for sound liquidity and smooth functioning of the institutions, which will include development of Islamic money and securities

market. There is also a need to innovate new Shari'ah compliant products for Islamic financial institutions instead of just mimicking conventional products.

Overall, in comparison with their conventional counterparts Islamic banks are less impacted by Basel 3 framework, as their model does not support short selling and non-Shari'ah complaint derivatives. Islamic Banks could utilize the competitive advantage resulted by higher impact on their conventional counterparts. Islamic Banks can't be regulated by adapting requirements set for their conventional counterparts. A deep examination of Islamic Banks' nature, specifications, and the way they conduct business is required to identify issues not considered by the Basel III framework. Islamic Banks will not be able to fully adopt Basel III framework without any modifications that are in line with their specifications and nature, thus it is recommended that IFSB should adapt these new requirements and issue new standards that take Islamic finance industry into consideration similarly to how Basel II was examined. Such effort will aid in streamlining adoption of international reforms.

An alternate conclusion would be that from a theoretical perspective Islamic Banks' model to an extent is less impacted by the Basel III framework than their conventional counterpart; hence may there be an incentive for the conventional counterpart to incorporate more of Islamic Banks' model? It may be too much to expect any radical structural reform of the kind that enables Islamic Finance to be the dominant factor for regulators to base reforms on, therefore until then international regulatory guidelines should consider both conventional and Islamic banks when creating such frameworks.

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