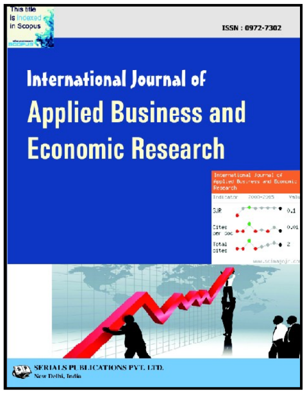

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The Implications of Basel III on Islamic Banks: A Review of Literature

Nabil Bello[1] and Aznan Hasan[2]

[1] *IIUM Institute of Islamic Banking and Finance (IIiBF), International Islamic University Malaysia,* E-mail: nabilbello@gmail.com
[2] *IIUM Institute of Islamic Banking and Finance, International Islamic University Malaysia* E-mail: haznan@iium.edu.my

Abstract: The objective of this literature review is to explore the various issues surrounding the implementation of Basel III by Islamic banks. A systematic literature review (SLR) is chosen in this review by synthesizing 56 scholarly peer-reviewed articles published from the 2010 to 2016 in relation to Basel III implementation by Islamic banks. The studies in general report that the introduction of Basel III has led to a global shift in risk management practices in banks. But this does not have much impact on Islamic banking since most Islamic banks were found to scale the capital adequacy levels. Although as suggested by studies, Basel III liquidity coverage ratio suggests Islamic banks to hold more liquid assets for wholesale funding, but obviously, the Basel committee did not consider the peculiarities of Islamic banks while developing Basel III, which poses a challenge for Islamic banks to develop instruments that will be suitable for meeting the capital adequacy requirements under Basel III and fulfilling Shari'ah requirements. There are several other areas that need further investigation from the studies reviewed as highlighted in the paper. Basel III framework has been found to be beneficial to Islamic banks in gaining global competitiveness and ensuring market confidence in the Islamic financial market.

Keywords: Basel III; Basel Accords; Capital Adequacy; Liquidity and Liquidity Management; Literature Review; Islamic Banks

1. INTRODUCTION

Basel III was introduced by the Basel Committee on Banking Supervision in response to the 2007/2008 global financial crisis, which seriously affected the global financial system. The crisis caused the collapse of several financial institutions such as Northern Rock and Lehman Brothers that was characterized with the inefficiency of risk management practices even though such banks declared profits and relatively possessed high capitalization. Some others that survived were forced to merge or resort to bailouts (Archer & Karim, 2013, p. 11). The major lesson learnt from this incidence is that when risk is not considered as a key component of the management structure, it may not only lead to bank run, but also affect the whole financial system. Studies have shown that overall, Islamic banks were less affected by the hit, but still further deliberations to sustain the industry was necessary.

Although there are several literatures on Basel III implementation available (online and in libraries), majority of these literatures are in the form of conference papers, books, working papers, news articles, manuscripts, etc. In addition, most of the studies are conceptual papers while quite a few articles were published in indexed journals or major academic online databases. This makes it very difficult to assess the quality of several literatures available. Some of the studies are even contradicting, flaws or at least mere personal opinions. This, as Siddaway (2014, p. 1) asserts, makes it difficult to understand the true overall picture of an issue and as well which study to be more reliable in terms of the applicability and drawing policy decisions. To avoid this problem, a systematic literature review (SLR) is chosen in this review by synthesizing the previous studies that were published in relation to Basel III implementation by Islamic banks.

This review intends to answer some questions related to Basel III implementation for Islamic banks. What empirical evidence is available on the importance of Basel III requirements to Islamic banks? What are the challenges in adopting Basel III requirements in Islamic banks? What are the issues surrounding the issuance of sukuk for Basel III implementation?

2. STUDIES REVIEWED

A total of 56 original, peer reviewed journal articles related to the implementation of Basel III in Islamic banks were identified (appendix 1). The papers were spread across 40 different journals indicating a trans-disciplinary interest in this area (appendix 2). It was also found that the key areas of research in this area lie in the management science discipline, which are economics, business accounting and finance areas. A total of 35 (63%) journals were in this category of articles containing 51 (91%) of the total articles. A sum of 3 (5%) of the journals contained 3 (5%) of the total articles. It would be noticed that one paper was not from a journal article, but rather a research paper sponsored by ISRA. The paper was found to be very relevant to this study and met the required criteria for inclusion. However, the contributions from disciplines other than the management sciences is not-substantial – less than 10%.

Basel III was formally introduced in November 2010 and therefore the studies on Basel III implementation were strictly restricted to 2010 to 2016. More so, there were no studies in this context before 2010 although a few articles were identified but most of them were predictions on the effects Basel III may have to Islamic banks. They were excluded based on quality of the articles particularly after studying their findings.

In the year 2010, three papers were published on three different aspects. Ahmad & Luo (2010) made a comparison between the efficiencies of Islamic and conventional banks in Germany, Turkey and the United Kingdom. Chazi & Syed (2010) also compared how both Islamic and conventional financial institutions dealt with the recent financial problems in terms of risk management globally. Similarly, Parashar & Venkatesh (2010) also studied what happened to Islamic banks during the financial crisis. Among these three papers only Parashar & Venkatesh (2010) studied Basel III issues. In the following years, the studies in this area received more attention.

A total of 28 studies were strictly on Islamic bank issues. Some studies (13 studies) were comparative studies between Islamic and conventional banks while some others were studies that combine both Islamic and conventional banking systems (15 studies). The latter studies did not make any comparison between the two.

3. METHODS USED IN THE STUDIES

The studies used different research designs. About 62.5% of the studies used quantitative and 32.1% were qualitative researches using several methods. Many of the studies however used more than one method. Only 3.57% of the studies used mixed methods, while 1.79% (Nienhaus & Karatas, 2016) used a multimethod research design. This study used different techniques to answer different research questions. Figure 2 below shows the research designs adopted in the studies.

Table 1
Bar chart showing research designs in studies

Research design	*Nos*
Quantitative	35
Qualitative	18
Mixed	2
Multimethod	1

A wide range of methods have been used to collect data. Some used more than one method as shown below (Table 2). Majority of the studies were based on secondary data from online databases, which include Bankscope, Annual Reports, Bloomberg, DataStream, Osiris Database, IFIS Database, IBIS Database, Bank Statements, Stock Market Indices and IMF reports. A quarter of the studies were found to be library research based on critical review of practices. About 15% used questionnaires. Other methods accounted for less than 10%. It is obvious that there are no studies that used observation, focus groups or content analysis. This seems to be an area of lacuna that needs further attention.

Table 2
Methods of Data Collection

Research Methods	*Nos*
Secondary Data	32
Library Research	15
Questionnaire	9
Interview	2
Survey	1

Different methods were used in analysing data ranging from statistical methods (39%) such as regression, t-test, simulation, descriptive and ANOVA and econometric methods (28.1%) using methods such as logit and probit regression, stochastic frontier analysis, ratios, data envelopment analysis and panel data analysis. Other methods are critical analysis (21.9%), financial ratios (4.7%), mathematical methods (3.1%) and systematic literature reviews (3.1%).

Table 3
Methods of data analysis

Details of the methods	*Nos*
Critical Analysis	14
Econometrics	18
Financial Ratios	3
Mathematics	2
Statistics	28
Literature Reviews	2

4. ISSUES ON BASEL III IMPLEMENTATION FROM PREVIOUS LITERATURE

From the previous descriptive analysis, studies related to Basel III implementation for Islamic banks are quite few. In addition, not all the studies are specifically discussing on Basel III implementation, some are on more general issues. Table 4 below is the classification of the papers based on the themes of the studies related to Basel III:

Table 4
Classification of Studies by Primary Themes

Themes	*Nos*
Bank Efficiency/Performance	6
Risk Management and Regulation	26
Basel III (General)	4
Basel III Capital Standards	4
Basel III Liquidity Ratios	3
Basel III Net Stable Funding Ratio	1
Equity Market	1
Global Financial Crisis	3
Sukuk Structures	8

Studies related to Basel III implementation are under about nine subthemes. About six papers studied the relationship between Basel III implementation and bank efficiency / performance. Generally, the studies report that Basel III was positively related to efficiency and performance of Islamic banks and indicating more preparedness of Islamic banks to Basel III. A total to 26 papers also focused on risk management and bank regulation practices. Basel III was generally considered as one of the risk management regulatory standards in these studies. Four studies were strictly on Basel III implementation for Islamic banks in general. Another four studies examine implementation of capital adequacy requirements of Basel III for Islamic banks. Three studies investigate the implementation of liquidity ratios of Basel III for Islamic banks. Only one study examines the Basel III net stable funding ratio (NSRF) implementation for Islamic banks. Similarly, only one study was on the equity market. Three studies discuss the global financial crisis and the roles of Basel III implementation to banks, particularly Islamic banks in avoiding future shocks. There are some eight studies that exclusively discuss on the roles of sukuk and how instrumental it is in the process of implementation of Basel III capital adequacy requirements for Islamic banks.

4.1. The Need for Basel III in Islamic Banking

The global financial crisis hit almost all parts of the globe including Islamic banks. This is because places where both banking systems operated were not immune from the recession. Ghosh (2016a) finds that generally the GCC banks were extremely impacted by the US sub-prime crisis. This was because such banks hoarded excessive liquidity and this led to lower loan growth especially during the sub-prime crisis. Although Islamic banks overall performed better during the crisis, Parashar & Venkatesh (2010) finds there are some aspects where Islamic banks even suffered more. Islamic banks were more affected in terms of their capital ratio, return on average equity and leverage. The conventional banks on the other hand suffered more in terms of return on average assets and liquidity.

However, existing literature report contradicting results as to whether regulation improves or impedes the efficiency and productivity of banks. Barth *et al.* (2001) in their seminal study conducted in 1999 and other subsequent studies (2004, 2006, 2008 & 2013) find that tighter restrictions on bank activities are negatively associated with bank efficiency while greater capital regulation stringency is marginally and positively associated with bank efficiency (Barth, Lin, Ma, Seade, & Song, 2013). This study raised serious debates and as concluded by Triki *et al.* (2016) the debate is still yet to be resolved. But in the context of Islamic banks, all the studies so far confirm a positive relationship between bank regulation and efficiency of Islamic banks. Kale (2015) finds that new regulations directly affects the productivity of banks positively particularly with the implementation of Basel III requirements. In a study on Africa banks involving both Islamic and conventional banks, Triki *et al.* (2016) further demonstrates that the impact also depends on bank size and the risk faced by the banks. Restrictions on entry affect large banks than smaller banks while exit restrictions affect smaller banks more. Banks with higher risks benefit more from more restrictions on entry while increased restrictions have no benefit to lower risk banks on exit.

Similarly, studies have shown that regulation is important in improving the efficiency of banks in general. Maghyereh & Awartani (2014) finds that capital adequacy, supervisory power and market discipline positively influence the efficiency of banks. However, it is still very early to assess the impact of Basel III on Islamic banks and this suggests why there are only few studies that discuss essentially the expected benefits of Basel III. Some of the expected benefits include promoting accountability and strengthening the relationship between finance and risk disciplines (Rasid, Rahman, & Ismail, 2011). Also, Basel III will improve regulatory practices of Islamic banks by maintaining higher capitalization and favourably affecting the funding levels of Islamic banks (Msatfa, 2012). Hasan (2014) note that Basel III requirements are easy to apply and meet the Shari'ah objectives. Ben Selma Mokni, Echchabi, Azouzi, & Rachdi (2014) further highlight that regulations will enhance steady growth of Islamic banks. Similarly, Kaur & Kapoor (2015) assert that the requirements will lead to a more proactive portfolio for the banks, improving operational efficiency, creating a better risk appetite for banks and create a behaviour for bank risk management that is progressive. It will also ensure the market confidence of investors (Zulkhibri, Ghafar, Sutan, & Hidayat, 2016).

Contrary to the previous views, Boumediene (2015) opines that Islamic banks do not need to adopt the Basel III requirements, particularly liquidity requirements because Islamic banks were found to be immune during the global financial crisis and were even stronger during the crisis. He concludes that even the IFSB adoption of Basel III was due to convenience and not because there was the need for it. However, not all the reasons of Boumediene (2015) are correct because studies have shown that even Islamic banks suffered during the financial crisis in some aspects. Also, the NSFR of Basel III was found to positively affect the stability of Islamic banks while it had a negative relationship with bank size (Ashraf, Rizwan, & L'Huillier, 2016). This further suggests the relevance of the Basel III NSFR.

In addition, most of the studies reviewed either discussed or demonstrated the efficiency of Islamic banks in comparison to conventional banks. It is well established that higher supervisory power and better corporate governance improves the performance of Islamic banks (Abdel-Baki & Sciabolazza, 2014; Alam, 2013; Ghosh, 2016b; Kale, 2015; Maghyereh & Awartani, 2014; Rahim, Mahat, Nassir, & Yahya, 2015). Efficiency also depends on market structure, bank's risk activities and also the regulatory environment (Maghyereh & Awartani, 2014). But Kale (2015) further explains that internal regulatory factors affect the efficiency of banks than external factors.

In comparison between the efficiencies of Islamic banks and conventional banks particularly in relation to bank regulation, Sorwar, Pappas, Pereira, & Nurullah (2016) find no discernible difference between the two, which the contrary is found to be established in the study of Triki *et al.* (2016). The geographical location of the studies may be a significant reason for the variations in their findings.

One study shows that Islamic banks were less efficient than conventional banks even though they reported higher profitability, liquidity, solvency and internal growth (Al-Hares, AbuGhazaleh, & El-Galfy, 2013). The study seems to lack validity in its findings especially after examining the findings of the study. More also, Hussain & Al-Ajmi (2012) finds that the levels of risks faced by Islamic banks is significantly higher than the risk faced by conventional banks in terms of country, liquidity, operational, residual and settlement. But the findings of Sorwar *et al.* (2016) show that Islamic banks are less riskier especially during the global financial crisis.

4.2. Preparedness of Islamic Banks to Implement Basel III

A very important question several studies try to answer is whether Islamic banks were prepared for Basel III implementation or not. Ramady (2015) notes that all GCC banks were fully prepared for Basel III implementation. In fact, all the banks in the GCC were found to have applied Basel II in their banking supervision, capital and liquidity requirements. Among the GCC countries, Saudi Arabia, Bahrain and the UAE are the most advanced in the implementation of the Basel requirements.

Moreover, Islamic banks are showing increased awareness and interest to risk management over the recent years. Studies have shown that Islamic banks were even more prepared for Basel III implementation than conventional banks (Al-Hares *et al.*, 2013; Alam, 2012). Studies that do not involve a comparison between Islamic and conventional banks also confirm the readiness of Islamic banks to implement Basel III requirements (Bilal, Talib, & Khan, 2013; Hussain & Al-Ajmi, 2012; Ramady, 2015; Shafique, Hussain, & Hassan, 2012).

Pellegrina (2012) finds that there is a difference between capitalization and risk positions in Islamic and conventional banks. The more Islamic banks are capitalized the less they are exposed to risk whereas in the conventional banks, high capitalization diverts their portfolio from traditional lending activities to rather more profit generating investments. In both scenarios, the results indicate that higher capitalization is a better position for both Islamic and conventional banks. This, however, is in line with Alam (2012) that both capital and liquidity requirements increase the risk behaviors of both Islamic and conventional banks. The general behavior of banks is that they respond to risk exposures by increasing their capital adequacy and not the other way round (Ghosh, 2014). Thus bank capital can reduce the risk taking incentives of banks (Haq, Faff, Seth, & Mohanty, 2014). In general, higher capital adequacy improves the efficiency of both Islamic and conventional banks (Maghyereh & Awartani, 2014). Still, Lee & Hsieh (2013) finds that the effect of capital on efficiency and profitability of banks depends on the level of income of countries. Where there is low-income in countries, the banks tend to have higher capital effect on profitability. This is a reason why banks in Middle Eastern countries have a high positive capital effect on profitability. Also, investment banks have lowest and positive effect on profitability while commercial banks have high negative capital effect on risk.

In terms of vulnerability to shocks, bringing the capital below the capital adequacy requirement will be necessary because Islamic banks operating above the minimum capital adequacy requirement are more vulnerable to shocks. Among the reasons behind this is that Islamic banks by using profit sharing investment account are more sensitive on their CAR (Chattha & Archer, 2016). This indicates an inverse relationship between profit sharing investment account and the regulatory capital ratio (Hamza & Saadaoui, 2013).

In a comparative study of risk management practices between Islamic and conventional banks in Bahrain, Hussain & Al-Ajmi (2012) find that Islamic banks have higher country, liquidity, operational, residual and settlement risks than conventional banks. Furthermore, studies show several relationships between bank risk, liquidity and capital of banks. Ghosh (2016a) finds a bidirectional relationship between bank risk and liquidity. Also, there was an inverse relationship between the behavior of banks in dealing with liquidity and capital buffers. When there is a decrease in capital buffers, banks increase their liquidity. Capital requirement and liquidity requirements had less impact on Islamic bank than conventional banks (Alam, 2012).

4.3. Challenges in the Implementing Basel III

Basel III was introduced because Basel II was considered insufficient to prevent the global financial crisis (Hersh, 2011). The Basel committee did not consider Islamic banks while developing Basel requirements and therefore Islamic banks were challenged with implementing the requirements. Islamic banks have excess liquidity compared to conventional banks (Ali, 2013; Boumediene, 2015), which, one of the reasons, is due to high competition with conventional banks (Ali, 2013) whereas the principles of Islamic banking are different. Even though there seems to be differences in the readiness of implementations of Basel III among Islamic banks (Kaur & Kapoor, 2015) due to jurisdictions of banks (Msatfa, 2012), there are several general problems faced by Islamic banks in the implementation of Basel III. In the GCC for instance, Ramady (2015) finds that there is lack of comprehensive conformity with the Basel capital adequacy requirements. Ghosh (2014) further confirms that GCC banks are defensive to risk as they increase their capital when there is higher risk. However, banks' attitude toward risk and capital in GCC banks does not evenly impact on regulatory pressure (Ghosh, 2014). The contractual nature of Islamic banks also poses more challenges in the management of certain risk. Operational risk is more complicated in Islamic banks (Abdullah, Shahimi, & Ismail, 2011).

Several other reasons like data acquisition and reporting, lack of human resources with the required education, scarce resources and disclosure requirements (Kaur & Kapoor, 2015) and also lack of information technology expertise in order to cater for specific Islamic instrument (Tafri, Rahman, & Omar, 2011) all make it difficult for some Islamic banks to implement the Basel requirements. Also, according to Hersh (2011) the leverage ratio is not relevant to Islamic banking because it is meant for deposit type of investment accounts.

4.4. Addressing the Challenges in Basel III implementation

There was an increased awareness on the implementation of Basel requirements since 2001 by both Islamic and conventional banks (Kaur & Kapoor, 2015). To Islamic banks, it helped them to be more innovative and also more active in product development (Tafri *et al.*, 2011). But since there are issues that needed to be addressed before Basel III could be adopted, serious deliberations on meeting Shari'ah requirements (Sairally, Muhammad, & Mustafa, 2013) and the macro-prudential aspects of Basel III (Nachane & Islam, 2012; Ramady, 2015; Rosman & Abdul Rahman, 2015) needed to be taken. However, in order to resolve the Shari'ah challenges in the implementation of Basel III, particularly meeting the regulatory capital requirement, sukuk was found to be the most suitable instrument for increasing regulatory capital of Islamic banks (Lackmann, 2014; Sairally *et al.*, 2013; Sairally, Muhammad, & Mustafa, 2015, 2016). The IFSB particularly took the issue very critical in the early time of the introduction of Basel III through revising their regulations (Msatfa, 2012) and came out with IFSB-15, which is the revised capital adequacy requirement for Islamic banks. It was indeed expected that such measures will have a great impact on sukuk issuance by highly rated governments and companies, and increase the domestic and international issuance of sukuk particularly by Islamic banks. Not only that, these measures will also lead to the cost of sukuk issuance through a standardisation process as a result of the new regulatory frameworks (Msatfa, 2012). Bank Negara Malaysia also issued a similar regulation that will guide Islamic banks in Malaysia (Sairally *et al.*, 2013, 2015, 2016).

It is found that only few studies focused on compliance with the Shari'ah in meeting Basel III capital requirements. Ahmed (2015) studied the liquidity challenges faced by Islamic banks in meeting liquidity requirements while Sairally *et al.*, (2013, 2015, 2016) studied more extensively on the Shari'ah issues in meeting regulatory capital requirements. Their studies devised practicable solutions in resolving Shari'ah issues in implementation of Basel III. They argue that the most suitable way to achieve the capital requirements is to use Sukuk Musharakah for both Tier 1 and Tier 2 capital and further concluded that the ranking of layers in the order recommended by Basel III was impossible. Similarly, exchange based contracts cannot be used for AT1 because it is required that instruments must be perpetual and using exchange based will violate the philosophy of Basel III. The study gave two solutions for the issue of subordination, which was the most serious Shari'ah concern. But their study seems to be not decisive on what was the solution that was in line with the Shari'ah. Two recommendations were given. Firstly, ranking layers *pari passu* one another which is still in line with the philosophy of Basel III. Secondly, use musharakah for Tier 1 capital and murabahah or Ijarah for Tier 2 instruments. Using the second option will allow for subordination (Sairally *et al.*, 2013). However, the bulk of their works confirm that using exchange based has some Shari'ah restriction, which for this reason, the writers seem not to support the second option. Another important suggestion posed by the studies of Sairally, *et al.* are the possibility of converting sukuk to ordinary shares which also depends on the category of Sukuk that is issued.

Chattha & Archer (2016, p. 112) in a study considers the sensitivity of CAR to shocks in Islamic commercial banks and finds that banks that operate "above minimum CAR could be vulnerable to shocks of various degrees of gravity, and thus bringing the CAR below the minimum regulatory requirement and necessitating appropriate remedial actions." This opens a very important issue in dealing with CAR on special cases and that it is not a one-cap-fits-all requirement. It also shows that Islamic banks may have special considerations in dealing with its macro prudential policies. A reason for a different treatment is required as noted by Chattha & Archer (2016) that will recognize the profit sharing nature of Islamic products. Another important measure in the implementation of Basel III was the IFSB modified NSFR. Ashraf *et al.* (2016) found in an empirical study that the IFSB modified NSFR was valid.

5. AREAS FOR FURTHER STUDY

From the review, it is obvious that there is a paucity of literature in this area (Kaur & Kapoor, 2015). There are several gaps and issues that were observed from this literature review pertaining to methodology, findings and limitations of the studies. As stated earlier, Basel III as a global standard was seen not to have considered adaptations to Islamic banking specific characteristics (Abdullah *et al.*, 2011). However, there is a need to develop universal requirements for all banks in future standards that will effectively be applicable to all banking systems.

Similarly, studies have shown that CAR initiated in Basel III further buttresses the virtue of equity financing over debt financing. But still as Mullineux (2015) notes, there is a lack of equity financing in both Islamic and conventional banks and therefore SMEs easily fail. Debt financing needs to be decreased to the possible minimum level. Banks will need to further learn more from the Islamic principle of profit and loss sharing. There is also the need for recapitalization of banks and development of sound capital market reforms to make this possible.

With regards to liquidity risk issues in Islamic banks, the study of Ali (2013) shows that the liquidity problems of Islamic banks have been increasing since 2003. There is the need for further study to find out what are the reasons for this. Another pillar of Basel III is the NSFR, which has not received attention of scholars. Only one paper studied its effects on Islamic banks (Ashraf *et al.*, 2016). Further studies may investigate whether compliance with NSFR will impact the efficiency of Islamic banks or not.

The studies reviewed reported several inconsistencies in the methodologies used. These include placing Islamic banks and conventional bank on equal footing (Al-Hares *et al.*, 2013), which due to the specific nature of Islamic banks in relation to size, age of banks and products, results may not be reliable. Some of the studies used very little sample sizes (Shafique, Hussain, & Hassan, 2012; Rosman & Abdul Rahman, 2015), due to few respondents (Tafri *et al.*, 2011) few banks (Parashar & Venkatesh, 2010; Alam, 2013) or few countries (Bilal *et al.*, 2013; Rahim *et al.*, 2015). There is also the need to confirm the consistency of the findings of several studies (Alam, 2013). Regarding the techniques of data collection, potential respondent bias was identified (Tafri *et al.*, 2011; Hussain & Al-Ajmi, 2012). There is also the need to employ more methods in future studies particularly, qualitative techniques like content analysis, case study or grounded theory. Although the use of secondary data seems to be the most suitable due to the nature of the subject area, other techniques of data collection should be used, such as interview, observation and focus group.

In the purview of Sukuk structuring, the studies of Sairally *et al.*, on the repositioning of sukuk structures for capital regulation is one of the nascent issues on sukuk studies. The recommendations given by the scholars need further re-examination in terms of Shari'ah compliance and even meeting the philosophy of Basel III capital requirement. AT1 requires that exchange based instruments must be perpetual in nature and therefore exchange based instruments could not be used. This seems to be a very clear issue that needs no further argument. But there is the need for examining the possibility of using another instrument other than mudharabah for the AT1. Similarly, their studies propose the use of musharakah for T2 and abolished the ranking order of layers. This is another issue that needs re-examination to find the possibility of using Shari'ah instruments to maintain the ranking order. Also, the authors were not decisive on the use of exchange based sukuk for structuring ATI sukuk. Another important gap identified was that their studies did not examine all the sukuk issuances in the implementation of Basel III capital requirements. Now there are about 22 sukuk issuances for meeting Basel III capital requirements and to bridge the gap between the idealist and the pragmatic approaches, there is need to investigate the structures and the features of these sukuk in relation to the Shari'ah and Basel III.

The debate between the idealist and the pragmatic approaches to sukuk structuring is one of the main issues that needs harmonization in the issuance of sukuk (Salah, 2014). Practitioners are more disposed to the pragmatic approaches to fulfil banking requirements which may not necessary be the ideal Shari'ah practices. Also, even when the pragmatic approach is to be considered, not all the conventional practices will as well be suitable for Islamic banks (Salah, 2014; Chattha and Archer, 2016). This will hence bring about the need for further deliberations on sukuk structuring. Some of the suggested areas from the studies reviewed include development of a *maqasid* based sukuk (Salah, 2014). Additionally, Zulkhibri (2015) identified important issues on sukuk studies that need further research. He stresses on the need to revise the theoretical framework on sukuk and sukuk practices instead of replicating the conventional products. Also, there is the need for advancing studies on sukuk to mainstream finance and economics, which will facilitate in further enlightening sukuk experts, trainers and educators. Another recommendation he identified is the need for more innovative sukuk and more behavioural studies on sukuk. Several untested variables related to sukuk such as pricing, performance of various sukuk structures, risk sharing and risk shifting in sukuk are all missing out from the existing literatures.

6. CONCLUSION

Basel III has led to a global shift in risk management practices in Banking practices in general. But this does not have much impact on Islamic banking since most Islamic banks were found to scale the capital adequacy levels. Basel III liquidity coverage ratio suggests Islamic banks to hold more liquid assets for wholesale funding. This is probably why the impact of Basel III will still be less on Islamic banks compared to the conventional banks (Harzi, 2011, p. 17). It is obvious that the Basel committee did not consider the peculiarities of Islamic banks while developing Basel III, which poses a challenge for Islamic banks to develop instruments that will be suitable for meeting the capital adequacy requirements under Basel III and fulfilling Shari'ah requirements. Notwithstanding, the framework has been found to be beneficial to Islamic banks in gaining global competitiveness and ensuring market confidence in the Islamic financial market (Zulkhibri, 2015, p. 240).

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APPENDICES

Appendix 1
Literature Screened Based on Title and Abstract

S/N	*Database*	*Search*	*Accessible*	*Downloaded*	*Title and Abstract Screening*
1	Emerald Insight	74	71	71	57
2	Google Scholar	N/A	N/A	94	21
3	Index Islamicus	2	2	1	1
4	Jstor	371	371	0	0
5	ProQuest	21	21	2	1
6	Science Direct	20	15	15	15
7	Scopus	6	5	1	1
8	Springer	46	46	26	22
9	Web of Science	3	3	3	3
10	Wiley-Blackwell	1	0	0	0
	Total	543	354	213	121

Appendix 2
Filter of studies used for systematic literature review