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THE SUBPRIME MORTGAGES CRISIS AND ISLAMIC SECURITIZATION

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ABSTRACT

As the global credit crisis continues to deepen, the soul-searching in conventional finance has directed attention to alternative modes of structured finance to fill the void of unmet credit demand. In this context, some investors who are unsettled by excessive risk-taking and asset price volatility have decided to turn to Islamic finance as market ruptures caused by the subprime mess seem has come to the dead end. In this regard, Islamic securitization, via *shariah*-compliant investment certificates or *sukuk*, invites a comparison of conventional and Islamic finance principles as to their capacity to sustain efficient capital allocation and financial stability. While *sukuk* are structured in a similar way to conventional asset-backed securities, they can have significantly different underlying structures and provisions and *shariah*-compliant, which prohibits the receipt and payment of interest and stipulates that income must be derived from an underlying real business risk rather than as a guaranteed return from interest. Therefore, the objective of this paper is to provide an insight of Islamic securitization based on *sukuk* structures. In particular, this paper will discuss the risk-sharing behaviour in Islamic securitization through different structures of *mudharabah* and *musharakah sukuk* derived from securitization. The paper will add to the literature of Islamic finance by showing that Islamic securitization via *sukuk* as a viable source of funds that could help stabilizes the securities market, and as solution to the current subprime mortgages financial crisis.

Keywords: Islamic securitization; *sukuk*; risk sharing.

1. Introduction

As the global credit crisis continues to deepen due, the soul-searching in conventional finance has directed their attention to alternative modes of structured finance such as Islamic securitization in order to fill the gap of unmet credit demand. In this position, some investors who are worried by their excessive risk-taking and asset price volatility have turned to Islamic finance as market deteriorates caused by the subprime mess seem has come to the dead end.

In this regard, Islamic securitization via *sukuk* invites a comparison of conventional and Islamic finance principles as to their capacity to sustain efficient capital allocation and financial stability. While *sukuk* are structured in a similar way to conventional asset-backed securities, they can have significantly different underlying structures and provisions and *shariah*-compliant, which prohibits the receipt and payment of interest and stipulates that income must be derived from an underlying real business risk rather than as a guaranteed return from interest.

The objective of this paper is to provide an insight of Islamic securitization based on *sukuk* structure. In particular, this paper will discuss the risk-sharing behaviour in Islamic securitization through different structures of *mudharabah* and *musharakah sukuk* derived from securitization. The paper will add to the literature of Islamic finance by showing that Islamic securitization via *sukuk* as a viable source of funds that could help stabilizes the securitization market, and as solution to the current subprime mortgages financial crisis.

The rest of the paper is structured as follows. Section two reviews the subprime mortgages crisis and the conventional securitization process. Section three discusses the nature of Islamic bond or *sukuk* and Islamic securitization process in greater detail. Section four concludes.

2. Subprime Mortgages

2.1. *Overview Of The Crisis*

Subprime lending is a general term that refers to the practice of making loans to borrowers who do not quality for market interest rates because of problems with their credit history or the ability to prove that they have enough income to support the monthly payment on the loan for which they are applying. Subprime loans or mortgages are risky for both lenders and borrowers because of the combination of high interest rates, bad credit history, and murky financial situations often associated with subprime applicants.[1] Mortgage brokers in U.S. handle as much as 70 percent of subprime mortgage originations (Lubove & Taub, 2007). The value was estimated at $1.3 trillion as of March 2007, with over 7.5 million first-lien subprime mortgages outstanding (www.scribd.com/doc/6920806/2007).

The eruption of the United States housing bubble has triggered the starting point of subprime mortgage financial crisis that began in U.S in 2006 and became a global financial crisis in 2007, which has yet to be resolved. Housing bubble in this context is characterized by the accelerate rises in the real property valuation until unsustainable levels are reached relative to incomes, i.e. price-to-rent ratio. Rising interest rates increased the monthly payments on newly-popular adjustable rate mortgages and property values suffered declines from the demise of the bubble, leaving home owners unable to meet their financial commitments. As home prices sink, mortgage defaults started to increase rapidly, resulting sharp rise of foreclosure rates among the home owners and lenders without a means to recoup their losses. This has resulted in a severe credit crunch, threatening the solvency of a number of marginal private banks and other financial institutions.

The high numbers of defaulters, i.e. home owners in making their mortgage payments is the outcome of the predatory, excessive and imprudent lending practices of mortgage brokers and lenders in subprime lending. This is due to the realization of a high demand in the marketplace for mortgage loans from high-risk borrowers with imperfect credit ratings. Without taking into consideration borrowers' credit ratings, borrowers' debt-to-income or assets ratio and value of loan-to collateral ratio, mortgage brokers and lenders persist to access this increasing market which they perceive as profitable opportunity regardless of the risks associated with the lending. They are actively encouraging fraudulent income inflation on loan applications, i.e. steering borrowers to unaffordable loans even though lenders offered these borrowers programs that found them acceptable risks, appraisers with inflating housing values.[2]

On the other hand, the borrowers have also been criticized for over-stating their incomes on loan applications and entering into loan agreements they could not meet. The mortgage characteristics making subprime borrowers more likely to default on their loan due to the weak prove of their credit record. As they are considered inherently high risk borrowers, lenders therefore charge them with higher interest rates and costs for the subprime mortgages

[1] A subprime loan is one that is offered at an interest rate higher than A-paper loan due to the increased risk.

[2] Lenders tend to attract borrowers with exotic subprime mortgages such as no-document loans, which require no evidence of potential borrower's income or savings.

that will lead to reduced repayment capacity by the borrowers and thus making the crises continue to deepen.

2.2. *The securitization of subprime mortgages*

This situation is further complicated when these subprime mortgages are securitized and sold through special purpose vehicles (SPVs) to interested investors such as investment banks (i.e. Lehman Brothers and Merrill Lynch). SPVs will pool hundreds or even thousands of subprime mortgages to package them into tradable securities such as mortgage backed securities (MBSs). From the lender's perspective, moving these mortgages to SPV will help them remove their risk exposure from the balance sheet. With minimum risk on its balance sheet, the lender is basically subject to lower capital requirements by regulators and thus, freed them up for continue making more loans.

MBSs generally rely on structured securitization and will be backed by the payment of interest and principal derive from the subprime borrowers.[3] They are being traded with different levels of risk-return profile according to tranches so that cash flow from the securities may appeal to a range of potential investors. Each different tranches are assigned credit rating by rating agencies in U.S. (i.e. Standard & Poor's, Moody's or Fitch Ratings) according to the credit risk on the subprime mortgages that support the MBSs and the probability of timely payment on the securities.

MBSs are paid according to the level of risk-return profile in different tranches. The low risk or secured bond tranches with the lowest expected return will be paid first before the mezzanine and unsecured tranches. If sufficient cash flow is not received from the underlying subprime mortgages, the lower or unsecured tranches may not receive return payment. Therefore, in view of the higher risk that the bondholders of unsecured tranches have to tolerate, they are compensated with higher expected return. If the underlying assets tend to perform well, this tranche can really offer very high returns to the investors (Jacobs, 2009) The lower or unsecured tranches of MBSs can be further repackaged by investment banks into CDOs with also subject to different tranches to enable them obtaining higher credit rating for the bonds to be easily tradable.

However, as nonperforming subprime mortgage backing MBSs and CDOs increases, less cash flow is available to pay to the bondholders especially to the lower bond tranches. Hence, rating agencies have to downgrade MBSs and CDOs bonds backed by these subprime mortgages. As a result, many investors in those securities such as insurance companies, pension funds, mutual funds, and hedge funds have suffered substantial losses from this credit crisis situation. Figure 1 illustrates the securitization of the subprime mortgages divided into different tranches initiated by the lenders or originators.

Although theoretically the benefits of diversification do exist from the pooling of mortgages through MBSs, but the primary risk reducing mechanism of MBSs and CDOs is risk shifting rather than risk sharing. The sale of MBSs and CDOs tranches has shifted the risks and the returns of the underlying mortgages from the lender to the investors. In particular, it actually shifting the risk of default and the large non diversifiable, systematic risk of a decline in housing prices to these investors, particularly to the investors in the unsecured and to the lesser extent, mezzanine tranches. The sale also supplies the lender with funds for the purchase of more mortgages for more MBSs and CDOs issuances. These highly complex structured finance products seemed to be reducing the risks of lending and investing

[3] Securitization allows investors to buy bonds that are directly tied to mortgages, auto loans or other income-generating assets. The loans move off the balance sheets of banks, freeing them to lend more and drive growth in mortgage markets, which in turn helps meet demand for housing.

by shifting risk from one part of the financial system to another. Nevertheless, in reality they actually multiplying those risks and spreading them throughout the global financial system.

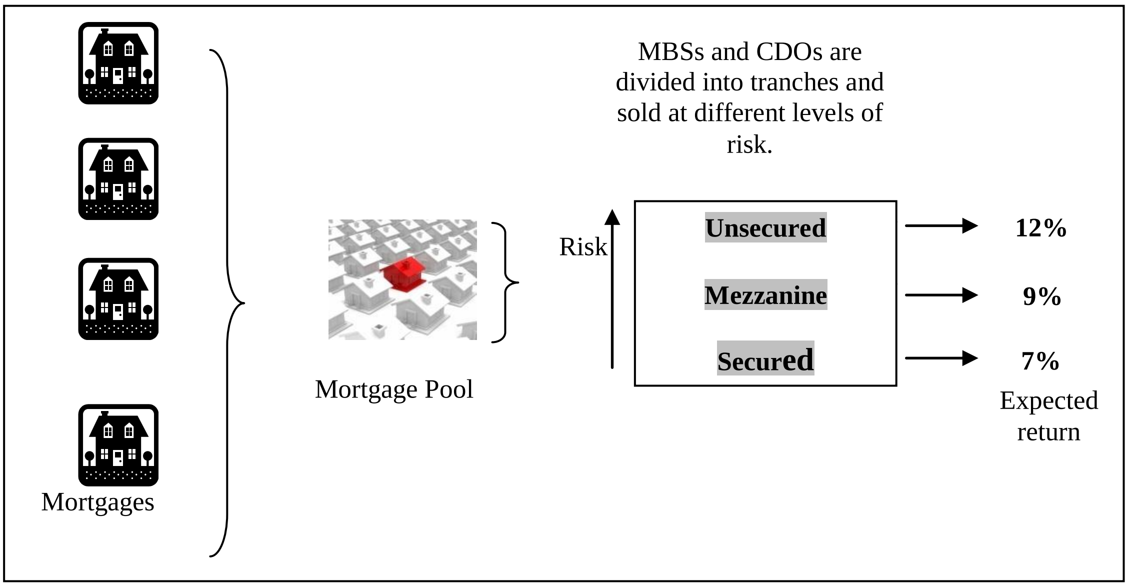

Figure 1: Securitization of the subprime mortgages divided into different tranches

The effects of the meltdown spread beyond housing and disrupted global financial markets, i.e. financial contagion and systemic risk, as investors, largely deregulated foreign and domestic hedge funds, were forced to re-evaluate the risks they were taking, as well as consumers, who lost the ability to finance further consumption spending, causing increased volatility in the fixed-income securities, equity and derivative markets. The unhealthy practice by the mortgage brokers and lenders in subprime lending not only in their own long-run interest but also destabilize the financial system. According to Chapra (2009), there are three factors that make this possible. Firstly, inadequate market discipline in the financial system resulting from the absence of profit and loss sharing. Secondly, the expansion of the size of derivatives, particularly credit default swap (CDSs), and thirdly, the 'too big to fail' concept, which tend to give an assurance to big banks that the central bank will definitely come to their rescue and will not allow them to fail. The false sense of immunity from losses that all these factors together provide, has introduced a fault line in the financial system as a whole.

Hence, as the global credit crisis continues to deepen due, the soul-searching in conventional finance has directed their attention to alternative modes of structured finance such as Islamic securitization in order to fill the gap of unmet credit demand. In this position, some investors who are worried by their excessive risk-taking and asset price volatility have turned to Islamic finance as market deteriorates caused by the subprime mess seem has come to the dead end. In this regard, Islamic securitization, via *shariah*-compliant investment certificates or *sukuk*, invites a comparison of conventional and Islamic finance principles as to their capacity to sustain efficient capital allocation and financial stability in the economy.

3. Islamic Securitization

The growth of Islamic finance has gained impetus since the last decade, particularly in the areas of securitization and *sukuk*. Although *sukuk* are structured in a similar way to conventional asset-backed securities, they fundamentally have significant different underlying structures and provisions. Most importantly, the advantage of *sukuk* is that they are compliant with *shariah* (Islamic law), which prohibits the receipt and payment of interest and stipulates that income must be derived from an underlying real business risk rather than as a guaranteed return from interest (Wilson, 2004).

3.1. *Concept Of Securitization From Islamic Perspective*

Securitization is the financial engineering process for the creation and issuance of fixed or floating income securities, where payment of principal and profits are derived from the cash flow generated by the indebtedness that it represents, or from the receivables or revenue derived from the pool of assets that underline the transaction in the issuance of the securities. Hence, it is a process of pooling or repackaging the non-marketable and illiquid assets into tradable certificates of investment. Securitization transforms the originator's role from being an accumulator to that of a distributor. It also refers to the process in which ownership of the underlying assets is transferred to a large number of investors in the form of instrument, namely *sukuk*. The ownership of the securitized assets is transferred to a special purpose vehicle (SPV) that set up for dual purpose of managing the assets on behalf the *sukuk* holders and for issuance of the investment certificates. The contractual rights attached to *sukuk* determine the mutual ownership and benefits of the securitized assets for the individual investors who subscribe to the *sukuk*. The *sukuk* holders earn any revenue generated by the project and/or capital appreciation of the assets involved.

The process and the procedures applied for *sukuk* issue are almost the same as those used for securitization in the conventional set up, with the exception of avoiding *riba*, *gharar* and the activities prohibited by the *shariah*. Securitization provides a premium over equivalent related plain securities and better stability than vanilla papers. In addition, there are benefits of the securitization to the originators as well as investors and how it could mitigate the risks in the capital market which are as follows (Lahsasna, 2007):

(1) Originators:

- (i) Transforming relatively illiquid assets into liquid and tradable capital market instrument.
- (ii) Cheaper financing cost due to higher rating via credit enhancement
- (iii) Allows diversification of financing sources.
- (iv) Facilitates removal of assets from the organization's balance sheet.
- (v) Reduces cost of finance if SPV is serving as multiple originators by pooling assets.

(2) Investors:

- (i) Provides a variety of products choices at attractive spread that attract a diversified investor profile.

(ii) Variety and flexibility of credit, maturity and payment structures and terms via securitization techniques that allows investment products to be tailored specific needs.

(iii) Pooling of diversified assets with heterogeneous risk mitigates earning risk.

(iv) Undivided ownership of the assets is an added protection.

(3) Capital market:

(i) The existence of secondary securitization markets for benchmark purpose.

(ii) Facilitate and encourage efficient allocation of capital.

(iii) Reduction of risk within the banking system

3.2. *Concept of sukuk*

Sukuk is the Arabic name and is derived from word '*sakk*' for the singular and '*sukuk*' for the plural one. The term is used to be referred to legal instrument, check and deed. In classical practice, *sukuk* was used as papers representing financial obligations originating from trade and other commercial activities. However, *sukuk* as applied in the capital markets pertains to the process of securitization and is generally defined as an Islamic bond (Wan Abdul Rahim Kamil, 2008).

The issuance of *sukuk* on the basis of the rules of *shariah* is among the objectives of Islamic banking and finance, and is also one of the greatest means of establishing Islamic economies in society. However, is on the condition that the tools used to develop and structure *sukuk* are in consonance with the fundamental principles which distinguish Islamic economic systems from others. The interest based system prevalent in the world today regularly issues bond that yield interest from capital from capital-intensive enterprises that bring great profits and regular revenues. The holder of such certificates are no more than lenders to the sponsors of enterprises and their earnings come from the interest on their loans in a percentage that accords with the price of interest in the marketplace. The profit of the enterprises after deduction of costs, including interest payments, return exclusively is to the sponsors.

The basic concept behind issuing *sukuk*, however, is for the *sukuk* holder to share in the profits of large enterprises. If *sukuk* are issued on this basis, they will play a major role in development of Islamic banking and finance and thereby contribute significantly to the achievement of the noble objectives sought by the *shariah*. To further understand, there are three main steps in *sukuk* issuance namely:

Step 1: Securitization.
Step 2: Bond issues – issuance of debt certificate (*shahdah al-dayn*).
Step 3: Trading of debt certificates – buying and selling of debt certificate in the secondary market using the contract of *bay' al-dayn*.

Asset securitization is the essence of Islam bond issues as a bond must assume the role of al-mal or property to qualify as an object of sale. An object of sale in the Islamic law of contract must be a property of value. When a bond certificate is supported by an asset as evidence via securitization process, it is transformed into an object value and therefore qualifies to become an object of trade whereby it can be purchased and sold in both the primary and secondary market. Investors then will have the right to sell (*haqq al-maaliy*) these bonds.

Issuance of Islamic debt certificate usually takes place in the primary market where in settling its debts, the issuing company will sell debt certificates or bonds to investor. As mention above, debt certificates issues is valid only when it is supported by an asset. In other words, the bonds must be securitized. For liquidity purpose, trading bonds in the secondary market is crucial. However, almost all Islamic bonds today were bought for the long term investments. As mentioned earlier when a debt certificate is securitized, it now becomes property (*al-mal*) which is also an article of trade. As an article of trade, the bonds can be sold by investors to the issuer or the third party.

3.3. *Types of sukuk*

There are different kinds of s*ukuk* of different maturities that can be issued in a *shariah* compliant manner. In this case, *mudharabah sukuk* and *musharakah sukuk* are directly related to further discussion on 3.4 and 3.6. Below we discuss this type of *sukuk* and its salient features.

3.3.1. Mudharabah sukuk

The AAOIFI (2004) has defined mudharabah sukuk as certificate represents ownership of units of equal value in *mudharabah* equity and registered in the names of holders on the basis of undivided ownership of shares in *mudharabah* equity and its returns according to the percentage of ownership of share. The owners of such *sukuk* are the *rabbul maal*.

This *sukuk* give its owner the right to receive his capital at the time the *sukuk* are redeemed, and an annual portion of the realized profits as mentioned in the issuance publication. The *sukuk* can play a vital role in the process of development financing, because it is related to the profitability of the projects. Financing through *mudharabah* is more efficient in term of the allocation of resources compared with financing based on interest rate, which does not reflect the profitability of the projects.

According to Al-Bashir (2001), *mudharabah* s*ukuk* is a tool for investment to raise funds, which is based on dividing *mudharabah* capital by equal value units, which are registered under *sukuk* holder's name (recorded bonds), which reflect the common asset in *mudharabah* capital. In other words, *mudharabah sukuk* mean the document of definite value issued in the name of their owner against funds they pay to the owner of the project. *Sukuk* owners acquire a definite proportion of the project profit, which is set out in the *sukuk* issuance publication (prospectus). *Mudharabah sukuk* neither yield interest nor entitle owner to make claims for any definite annual interest. This means that *mudharabah* s*ukuk* are like shares with regard to vary returns, which are accrued according to the profits made by the project. Appendix 1 contains structure of *mudharabah sukuk* and its detail explanations.

Besides that, *mudharabah* s*ukuk* must represent a common ownership and entitle their holder to shares in a specific project for which the *sukuk* have been issued to fund. A *sukuk* holder is entitled to all rights, which have been determined by *shariah* upon his ownership of the *mudharabah* s*ukuk* in matters of sale, gift, mortgage, succession and other. The contract in *mudharabah* s*ukuk* is based on the official notice of *sukuk* sale. Subscription in these *sukuk* is considered as an offer from the investor and approval of the issuer is then regarded as acceptance of the contract. Official notice of sale must contain all the conditions which are required by *shariah* in *mudharabah* contract and the distribution of profit should be in conformity with *shariah* rules.

On the other hand, *sukuk* holder is given the right to transfer the ownership by sale or trade in the securities market at his discretion on the expiry of the specified time period of the subscription. Then, the disposal or sale of the *sukuk* must follow the rules that stated below (Saiful Azhar, 1999):

- If the *mudharabah* capital after the subscription period is over and before the operation of the specific project still in the form money, therefore, the trading of *sukuk* would be based on the exchange of money for money and it must satisfy the rules of *sarf*.
- If such capital is still in form of debt, it must be based on the principle of Islamic debt trading or exchange debt for debt.
- If such capital is in the form of money, debt, assets and benefits, trade must be based on the market price evolved by mutual consent.

With regard to distribution of profit, the following rules must be observed (Saiful Azhar, 1999):

- The *mudharib*, the person who has received the fund also been charged with the duty to run the affairs of the specific project or business, profit realized from investment in mudharabah sukuk will be distributed between the *mudharib* and investor according to the agreement.
- *Mudharib's* share with the investor, the ownership of the assets in accordance with his participation to the total value of the company/ project assets.
- It is not permissible to guarantee him a fixed lump sum amount of profits.
- The issuer has the right to purchase *sukuk* offered for the sale by others according to the prices declared from time to time by the issuer.
- The *mudharib* is considered as the depositary of the common fund and the project assets entrusted to him. If he is negligent or has committed dishonesty leading to losses, he shall be liable for the losses.

In matter of concerning the guarantee of *mudharabah* s*ukuk*, the following points must be observed (Saiful Azhar, 1999):

- It is permissible for the third party (the government) to promise to compensate any losses sustained in the specific project. However, this guarantee should be concluded in a separate contract and not included in the main contract of *mudharabah* s*ukuk* between issuer and the investor.
- It is not permissible for the issuer to guarantee the capital of the *mudharabah* (the investor would not bear any loss in the value of the *sukuk*) or to guarantee the investor a fixed amount paid as profit.
- It is permissible for the *mudharib* and the investor to agree to put aside a specific or certain portion of the profit as reserves to provide for protection or to meet any losses arising during the implementation of the project.

3.3.2. Musharakah sukuk

The AAOIFI (2004) defined *musharakah sukuk* as certificates of equal value issued with the aim of using the mobilized funds for establishing a new project, developing an existing project or financing a business activity on the basis of any partnership contracts. In this case, the certificate holders become owners of the projects or assets of the activity as per their respective shares, with the *musharakah* certificates being managed on the basis of participation or *mudharabah* or an investment agency. *Musharakah sukuk* are used for mobilizing the funds for establishing a new project or developing an existing one or financing a business activity on the basis of partnership contracts. The certificate holders become the owners of the project or the assets of the activity as per their respective shares. These *musharakah* certificates can be treated as negotiable instruments and can be bought and sold in the secondary market.

Musharakah sukuk can be issued as redeemable certificates by or to the corporate sector or to individuals for their rehabilitation/employment, for the purchase of automobiles for the commercial use or for the establishment of high-standard clinics, hospitals, factories, trading centre, endowments, etc. After the project is started, these *musharakah* certificates can be bought and sold in the secondary market, subject to the condition that the portfolio of *musharakah* comprises non-liquid assets valuing more than 50% (Ayub, 2007). Profit earned by the *musharakah* is shared according to an agreed ratio. Loss is shared on pro rata basis.

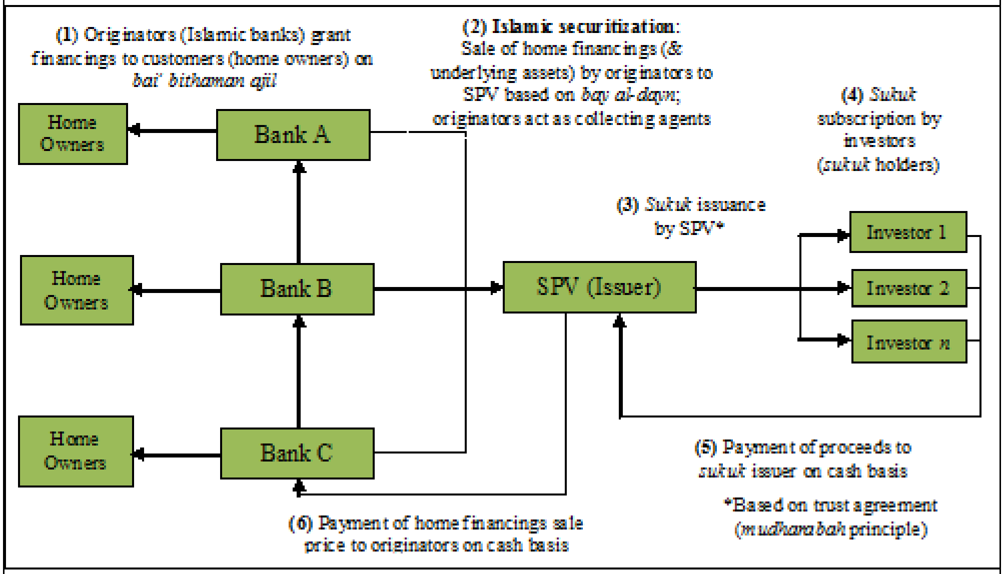

Figure 2: The mechanism of Islamic securitization based on debt principle

Investment *sukuk* can be issued on *musharakah* basis to mobilize short-term deposits for the development of long term projects or for investment in general financial activities or specific projects. The proceeds of the *sukuk* can be used to buy and lease certain equipment or for the construction of projects and factories, the expansion of projects or for working capital finance. The *musharakah* structure is considered more equitable and also safer for the investor than the *mudharabah* structure, as it involves both profit and loss sharing between the fund manager (issuer) and the *sukuk* holder, not only profit-sharing. Furthermore, *sukuk* holder also will have added comfort and security from the cushion provided by the manager's participation in the *musharakah* capital. Appendix 2 contains structure of *musharakah sukuk* and its detail discussion.

3.4. *The mechanism of Islamic securitization based on debt principle*

The process:

(1) Originators (Islamic banks) grant financings to customers (home owners) on *bai' bithaman ajil* (BBA) based principle. In BBA Islamic bank will discloses the true cost of the house and then adds a mark-up to sell it at an agreed price to the customer. The house will be sold on a deferred payment basis to the customer.

(2) Islamic securitization: Sale of home financing from the originators to SPV is based on bay al-dayn. In this case, Islamic banks as the originators act as collecting agents and they get the return from the fee for their services.

(3) *Sukuk* issuance by SPV (*sukuk* issuer) based on trust agreement (*mudharabah* principle), evidencing the investor's (*sukuk* holder's) participation in home financing through the cash contribute by investor as *mudharabah* capital.

(4) *Sukuk* subscription by investors (*sukuk* holders). The *mudharabah sukuk* has evidenced the beneficial interest in the *mudharabah* participation, hence entitled the *sukuk* holders to receive the distributable profit.

(5) Payment of proceeds to *sukuk* issuer on cash basis.

(6) Payment of transferring share and ownership to originators on cash basis.

3.5. *The mechanism of Islamic securitization based on partnership principle*

3.5.1. Mudharabah sukuk

The process:

(1) Originators (Islamic banks) grant financings to customers (home owners) on *musharakah mutanaqisah* partnership (MMP) based principle. MMP comprise of *musharakah* (partnership) contract and an *ijarah* (rental) contract where the equity of the financier follows the diminishing partnership method. In both types of contracts, customer and Islamic banks form a *musharakah* company. Each of them agrees to contribute certain percentage of capital.

(2) Islamic securitization: Transfer the share and ownership of assets (house) from the originators to SPV based on MMP. In this case, Islamic banks as the originators act as collecting agents and they get the return from the fee for their services.

(3) *Sukuk* issuance by SPV (*sukuk* issuer) based on trust agreement (*mudharabah* principle), evidencing the investor's (*sukuk* holder's) participation in home financing through the cash contribute by investor as *mudharabah* capital.

(4) *Sukuk* subscription by investors (*sukuk* holders). The *mudharabah sukuk* has evidenced the beneficial interest in the *mudharabah* participation, hence entitled the *sukuk* holders to receive the distributable profit.

(5) Payment of proceeds to *sukuk* issuer on cash basis.

(6) Payment of transferring share and ownership to originators on cash basis.

3.5.2. *Diminishing musharakah sukuk* (*musyarakah mutanaqisah* partnership – MMP)

The process:

Step 1-2 are same as before.

(3) *Sukuk* issuance by SPV (*sukuk* issuer) based on *diminishing musharakah* principle, evidencing the investor's (*sukuk* holder's) partnership in home financing through the cash contribute by investor as *musharakah* capital. In this case, SPV as the issuer acts as a *wakeel* to administer the *sukuk*.

(4) *Sukuk* subscription by investors (*sukuk* holders). The *sukuk* has evidenced the beneficial interest in the *musharakah* partnership, hence entitled the *sukuk* holders to receive the distributable profit.

(5) Payment of proceeds to *sukuk* issuer on cash basis.

(6) Payment of transferring share and ownership to originators on cash basis.

(7) In this case, the share of investors in home financing will diminish over time as instalments are paid by the home owners to repurchase the assets (house). The instalments plus rental payments paid by the home owners for using the assets (house renting) provide income streams for the investors. *Sukuk* holders (investors) will receive return of their capital in installments, with the final installment terminating the partnership (MMP), resulting full transfer of assets ownership to home owners.

Based on Figure 3 and 4, Islamic securitization based on partnership principle (*musharakah mutanaqisah*) and *sukuk* structures (*mudharabah* and *musharakah mutanaqisah* principles) are based on risk-sharing concept rather than risk-shifting (as in subprime mortgages securitization). As discussed in Jacobs (2009), risk-sharing works by combining risk-exposures in such a way that they offset one another to some degree, thus the whole risk is less than total risks on individual part. As promoted by Chapra (2009) the financial system may be able to promote justice if, in addition to being strong and stable, it statisfied at least two conditions based on moral value. One of these is the financier should also share in the risk so as not to shift the entire burden of losses to the entrepreneur. To fullfill the first condition of justice, Islam requires both the financier and the entrepreneur to equitably share the profit as well as the loss. For this purpose, one of the basic principles of the Islamic finance is 'no risk, no gain'. This should help introduce the greater discipline into the financial system by motivating financial institutions to assess the risk more carefully and to effectively monitor the use of funds by the borrowers. The double assessment of risks by both the financier and entrepreneur should help inject greater discipline into the system and go a long way in reducing excessive lending.

Islamic economy through Islamic finance should help raise the share of equity and partnership principles in real economics activities substantially. Greater reliance on the partnership principles does not necessarily mean that debt-based financing is ruled out. Risk-sharing that applicable in these partnership principles may link credit expansion to growth of the real economy by allowing credit primarily for the purchase of the real goods and services which the seller owns and possesses and the buyer wishes to take delivery. It also requires the creditor to bear the risk of default, thereby ensuring that he evaluates the risk more carefully. In addition, Islamic finance can also reduce the problem of subprime borrower by providing credit to them at affordable terms.

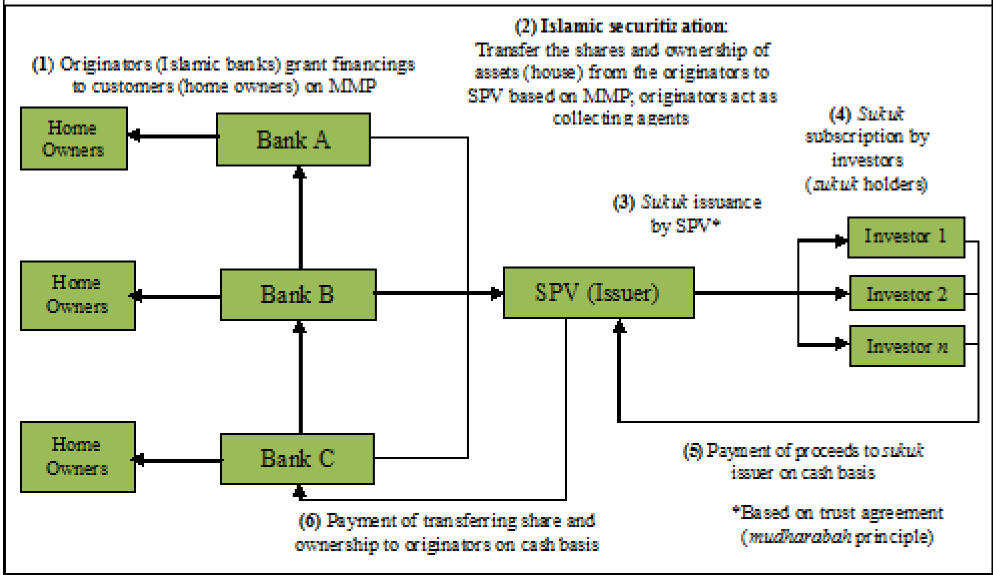

Figure 3: Structure of *mudharabah sukuk*

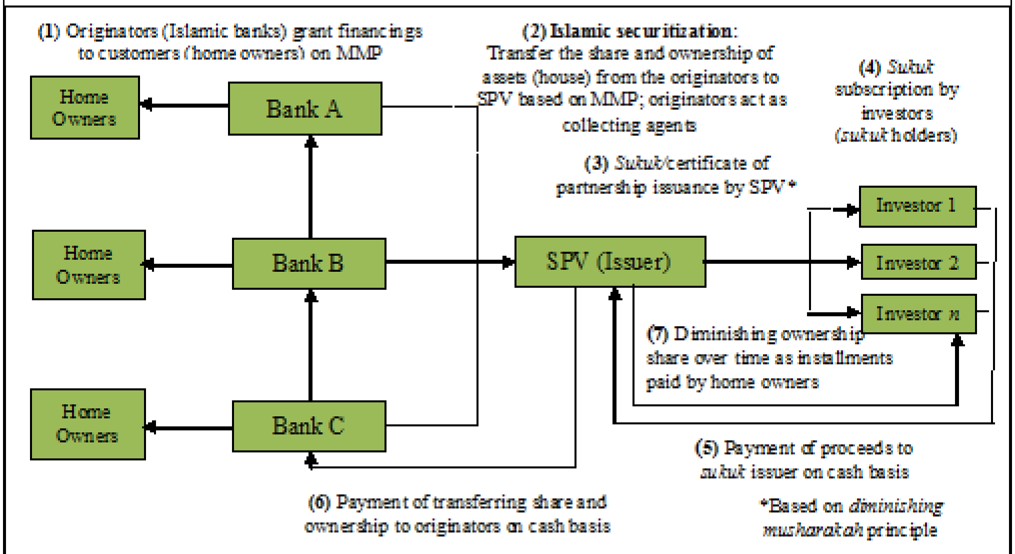

Figure 4: Structure of *diminishing musharakah sukuk*

In the case of Islamic securitization via partnership-based *sukuk* as discussed in this paper, it has great potential for promoting risk-sharing thereby increasing mobilization of savings and investment, hence spurring growth which lead to enhanced welfare. *Sukuk* are very convenient vehicles of transferring some of this liquidity to people capable of employing it into productive projects. A diverse spectrum of investment vehicles serves persons with different perceptions of risks and returns. In this regard, Islamic securitization based on partnership principles have directed towards risk sharing due to wealth creation, to be shared between both fund providers (investors) and fund users (*sukuk* issuers), while both bear the risks involved and the resulting loss.

In the case of *musharakah mutanaqisah sukuk*, the legal implication is that both the investors and home owners are *musharakah* partners, but the share of investors in the assets (houses) will diminish over time as instalments are paid by home owners to repurchase the assets. In this situation, the issuer acts as a *wakeel* or agent to administer the *sukuk*. The investors receive the return of their capital from the installments, plus the rental paid by the home owners for using the assets. This kind of *sukuk* has flexibility characteristic with respect to the payments schedule and amounts, as long as both parties agreed on the terms and conditions of the contract. Another possibility for risk-sharing would be through *mudharabah sukuk*, with investors sharing in the profit or dividen but not in the losses. In addition, there could be no absolute guarantee of capital values just like in the case of *musharakah mutanaqisah sukuk*. The return would be lower than *musharakah mutanaqisah sukuk*, as the companies would be expected to make some provisions in highly profitable years so that payouts could be maintained in less profitable or loss making years (Wilson, 2008).

4. Conclusion

Sukuk based on participatory structures, with risk-sharing by investors could be an alternative to conventional securitization. Risk-sharing is a way of facing risk, on which the genuine *sukuk* should be based on or *shariah*-based rather than *shariah*-compliant. It contributes toward value added as well as wealth creation to be shared between both fund providers (investors) and fund users (*sukuk* issuers), while both bear the risks involved and the resulting loss.

As a necessary step towards a just and equitable society, shifting the risk of default by excessive uncertainty (*gharar*) should be disallowed as it implies gambling or blind speculation. On the other hand, risk-sharing arrangements are essentially cooperative way in meeting financial contingencies. The nature of risk-sharing remains intact instead of unbundling different kinds of risks and repackaging them to suit different types of customers as in subprime mortgages securitization. The conflicts of interest among investors (which became apparent during the crisis) to contaminate the reliability of the securitization process could be avoided if it were be based on risk-sharing rather than solely on risk-shifting and conducted in compliance with *shariah* principles.

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Appendix A. Structure Of *Mudharabah Sukuk*

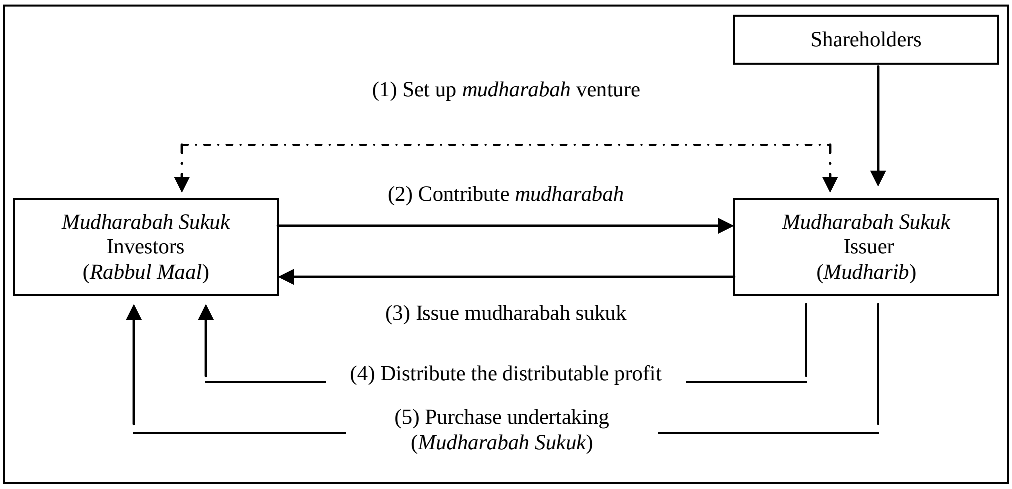

Figure A.1: Issuance of *mudharabah sukuk*

(1) Setting up a *mudharabah* venture

- (i) Pursuant to the concession agreement, the issuer is set up to undertake the assigned business.
- (ii) For the purpose of undertaking the assigned business, the issuer shall invite the investors to participate in the *mudharabah* venture. Under this venture, the issuer shall be the entrepreneur (*mudharib*) whereas the investors shall be the capital providers (r*abbul maal*).

(2) Contribution of *mudharabah* capital

- (i) The *rabbul maal* shall contribute financing capital (*mudharabah* capital) to fund the *mudharabah* venture.
- (ii) In order to carry out the assigned business, the issuer, in the capacity of *mudharib*, shall also invite other investors to part finance the project.

(3) Issuance of mudharabah sukuk

- (i) The *mudharib* shall issue the *mudhrabah sukuk* to the *rabbul maal* or investors (also referred to as the mudharabah sukuk holders), evidencing the *rabbul maal's* participation in *mudharabah* venture.
- (ii) The *mudharabah sukuk* shall be presented by Global *Mudharabah sukuk* Certificates evidencing the *mudharabah sukuk* holders' participation and beneficial interest in the *mudharabah* venture, hence entitling the mudharabah sukuk holders to receive the distributable profit.
- (iii) The obligations of the holders shall be limited up to the amount invested in the *mudharabah* venture.
- (iv) The assigned business under the *mudharabah* venture shall be, at all time, developed, operated, managed and represent by the issuer (as *mudharib*).

(4) Distribute the distributable profit

   (i) Under the *mudharabah* venture, the *mudharib* shall distribute the distributable profit to the *mudharabah* s*ukuk* holders based on agreed profit sharing ratio.

   (ii) The distributable profit is the budgeted profit for the collection period based on the formula of profit equals budgeted revenue minus budgeted expenditure, subject to availability of the same.

(5) Purchase undertaking (*mudharabah sukuk*) or dissolution of the *mudharabah* venture

   (i) Either upon each maturity of the serial *mudharabah* s*ukuk* or upon declaration of any event of default, the issuer shall acquire the interest in the *mudharabah* venture.

   (ii) Upon completion of the purchase, the *mudharabah* venture shall then be dissolved.

Appendix B. Structure of *Musharakah Sukuk*

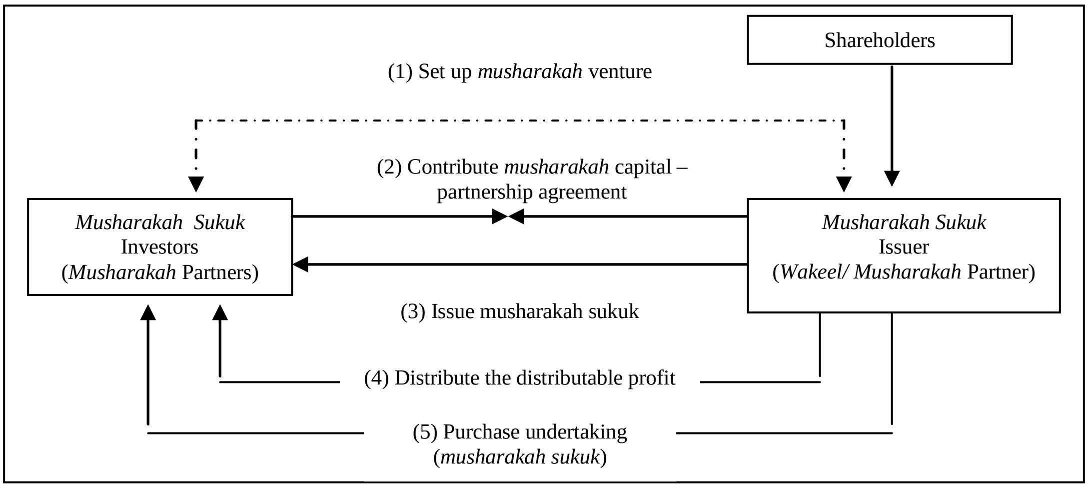

Figure B.1: Issuance of *musharakah sukuk*

(1) Setting up a *musharakah* venture

(i) Pursuant to the concession agreement, the issuer is set up to undertake the assigned business.

(ii) For the purpose of undertaking the assigned business, the issuer shall invite the investors to participate in the *musharakah* venture. Under this venture, the issuer acts as the *wakeel* for the *sukuk* holder or as one of the *musharakah* partner whereas the investors also act as the *musharakah* partners (capital providers).

(2) Contribution of *musharakah* capital

(i) *Musharakah* partners produce the same denomination of capital or the issuer contributes land or the other physical assets (then turn into capital) and other partners (investors) contribute money as capital. The *musharakah* partners shall contribute financing capital (*musharakah* capital) to fund the *musharakah* venture.

(ii) In order to carry out the assigned business, the issuer, in the capacity of *musharakah* partner, shall also invite other investors to part finance the project.

(3) Issuance of musharakah sukuk

(i) The issuer shall issue the *musharakah sukuk* to the *musharakah sukuk* holders or investors, evidencing the investor*'s* partnership and ownership in *musharakah* venture.

(ii) The *musharakah sukuk* evidencing the *musharakah sukuk* holders' partnership and beneficial interest in the *musharakah* venture, hence entitling the *musharakah sukuk* holders to receive the distributable profit.

(iii) The obligations of the holders shall be limited up to the amount invested in the *musharakah* venture.

(iv) The assigned business under the *musharakah* venture shall be, at all time, developed, operated, managed and represent by the issuer (as one of *musharakah* partner).

(4) Distribute the distributable profit

(i) Under the *musharakah* venture, the issuer shall distribute the distributable profit to the *musharakah sukuk* holders based on agreed profit sharing ratio. Loss is shared on pro rata basis.

(ii) The distributable profit is the budgeted profit for the collection period based on the formula of profit equals budgeted revenue minus budgeted expenditure, subject to availability of the same.

(5) Purchase undertaking (*musharakah sukuk*) or dissolution of the *musharakah* venture

(i) Either upon each maturity of the serial *musharakah sukuk* or upon declaration of any event of default, the issuer shall acquire the interest in the *musharakah* venture.

(ii) Upon completion of the purchase, the *musharakah* venture shall then be dissolved.