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Impact of Islamic Securitization (Sukuk) on Islamic Banks Liquidity Risk in Light of Basel III Requirements

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Abstract

This study aims to investigate the relation between Islamic securitization representing in Sukuk, and the Islamic banks 'liquidities in light of Basel 3 requirements. So that the study investigates three variables which include Islamic securitization as independent variable; net cash from financing activities and net noncore funding dependence ratio as dependent variables. The study follows quantitative method by employing cross sectional data context analysis. The data is collected from six banks over six countries through the period 2011-2013. Pearson regression is used to measure causal relation between Sukuk and Net Stable Fund Ratio (NSFR), hence the model is developed to describe the relation. The study uses net noncore funding dependence ratio as (NSFR) which was required by Basel III. The regression result finds that there is positive relation between Sukuk and NSFR for Islamic banks. Also the study uses loans / deposits ratio to discover the relation between Sukuk and Islamic banks 'liquidity risk, so the regression test shows that there is positive relation between Sukuk and loans / deposit ratio.

***Key Words**: Sukuk, NSFR, Liquidity Risk, Basel*

***JEL classification**: G21, G32*

Introduction

Does BASEL III liquidity requirement applicable for Islamic banks? If it does are Islamic banks comply with it? Does Sukuk issuing help Islamic banks to absorb liquidity risk? This debate has taken on added significance with relation between Islamic securitization and liquidity risk indicator Net Stable Fund Ratio (NSFR) in Islamic banks. From last literature there is no clear consensus about the relation between Islamic securitization and banks' liquidity.

ElSayed Elsiefy (2013) found that Islamic banks are less liquid than conventional bank due to liquidity indicators. There is no evidence for a significant relationship between capital ratio and the stability of Islamic banks (Mohammad BITAR, 2013). Also he added Liquidity ratio is positively correlated with the Z-score and the adjusted return on Equity of Islamic banks in comparison with conventional banks (Mohammad BITAR2013)

Simplice A. Asongum (2013) investigated if Basel II pillar 3 disclosures on the liquidity risk management are applied by 20 of top 33 world banks, he found that Only 25 per cent of sampled banks provide publicly accessible liquidity risk management information, a clear indication that in the post-crisis era, many top ranking banks still did not take Basel disclosure norms seriously, especially the February 2008 pre-crisis warning by the Basel Committee on Banking Supervision.

There are two useful monitoring tools for judging liquidity in conventional banks, they are the liquidity worksheet and liquidity ratio summary. The liquidity worksheet is essentially a cash flow analysis that many businesses use. The liquidity ratio summary is a compilation of commonly used ratios for assessing bank liquidity. Because of difficulties of gathering monthly cash follow data from the sample to use liquidity worksheet tool. Hence the study uses the liquidity ratio summary to reach reasonable results.

Subsequent to financial crisis the Basel Committee on Banking Supervision (BCBS) introduce revised capital requirements and new liquidity standards to enhance Banks' ability to absorb shock arising from financial and economic stress. Accordingly, the liquidity profile of banks going forward and liquidity criteria based on new requirements, with the aim to provide a liquidity buffer and enhance balance sheet resilience. The balance sheet resilience over longer term will be maintained by funding activities with more stable source of funding on a perpetual basis. The liquidity level will also be stress tested for regulatory compliance.

Table 1: Basel III Time Line for Capital And Liquidity Regulatory Compliance

Basel III measures		**2011**	**2012**	**2013**	**2015**	**2016**	**2018**	**2019**
Capital	Minimum common equity			Initial compliance	Full compliance			
	Conservation buffer					Initial compliance		Full compliance
Liquidity	Liquidity Coverage Ratio (LCR)	Observation period			Full compliance			
	Net Stable Fund Ratio (NSFR)		Observation period				Full compliance	

Source: BCOBS www.assaif.org

Liquidity Coverage Ratio (LCR) requires institutions to hold a sufficient buffer of high quality liquid assets to cover liquidity out flows a one-month period of stress. Islamic Financial Institutions (IFIs) should include assets of high credit and liquidity. On the other hand, the Net Stable Fund Ratio (NSFR) requires institutions to maintain a sound funding structure over one year in an extended firm, specific stress scenario. Assets currently funded and any contingent obligations to fund must be matched to a certain extent by source of stable funding. The Basel ш requirements for liquidity would impact Islamic financial institutions due to limited range of short–term investment.

Therefore this study tries to test two hypothesizes the first one says there is no relation between Islamic securitization and liquidity level of Islamic banks; the second says Islamic banks does not comply with Basel ш requirements on the liquidity level of the banks. This paper is structured from five sections as follows: section one shows literature review and Sukuk&Islamic securitization background ,the second section shows research methodology, the third section shows empirical data and analysis results, fourth section explain result and added significance of the study, section five shows the conclusion of the study, and the last section shows references&appendixes.

Literature Review

Literature related to this study is divided into two topics: literature related to liquidity risk in the Islamic banks; another literature is related to Islamic securitization (Sukuk).

In this study, literature is related to liquidity risk. There are several study focused on this manner such as: Samad A. (2004) had examined using ratio analysis of the financial performances of six Islamic banks and 15 conventional banks of Bahrain during the period 1991-2001, and concludes that there is no major difference in profitability and liquidity between Islamic banks and conventional banks. Study by the World Bank (WB) in 2010, Beck et al. claim that few significant differences in business orientation, efficiency, asset quality, and stability were found between the Islamic banks" business model and the conventional banks" business model. However, higher capitalizations of Islamic banks accompanied with higher liquidity reserves explain the relatively better performance of Islamic banks during the international financial crisis.

Parashar & Venkatesh (2010) compare using ratio analysis conventional and Islamic banks performance in the GCC before and during the recent global financial crisis, and found that over the four-year period analysis from 2006 to 2009, Islamic banks performed better than conventional banks in respect of profitability as indicated by higher average return on total assets and equity, and were higher capitalized as indicated by higher CAR ratio and higher equity to total assets ratio. Interim analysis before and during the crisis, however showed that Islamic banks suffered more in terms of capital adequacy and leverage while conventional banks suffered more in terms of liquidity and return on average assets. However, ElSayed Elsiefy (2013) stated that Islamic banks are less liquid than conventional bank due to liquidity indicators. He examined specific performance areas related to: profitability, asset quality, efficiency, liquidity and insolvency risk in Islamic banks as compare to conventional counter parts in Qatar during period 2006-2010.Habib Ahamed (2013); he examined attitude of depositors and the nature of withdrawal risk inherent in Islamic banks . After a simple model was developed he stated that Islamic banks are able to absorb the macroeconomic shock better than conventional banks due to the existence of withdrawal risk. Simplice A. Asongum (2013) investigated if Basel II pillar 3 disclosures on liquidity risk management are applied by 20 of top 33 world banks, he found that only 25 per cent of sampled banks provide publicly accessible liquidity risk management information, a clear indication that in the post-crisis era, many top ranking banks still did not take Basel disclosure norms seriously, especially the February 2008 pre-crisis warning by the Basel Committee on Banking Supervision.

Secondly literature related to Islamic Securitization (Sukuk): Islamic Securitization is the creation of securities (or Sukuk) that: evidence ownership of a pool of tangible assets or a pool of tangible and intangible assets, either fixed or revolving, that generates cash flow plus any rights or other facilities designed to assure the servicing or timely distribution of proceeds to the security holders; and by their terms convert into cash within a finite time period (Haneef, 2008). After a brief definition, now I would like to move on with the structure of Islamic Securitization.

Various parties are involved in an Islamic Securitization transaction. Key players in various issues are:

- The originator or the issuers of Sukuk, who sells its assets to the SPV and uses the realized funds. Originators are mostly governments or big corporations, but they could be banking or non-banking Islamic financial institutions. The issuers may delegate, for a consideration or commission, the process of arranging the issue.
- The SPV – an entity set up specifically for the securitization process and managing the issue. It purchases assets from the originator and funds the purchase price by issuing Sukuk. Sometimes, the SPV is also referred to as the issuer.
- Investment banks – as issue agents for underwriting, lead managing and book-making services for Sukuk against any agreed-upon fee or commission. These services are provided by syndicates of Islamic banks and big multinational banks operating Islamic windows.
- Subscribers of Sukuk – mostly central banks, Islamic banks and non-bank financial institutions and individuals who subscribe to securities issued by the SPV. (Ayub ,2008,pp.393)

This list shows us the fact that an Islamic securitization structure perfectly mimics a conventional securitization in relation to the parties involved.

A widely used Islamic securitization structure, which also illustrates the exact same structure with the Sukuk issue made by the German state of (Saxony-Anhalt in 2004,) would resemble the following scenario:

- ✓ The originator of the assets (e.g. the owner of office buildings) sells the assets to an SPV.
- ✓ The SPV raises financing to purchase the assets by issuing Ijara Sukuk i.e. (leasing bonds) to investors. The amount raised by issuing the Sukuk is equal to the purchase price.
- ✓ The Ijara Sukuk represent equity interest in the SPV, and in turn, in the assets.
- ✓ The SPV leases the assets back to the seller/originator. The seller makes periodic lease payments to the SPV, which should match the SPV's obligations under the Ijara Sukuk.
- ✓ At maturity, the SPV sells the assets back to the originator (i.e. lessee or previous seller/owner of the assets). The amount should cover any liabilities owed by the SPV under the Ijara Sukuk. (Marar and Amr Daoud, 2006).

Sukuk is a recently-developed Islamic investment product that first appeared in 2002, when Malaysia issued a government-backed Sukuk, the first of its kind. (Richardson, 2006)

Sukuk (the plural of the word Sak, or Sanadat, meaning certificate of investment or simply certificates) (Ayub, 2008) are certificates that represent the holder's proportionate ownership in an undivided part of an underlying asset where the holder assumes all rights and obligations to such asset. (IFSB technical note, 2008).

The Accounting and Auditing Organization for Islamic Financial Institutions ("AAOIFI") has issued the Standard for Investment Sukuk. Under the AAOIFI Sukuk Standard, Sukuk are defined as certificates of equal value put to use as common shares and rights in tangible assets, usufructs, and services or as equity in a project or investment activity. The AAOIFI Sukuk Standard carefully distinguishes Sukuk from equity, notes, and bonds. It emphasizes that Sukuk are not debts of the issuer; they are fractional or proportional interests in underlying assets, usufructs, services, projects, or investment activities.

Sukuk may not be issued on a pool of receivables. Further, the underlying business or activity, and the underlying transactional structures (such as the underlying leases), must be Sharia-compliant (for example, the business or activity cannot engage in prohibited business activities), (McMillen and Michael, 2007).

To sum up, the AAOIFI standard stipulates that Sukuk must demonstrate:

- ✓ That any income arising must derive from the underlying activities for which the funding has been used, and not simply comprise interest,
- ✓ The Sukuk must be backed by real underlying assets and these assets must be Halal [that is, allowable under Sharia] in nature and be being utilized as part of a Halal activity; and there must be full transparency as to rights and obligations of all parties (Lahlou et. al., 2007),
- ✓ Until now there have been 14 different types of Sukuk structures most common ones of which are Sukuk al-Ijara, Sukuk al-Istisna, Sukuk al-Murabaha, Sukuk al-Musharaka and Sukuk al-Mudaraba (AAOIFI, 2003).

The list of 14 different types of Sukuk is not an exhaustive list since other forms of Sukuk can be issued such as by copyright owners, so continuing innovation in this field is expected (Lahlou and Tanega, 2007).

There are common Sukuk structures, such as Ijara Sukuk (lease) it is a contract according to which a party purchases and leases out equipment required by the client for periodic rental payment. The duration of the rental and the amount payable are agreed in advance, and ownership of the asset remains with the lessor (Mannan, 2008).

If a lessor, after executing an Ijara contract, wishes to recover his cost of purchase of the asset to get liquidity or for the purpose of profit, he can sell the leased asset wholly or partly, either to one party or to a number of individuals. The second type is Mudaraba (or Muqarada) Sukuk, mudaraba means an agreement between two parties according to which one of the two parties provides the capital (capital

provider) for the other (mudarib) to work with on the condition that the profit is to be shared between them according to a pre-agreed ratio. These types of Sukuk play a vital role in the process of development financing, because these are related to the profitability of the projects (Mannan, 2008).

Mudaraba or Muqarada (Muqarada has the same meaning as that of Mudaraba) Sukuk or deeds can be instrumental in enhancing public participation in investment activities in any economy. These are certificates that represent projects or activities managed on the Mudaraba principle by appointing any of the partners or any other person as Mudarib for management of the business. The third type is Musharaka Sukuk, In a Musharaka transaction, partners contribute capital to a project and share its risks and rewards. Profits are shared between partners on a pre-agreed ratio, but losses are shared in exact proportion to the capital invested by each party. Thus a financial institution provides a percentage of the capital needed by its customer with the understanding that the financial institution and customer will proportionately share in profits and losses in accordance with a formula agreed upon before the transaction is consummated. (Mirakhor and Zaidi, 2007).

In securitizing a Musharaka arrangement, every subscriber can be given a participation certificate, which represents his proportionate ownership in the assets of the venture or project for which financing is being raised. Subsequent to the acquisition of substantial non-liquid assets, these Musharaka certificates can be treated as negotiable instruments and can be bought and sold in the secondary market (Akbar and Salman, 2003).

Musharaka Sukuk which is based on an underlying Musharaka contract is quite similar to mudaraba Sukuk. The only major difference is that the intermediary will be a partner of the group of subscribers or the Musharaka Sukuk holders in much the same way as the owners of a joint stock company. Almost all of the criteria applied to a Mudaraba Sukuk are also applicable to the Musharaka Sukuk, but in the Mudaraba Sukuk the capital is from just one party. The issuer of the certificate is the inviter to a partnership in a specific project or activity, the subscribers are the partners in the Musharaka contract, and the realized funds are the contributions of the subscribers in the Musharaka capital. The certificate holders own the assets of partnership and share the profits and losses. (Mirakhor and Zaidi, 2007)

Fourth type is Murabaha Sukuk, Murabaha Sukuk are issued on the basis of murabaha sale for short term and medium-term financing. As mentioned earlier, the term murabaha refers to sale of goods at a price covering the purchase price plus a margin of profit agreed upon by both parties concerned. The advantage of this mode of financing is that, if the required commodity in the murabaha is too expensive for an individual or a banking institution to buy from its own resources, it is possible in this mode to seek additional financiers.

The financing of a project costing $50 million could be mobilized on an understanding with the would-be ultimate owner that the final price of the project would be $70 million, which would be repaid in equal installments over five years. The various financiers may share the $20 million murabaha profit in proportion to their financial contributions to the operation (Mirakhor and Zaidi, 2007). A commonly accepted view among Sharia scholars in a number of Islamic jurisdictions are that murabaha debt cannot be securitized, thus making Sukuk backed by pools of murabaha debt impermissible.

Fifth type is Salam Sukuk. As we noted earlier, Salam is deferred delivery contract. It is essentially a forward agreement where delivery occurs at a future date in exchange for spot payment of price. Salam Sukuk is certificates of equal value issued for the sake of mobilizing capital that is paid in advance in the shape of the price of the commodity to be delivered later.

The seller of the Salam commodity issues the certificates, while the subscribers are the buyers of that commodity, i.e. they are the owners of the commodity when delivered. Salam sale is attractive to the seller, whose cash flow is enhanced in advance, and to the buyer, as the Salam price is normally lower than the prevailing spot price (Gurulkan, 2010).

Salam-based securities may be created and sold by an SPV under which the funds mobilized from investors are paid as an advance to the company SPV in lieu of a promise to deliver a commodity at a future date. Sixth type is Istisna Sukuk. Istisna is a contractual agreement for manufacturing goods,

allowing cash payment in advance and future delivery or a future payment and future delivery of the goods manufactured, as per the contract. Istisna contracts can be securitized to raise funds on the basis of the rental income that the asset (for example, a building or bridge) will generate. In that case it will generate fixed return securities, or it can be securitized on the basis of variable income (such as a toll tax on the bridge), generating variable-return securities (Khan and Fahim, 2007).

Seventh type is Hybrid sukuk. Considering the fact that Sukuk issuance and trading are important means of investment and taking into account the various demands of investors, a more diversified Sukuk - hybrid or mixed asset Sukuk - emerged in the market. In a hybrid Sukuk, the underlying pool of assets can comprise of Istisna, Murabaha receivables as well as Ijara. Having a portfolio of assets comprising of different classes allows for a greater mobilization of funds. However, as Murabaha and Istisna contracts cannot be traded on secondary markets as securitized instruments at least 51 percent of the pool in a hybrid Sukuk must comprise of Sukuk tradable in the market such as an Ijara Sukuk (Gurulkan, 2010).

Steps involved in a hybrid Sukuk structure are:

- ✓ Islamic finance originator transfers tangible assets as well as Murabaha deals to the SPV.
- ✓ SPV issues certificates of participation to the Sukuk holders and receive funds. The funds are used by the Islamic finance originator.
- ✓ Islamic finance originator purchases these assets from the SPV over an agreed period of time.
- ✓ Investors receive fixed payment of return on the assets (Gurulkan, 2010).

Methodology

The study follows quantitative method, by applying cross sectional data analysis concept. The data is collected from annual published reports through the period 2011—to 2013 from different Islamic banks over six countries see appendix (A) which shows loan /deposits ratio in sampled Islamic banks. The sample is chooses according to availability of published annual report and membership of Islamic Financial Services Board (IFSB).Then the quantitative data of each studied bank is converted to U.S.A Dollar.

Linear regression test is used to discover if any relation between Sukuk Issuing and Islamic bank liquidity risk is available. To make that test the study uses the ratio Net Noncore Funding Dependence (NNCFD) to represent Net stable Funding Ratio (NSFR) which was addressed by Basel ш as liquidity risk indicator; moreover it uses loan/deposits as the second indicator of liquidity risk.

The NNCFR highlights how dependent a bank is on volatile funding resources; the ratio attempts to measure a banks 'ability withstand the sudden loss of its noncore liabilities. The ratio calculated by subtracting short –term investment from noncore liabilities, then dividing the difference by long –term assets.

$$\text{Dependence} = \frac{(\text{noncore liabilities} - \text{short-term investment})}{\text{Long –term assets}}$$

Noncore liabilities are: Time deposits; brokers &financial institution deposits; foreign office deposits; central bank purchased; and securities sold under agreement to repurchase. The researcher uses brokers &financial institution deposits; central bank purchased; unrestricted investment Accounts to represent Non-core liabilities, because Islamic banks did not use securities sold under agreement to repurchase.

Short–term investments are: Murabah & Mudarabah balances with other banks; debit securities with remaining maturity of one year or less; securities sold under agreement to repurchase; and central bank sold.

Long–term assets are: net loans with maturity more than one year, assets available for sale that have a remaining maturity of more than one year, and other real estate owned.

The dependence ratio can take negative values or positive values. Negative values indicate that the bank has enough short –term investment to sell to repay noncore liabilities if the need arose. Selling short–term investment is a relatively inexpensive way to meet the funding loss.

Positive values mean that the bank would have to sell long–term assets in addition to short-term investments to fund the loss of noncore liabilities, a relatively expensive way to fund loss. Thus higher ratio indicates lessening bank liquidity.

Typically smaller banks that rely more heavily on core funding source will have a negative value for this ratio (NSFR) .but larger banks with their greater reliance on noncore source will have positive values for this ratio (ElSayed Elsiefy, 2013). Hence increasing values for this ratio interpreted as declining liquidity risk.

Empirical Analysis

The study tries to test two hypothesizes:

Hypothesis (1): Islamic banks do not comply with Basel ш requirements on the liquidity level of the banks;

Hypothesis (2): There is no relation between Islamic securitization and liquidity level of Islamic banks.

Table 2: NSFR Requirements Compliance by Islamic Banks Based on Basel III

				NSFR
Year	2011	1		1.61
		2		-.17
		3		-2.27
		4		-.10
		5		-946.86
		6		-2.77
		Total	Mean	-226.5165
	2012	1		1.20
		2		-.18
		3		-.34
		4		-.26
		5		-940.64
		6		-3.10
		Total	Mean	-224.9060
	2013	1		4.51
		2		-1.29
		3		-5.94
		4		-.21
		5		-1375.93
		6		-3.00
		Total	Mean	-329.2575
	Total	Mean		-260.2267
a. Limited to first 6 cases.				

From table 2, we notice that NSFR for the sample is comply with Basel III requirement. In 2011 the mean of total ratios equal (-226.52), 2012 equal (-224.91) and in 2013 equal (-329.26) the NSFR decreases descending with years specifically 2012 & 2013.

Table 3: Correlation Results

Correlations								
		short term investment	**Islamic finance**	**core deposits**	**non-core liabilities**	**Sukuk**	**NNCFD**	**loans/deposits ratio**
Short-term investment	**Pearson Correlation**	1	.575	.359	.570	-.228	-.920	.440
	Sig. (2-tailed)		.000	.004	.000	.073	.000	.000
	N	63	63	63	63	63	63	63
Islamic finance	**Pearson Correlation**	.575	1	.661	.586	.148	-.326	.210
	Sig.(2-tailed)	.000		.000	.000	.246	.009	.099
	N	63	63	63	63	63	63	63
core deposits	**Pearson Correlation**	.359	.661	1	.409	-.091	-.057	-.325
	Sig.(2-tailed)	.004	.000		.001	.476	.658	.009
	N	63	63	63	63	63	63	63
Non-core liabilities	**Pearson Correlation**	.570	.586	.409	1	.218	-.307	.297
	Sig.(2-tailed)	.000	.000	.001		.086	.014	.018
	N	63	63	63	63	63	63	63
Sukuk	**Pearson Correlation**	-.228	.148	-.091	.218	1	.344	.550
	Sig.(2-tailed)	.073	.246	.476	.086		.006	.000
	N	63	63	63	63	63	63	63
NNCFD	**Pearson Correlation**	-.920	-.326	-.057	-.307	.344	1	-.446
	Sig.(2-tailed)	.000	.009	.658	.014	.006		.000
	N	63	63	63	63	63	63	63
loans/deposits ratio	**Pearson Correlation**	.440	.210	-.325	.297	.550	-.446	1
	Sig.(2-tailed)	.000	.099	.009	.018	.000	.000	
	N	63	63	63	63	63	63	63

a. Dependent Variable: Net Non-Core Fund Dependent

b. All requested variables entered.

Hypothesis (2): There is no relation between Islamic securitization and liquidity level of Islamic banks.

Correlation result shows that Net Non-core Fund Dependent Ratio (NNCFD) is significant negatively correlated to short-term investments (Pearson correlation = -(0.92), sig (2-tailed) = 0.000), also it is significant negatively correlated to Islamic Finance (Islamic loans such as Salam, Muraba, etc), (Pearson correlation = -(0.326), sig (2-tailed) = 0.009). In addition, (NNCFD) is significant negatively correlated to non-core liabilities (Pearson correlation = -(0.307), sig (2-tailed) = -(0.014), moreover it also significant negatively correlated to loan/deposits ratio, (Pearson correlation = -(0.44), sig (2-tailed) = 0.000. Nevertheless, there is no significant relation between NNCFD and core deposits. But, NNCFD is significantly positively correlated to Sukuk, Pearson correlation = 0.344, sig (2-tailed) = 0.006. According to table 3, the main independent variables are highly correlated, so the researcher regress each variable alone to avoid multicollinearity problems.

Table 4: Summary of the Model

Model Summary			
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.986[a]	.972	.970	4723111.51559

a. Predictors: (Constant), Sukuk, core deposits, short term investment, noncore liabilities, Islamic finance.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44703468728445632.000	5	8940693745689126.000	400.788	.000[b]
	Residual	1271543596156059.000	57	22307782388702.797		
	Total	45975012324601688.000	62			

a. Dependent Variable: non-core resource(NNCFD)

b. Predictors: (Constant), Sukuk, core deposits, short term investment, non-core liabilities, Islamic finance

Table 4 shows the model summary, adjusted R square = .97. It means that 97% of the Net Non-core Funds dependent change causes by the independent variables: Sukuk, core deposits, short term investment, non-core liabilities, and Islamic finance.

Table 4 shows significance of the test sig (2-tailed) = .000 under the confidence level 0.05 that is means there is causal relation between dependent variable (NNCFD) and independent variables which are mentioned above.

Table 5: Data for Independent Variables

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5317395.903	1140159.514		4.664	.000
	core deposits	.433	.053	.254	8.145	.000
	Islamic finance	.070	.102	.026	.679	.500
	short term investment	-7.018	.209	-1.126	-33.557	.000
	non-core liabilities	1.082	.168	.202	6.424	.000
	Sukuk	.851	.367	.063	2.319	.024

a. Dependent Variable: non-core resource

Net non-core Funds Dependent = (5317395.9, sig=.000) + 43 (core deposit sig = .000) + .07 (Islamic finance or loans, sig =.50) - 7.02 (short term investments, sig =.000) + 1.08 (noncore liabilities sig=.000) +.85 (Sukuk, sig = .024).

Thus we can say that there is positive causal relation between net non-Fund Dependent in Islamic banks and independent variables: core deposits, non-core liabilities, and Sukuk, but there is significant positive causal relation between Net Non-Core Fund Dependent and Islamic loans. Also the study uses curve estimation to describe the relation between Sukuk and NSFR, see appendixes (C), however the constant is bigger than other variables.

So we can conclude that there is positive relation between Sukuk and Net Stable fund Ratio, hence increasing Dependent ratio indicates negative signal of liquidity risk. Thus we can say Islamic securitization increases liquidity risk in the Islamic banks.

Also the study uses loans to deposit ratio indicator .Table 5 shows significance of the correlation between loan/deposits ratio and Sukuk: Correlation is significant at the 0.01 level (2-tailed). Table 6 shows significance of the correlation between loan/deposits ratio and Sukuk:

Table 6: Significance Test Results

Correlations[b]			
		Sukuk	loans/deposits ratio
Sukuk	Pearson Correlation	1	.550**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	254220667319526.940	98586283.147
	Covariance	4100333343863.338	1590101.341
loans/deposits ratio	Pearson Correlation	.550**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	98586283.147	126.602
	Covariance	1590101.341	2.042
**. Correlation is significant at the 0.01 level (2-tailed).			
b. Listwise N=63			

According to table 6, Sukuk significant positively high correlated to loans/deposits ratio.

Table 7: Significance Test Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.232	1	38.232	26.390	.000[b]
	Residual	88.370	61	1.449		
	Total	126.602	62			
a. Dependent Variable: loans/deposits ratio b. Predictors: (Constant), Sukuk.						

source :author calculation from data

Table 8: Model Summary

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.546	.172		8.983	.000
	Sukuk	3.878E-007	.000	.550	5.137	.000
a. Dependent Variable: loans/deposits ratio						

Also the researcher uses another test curve estimation to examine the causal relation between Sukuk and banks' liquidity level (loan /deposits ratio). See appendix (B) shows the positive causal relationship between Sukuk and loan /deposits ratio.

Results and Discussion

In this study, we notice that NSFR for the sample is comply with Basel III requirement.in 2011 the mean of total ratios equal (-226.52), 2012 equal (-224.91) and in 2013 equal (-329.26) the NSFR decreases descending with years specifically 2012 &2013. Negative values indicate that the bank has enough short – term investment to sell to repay noncore liabilities if the need arose. Selling short –term investment is a relatively inexpensive way to meet the funding loss. Hence increasing values for this ratio interpreted as declining liquidity risk of Islamic banks.

Thus we can say that Islamic banks are complying with Basel ш requirements specifically in the NSFR requirements time line compliance. See appendix (D). Thus fills the gab because there is no clear consensus about Islamic banks complying with basel3 liquidity requirement. Also, correlation result shows that Net Non-core Fund Dependent Ratio (NNCFD) is significant negatively correlated to short-term investments (Pearson correlation = - (0.92), sig (2-tailed) = 0.000), also it is significantly negatively correlated to Islamic Finance (Islamic loans such as Salam, Murabah…etc.), (Pearson correlation = - (0.326), sig (2-tailed) = 0.009). In addition, (NNCFD) is significant negatively correlated to non-core liabilities (Pearson correlation = (0.307), sig (2-tailed) = - (0.014), moreover it also significant negatively correlated to loan/deposits ratio, (Pearson correlation = - (0.44), sig (2-tailed) = 0.000. Nevertheless, there is no significant relation between NNCFD and core deposits. But NNCFD is significantly positively correlated to Sukuk, Pearson correlation = 0.344, sig (2-tailed) = 0.006. This can be explained short-term investments; Islamic loans; non-core liabilities move in the opposite direction with liquidity risk in Islamic banks. But, Islamic securitization (Sukuk Issuing) moves in same direction with liquidity risk in Islamic banks. Thus, we can say there is positive relation between Islamic securitization and Islamic banks liquidity risk. The model can be developed as follow:

Net non-core Funds Dependent = (5317395.9, sig = .000) + 43 (core deposit sig = .000) + .07 (Islamic finance or loans, sig = .50) -7.02 (short term investments, sig =.000) + 1.08 (noncore liabilities sig=.000) + .85 (Sukuk, sig= .024).

Thus we can say that there is positive causal relation between net non-Fund Dependent in Islamic banks and independent variables: core deposits, non-core liabilities, and Sukuk, but there is significant positive causal relation between Net Non-Core Fund Dependent and Islamic loans. So, there is no clear consensus on relation between Sukuk Issuing and liquidity risk indicator.

Additionally, Sukuk is positively high correlated to loans/deposits ratio. The model summary between Sukuk and loans /deposits ratio is following:

Loan / deposit = 1.546 (sig = 0.000) + .0000003878 sukuk (sig-0.000). So, there is no clear consensus on relation between Sukuk Issuing and liquidity risk indicator.

Loan/deposits ratio indicates the banks' ability to support its loans growth with deposits. Deposits are the principal way banks, especially community banks, fund their operation and loans. Higher value of this ratio means that there are fewer remaining deposits to fund additional loans, implying lower liquidity. Accordingly Islamic securitization or Sukuk Issuing leads to high liquidity risk in Islamic banks. This result agrees with Elsayed Elsiefy (2013). He had demonstrated that Islamic banks are less liquid than conventional banks due to liquidity indicator. However Habib Ahamed (2013) had stated that Islamic banks are able to absorb the macroeconomic shock better than conventional banks due to the existence of withdrawal risk.

Conclusions

Explanation of the working result: The first working hypothesis of this study says:

Islamic banks do not comply with Basel ш requirements on the liquidity level of the banks.

This hypothesis does not proved because we notice that NSFR variable for the sample is comply with Basel III liquidity requirement. In 2011, the mean of total ratios equal (-226.52), 2012 equal (-224.91) and in 2013 equal (-329.26) the NSFR decreases descending with years specifically 2012 & 2013. Thus, the researcher concludes that Islamic banks are comply with Basel ш liquidity requirement .

The second hypothesis of the study says:

There is no relation between Islamic securitization and liquidity level of Islamic banks.

This Hypothesis is proved, because according to Table 3-4, there is significant positive causal relation between Islamic securitization (Sukuk issuing) and Net Non-core Fund Dependent (NNCFD) which is considers as Net Stable Fund Ratio (NSFR). Net Stable Fund Ratio was addressed by Basel ш liquidity requirement in 2010. Also table 3-7 shows significant positive causal relation between Sukuk Issuing and loans/deposits ratio, Sukuk represents Islamic securitization.

The conclusion results of the study are: Islamic banks are complying with Basel ш liquidity requirement time line; Net Non-core Fund Dependent Ratio (NNCFD) is significant negatively correlated to short-term investments, also it is significant negatively correlated to Islamic Finance (Islamic loans such as Salam, Murabah…etc.); in addition (NNCFD) is significant negatively correlated to non-core liabilities .

These results contributed in making Islamic banks absorb any liquidity risk ; The model summary between Islamic securitization(Sukuk)and loans /deposits ratio is develops as following:

Loan / deposit = 1.546 (sig = 0.000) + .0000003878 sukuk (sig - 0.000). Thus Islamic securitization representing in Sukuk issuing leads Islamic banks to liquidity risk. According to the researcher assessment can be a new contribution to Islamic finance science , hence it can be used as warning liquidity risk indicator in Islamic banks for supervision purpose. Accordingly the recommendations for Islamic financial system to minimize Sukuk issuing as money market instrument. But the limitation of this study representing in difficulties faces the researcher to use questionnaire to support quantitative results. Also the researcher doesn't succeed to get monthly qualitative liquidity data from studied banks.

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Appendixes :

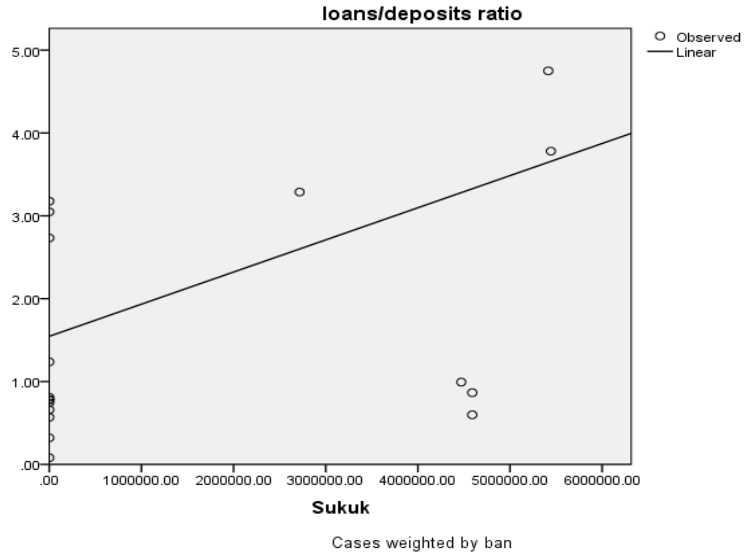
Appendix (A)

Case Summaries[a]

						Sukuk	net stable fundiratio	loans/deposits ratio
year	2011	ban	Abudahbi	1		4590625.00	1.61	.60
				Total	N	1	1	1
			AlRajhi	1		.00	-.17	.81
				Total	N	2	2	2
			Fisal	1		.00	-2.27	1.24
				Total	N	3	3	3
			Qater	1		2716691.00	-.10	3.29
				Total	N	4	4	4
			Affin	1		.00	-946.86	.78
				Total	N	5	5	5
			AlBaraka	1		.00	-2.77	2.73
				Total	N	6	6	6
			Total	N		21	21	21
	2012	ban	Abudahbi	1		4470902.00	1.20	.99
				Total	N	1	1	1
			AlRajhi	1		.00	-.18	.78
				Total	N	2	2	2
			Fisal	1		.00	-.34	.74
				Total	N	3	3	3
			Qater	1		5415628.00	-.26	4.75
				Total	N	4	4	4
			Affin	1		.00	-940.64	.57
				Total	N	5	5	5
			AlBaraka	1		.00	-3.10	3.18
				Total	N	6	6	6
			Total	N		21	21	21
	2013	ban	Abudahbi	1		4590625.00	4.51	.86
				Total	N	1	1	1
			AlRajhi	1		.00	-1.29	.08
				Total	N	2	2	2
			Fisal	1		.00	-5.94	.32
				Total	N	3	3	3
			Qater	1		5444077.00	-.21	3.78
				Total	N	4	4	4
			Affin	1		.00	-1375.93	.66
				Total	N	5	5	5
			AlBaraka	1		.00	-3.00	3.05
				Total	N	6	6	6
			Total	N		21	21	21
	Total	N				63	63	63

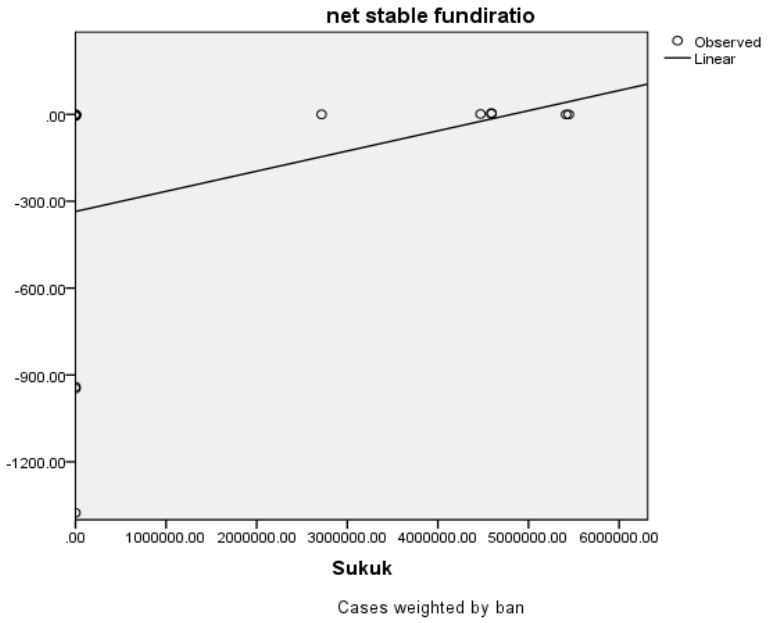
a. Limited to first 100 cases.

Appendix (B) shows the causal positive relation between Sukuk and loan/deposits ratio



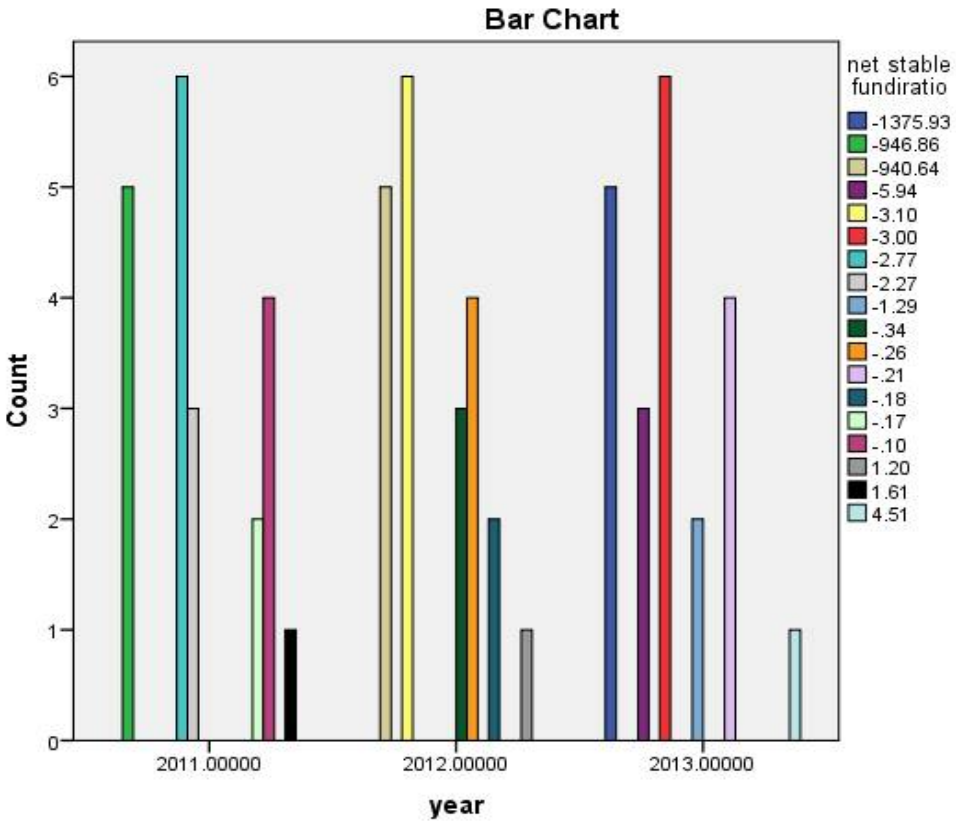
Source :author calculation from the data .

Appendix (C) shows the causal relation between Sukuk independent variable and NSFR as dependent variable



Source: author calculation from the data .

Appendix (D) shows distribution of NSFR



Source: author calculation from the data .