A market-based financing model for Islamic housing microfinance market

Zamir Iqbal[1], Friedemann Roy[2]
[1]Lead Investment Officer, Treasury of the World Bank
[2]Senior Housing Finance Specialist, International Finance Corporation

Abstract - For many years, microfinance (MF) was considered an appropriate tool to accomplish social and financial goals simultaneously. Over time, microfinance has become more commercialized, transforming into a financially efficient industry, allowing customers to have access to more sophisticated banking products (e.g. small housing loans). Despite interest from the commercial sector, the industry has yet to find a workable market-based solution to fund microfinance.

Microfinance in the member states of the Organization of Islamic Cooperation (OIC) faces two challenges:

1. Constraints in the area of risk and management capabilities as well as funding.
2. Limited access by consumers to financial services.

Growing populations and rising urbanization have impeded the access of low income groups to housing finance. Housing cost in relation to incomes and the lack of formal titles have forced people to live in informal settlements.

The objective of this paper is therefore to describe and assess the introduction of an innovative and practical market-based and Shariah-compliant mechanism aimed at housing microfinance with access to finance at lower cost. The market-based solution entails structuring sukuk through securitization of micro-portfolios. Due to the high risk of the underlying portfolio, conventional mechanisms of credit enhancements would fail. The paper proposes a unique way to overcome the credit enhancement problem through the use of Islam's redistributive instruments such as waqf, qard-al-hassan, etc. The result is a viable option to develop a market-based financing solution to address core problems of financial inclusion and the non-bankable segment of the society.

1. Introduction

Low income groups in OIC countries struggle to access financing at affordable cost to meet their housing needs.

Increasing urbanization and growing populations are important drivers of demand for housing in the Organization of Islamic Corporation (OIC) countries.[1] According to UN-Habitat, the estimated shortfall of housing, at present amounting to about 8.2M houses a year, is predicted to increase at an average rate of 2.83% annually. In particular, low income groups are exposed to this housing backlog because they are often forced to find shelter at the fringes of the cities, or in an informal settlement with suboptimal construction standards and no access to clean water. Besides weak and dysfunctional legal and regulatory conditions, a major challenge for countries is to provide and allocate sufficient financial resources, estimated at US$ 15.5 billion a year, to meet the costs of providing the majority of their citizens with decent housing conditions.[2]

Low income groups typically access financial services from relatives, friends or informal lenders (e.g. loan sharks), or a microfinance institution (MFI).[3] MFIs have benefitted from the concept among investors, policy makers and academics that granting loans at fair conditions is an acceptable approach to alleviate the financial constraints of the poor.[4] The industry has expanded over recent years, extending loans to more than 200M clients. Concurrently, the offer of Shariah-compliant microfinance products has also increased, albeit at a much slower rate.

Coupled with the expansion, over time the industry has become more commercialized, allowing customers to have access to a wider range of different products, especially small

Cite this chapter as: Iqbal Z, Roy F (2015). A market-based financing model for Islamic housing microfinance market. In H A El-Karanshawy et al. (Eds.), Access to finance and human development – Essays on *zakah, awqaf* and microfinance. Doha, Qatar: Bloomsbury Qatar Foundation

housing loans. However, the growth in access to finance has uncovered a number of weaknesses in the management of MFIs, leading to deterioration in their portfolio quality:

- In the wake of the fast expansion of microfinance, many MFIs have extended finance to riskier borrowers without having adequate risk management capacities. Another challenge for the industry has been product diversification beyond the traditional lending schemes to small entrepreneurs. Many MFIs have not adjusted their lending standards to incorporate different loan products.
- Microfinance was often introduced as a development tool in a largely non-competitive setting; however, with increasing commercialization and competition, the instruments used to overcome moral hazard and adverse selection have become less effective. This has weakened incentives to repay on the part of borrowers, increasing the probability of multiple borrowings and strategic default by borrowers.

As a result, the industry experienced its first setback in 2008: asset growth slowed markedly, profitability declined and portfolio risk rose. The microfinance crisis in Andhra Pradesh (India) was a prominent example of the industry's difficulties. The future development of the industry will therefore depend on the implementation of sound lending and risk management standards, as well offering products which put client needs back in focus. It also requires a culture of social responsibility among MFI owners, managers and staff. Another important aspect is the access to stable funding sources to allow a balanced expansion. The US subprime mortgage crisis of 2007 that revealed the risks of slicing and dicing of underlying portfolios brought the development of market-based funding solutions to a complete standstill. Markets are only slowly recovering. For example, securitization volumes in 2012 amounted to about EUR 200 billion, a fraction of the more than EUR 800 billion in 2008.[5] Before the financial crisis, leading investment houses began to take a serious look at the microfinance market with a view to entering into this market. Several efforts were made to provide financing from financial markets as the market appeared to offer viable investment opportunities. However, the complexities of the microfinance sector and the financial crisis halted the introduction of a market-based solution to financing this sector.

The objective of this paper is to describe and assess the introduction of a market-based and Shariah-compliant mechanism aimed at combining Islamic finance principles in (housing) microfinance with access to finance at lower cost. In OIC countries, low income groups often do not have access to formal financial services. It also appears that there is preference for Shariah-compliant products.[6] Housing microfinance (HMF) intersects housing finance and microfinance and incorporates elements of both.[7] As a result, HMF products combine on the one hand traditional microfinance elements (e.g. creditworthiness assessment methodologies); and on the other hand, they include features common in housing finance. Typically, HMF loans have longer tenors and loan amounts are larger.[8] HMF loans can be also included in securitization transactions of a microfinance portfolio.

A particular focus will be given to funding mechanisms to support the expansion of such products. Market-based solutions entail the structuring of sukuks through securitization of micro-portfolios. Due to the high risk of the underlying portfolio, conventional mechanisms of credit enhancements would fail. In addition, they are not aligned with Shariah-rules. Therefore, the paper proposes waqf and qard-al-hasan – two of Islam's redistributive instruments – to serve as credit enhancements, which facilitate the use of securitization as a funding vehicle for HMF portfolios.

2. Challenges of Islamic microfinance in OIC countries

The aggregate population of the 57 OIC countries amounts to about 1.6 billion. Nearly half the population (about 733M people) lives below the poverty line of US$ 2 per day.[9] As poverty is widespread, access to financial services is rather limited. According to estimates of CGAP, there are only 1.28M Islamic microfinance clients, representing about 0.1% of the total population of the OIC countries. Additionally, most of the clients are concentrated in three countries: Indonesia (181,508 clients), Sudan (426,694 clients) and Bangladesh (445,153 clients). The remaining number (226,645 clients) is distributed among 16 OIC countries. It seems that no Islamic microfinance products are offered in the other OIC countries.[10]

The number of those customers with a microfinance loan is even smaller. The total portfolio of Islamic microfinance loans amounts to US$ 628 m for 817,000 customers. This results in an average loan amount of US$ 768. The majority of loans are granted in form of murabaha and qard hassan loan contracts. The percentage of these loans, which are used for housing purposes, is not known. Anecdotal experience from conventional MFI lenders suggests that about that about 30 to 40% of MF loans (or a fraction of the amount borrowed) is used for housing purposes. For many microfinance clients, the home is often the place of production. Therefore, it is evident that customers also invest in the home to facilitate the production process.

Concurrently, the number of financial service providers which offer Islamic microfinance products is quite small. The number is estimated at 255, the majority of which are concentrated in East Asia and Pacific (64% of all providers), and the Middle East and North Africa, including Sudan (28%). The slow growth of Islamic microfinance is attributed to a number of reasons, including the fact that Islamic MF programs are provided by small institutions (NGOs, village or rural banks) with limited outreach, and also that there is limited access to funding at reasonable cost.[11]

As information on demand for microfinance products is incomplete and contradictory, it is difficult to provide estimates of the demand for these products (including demand for small housing loans or housing microfinance loans). As stated, increasing urbanization, growing populations and a relatively young population which is emerging are driving the demand for housing. For example, more than 60% of the population of roughly 300 million in the Arab world is under the age of 25. One of their biggest concerns is the access to affordable housing.[12]

In conclusion, it appears justified to assume that borrowers of Islamic MFIs use a certain percentage of their borrowings

for housing purposes. HML product offerings are likely to be well absorbed by the market given the needs of low income groups to improve their housing situation.

3. Building the model

Securitization of (Housing) microfinance assets

Microfinance finance institutions have successfully tapped capital markets to raise funding by issuing domestic or international bonds, or else through equity funds. In India, MFIs regularly raise funds by securitizing their loan portfolios.[13] In contrast, there is hardly any capital market activity by Islamic MFI providers. This absence is due to the small size of the industry, lack of awareness of MFI providers and lack of a conducive legal and economic environment. Another important factor is the absence of an institutional credit guarantee system in OIC countries which could provide credit enhancement to securitization transactions.[14]

Securitization involves the collection of homogeneous assets with a known stream of cash flows into a pool, or portfolios, which are independent from the creditworthiness of the financier. This pool or portfolio of assets is used to issue securities, which can be marketed to different classes of investors. The securities are structured in such a way that all payoffs in terms of risks and returns are "passed through" to the investors or the holders of the securities. As a result, this is similar to a direct ownership by the investor in the underlying assets; he or she shares the returns from the assets, and is exposed to all associated risks. The securities are traded on organized exchanges. This description of a conventional securitization is also applicable to securitization within an Islamic financial system.[15]

The main structural difference between the Islamic securitization process and that applying to conventional securitization is, however, the way in which returns and risks are shared with the investors: in the conventional system, the buyer and holder of the security is exposed to a number of risks which are passed on to him or her (including credit risk, market risk, interest rate risk,) but he or she enjoys some protection given by the underlying assets which "back" the security ("asset-backed security"). This structure does not transfer any rights or control or ownership over these assets to the investor. The function of the asset backing is a credit enhancement; in the case of a default, the assets will be seized and the proceeds from foreclosure will be used to repay the investors.

In contrast, the Islamic finance structure suggests the establishment of a link between the security payoffs and the underlying assets. This "asset-linked" structure leads to an ownership interest by the investor (i.e. Islamic bank) in the underlying asset. It also leads to uncertainties in the security's cash flows to the investor, which will depend on the performance of the underlying asset. The repayment of the principal will not necessarily be guaranteed. Additionally, the holder of the security establishes an ownership claim against underlying assets (whereas in a conventional securitization structure, the holder of a security establishes a claim against a pool of assets).[16]

Figure 1 depicts a simplified model of securitization as used in an ijarah-based sukuk. The core legal entity in the securitization is a special purpose mudarabah (SPM) or special purpose vehicle (SPV) which is bankruptcy remote and has Shariah-compliant assets on the asset side against liabilities of sukuk or marketable securities. Although fund mobilization, pooling of assets, setting-up of SPMs or SPVs, placement, and servicing are all structured in a similar way to conventional securitization, credit enhancement (which gives the certificates an investment grade rating) is complex to replicate. As a key notion of Islamic finance is risk-sharing and passing-through of assets' payoffs to investors, providing financial guarantee style credit enhancement is difficult. This is particularly critical in the case where the underlying assets are exposed to high risk as would be the case for microfinance portfolios.

Table 1 shows the main differences between the conventional and Shariah-compliant securitized assets. The comparison is with a conceptual view of Shariah-compliant securitization and may be different from the actual securitized product practised in the market. In a conventional asset backed or mortgage-backed security,

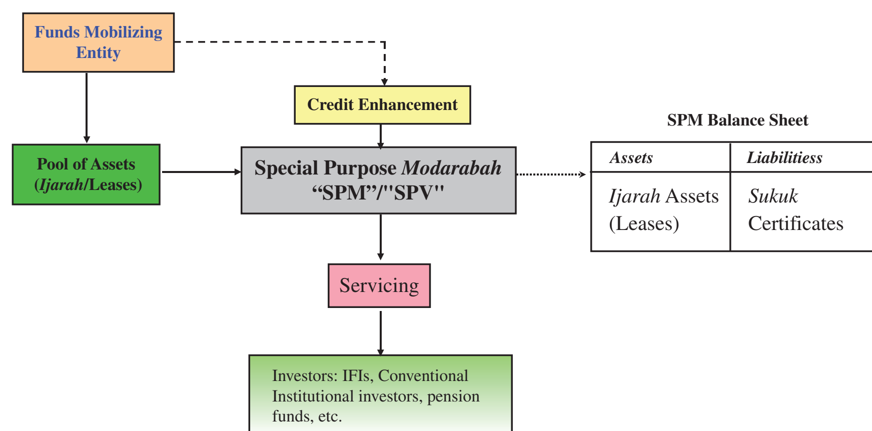

Figure 1. Anatomy of a Shariah-compliant securitization.
Source: Iqbal and Mirakhor (2011).

Table 1. Comparison between conventional and Islamic securitized securities.[17]

	Conventional asset-backed security	Shariah-compliant, asset-linked security
Type of security	Fixed income (debt based)	Hybrid structure depending on contract and underlying asset
Intended risk allocation	Risk transfer	Risk sharing
Ownership	No ownership in underlying assets	Security owner has ownership interest in underlying asset
Linkage with asset value	No direct link to market value of underlying asset	Final or other payoffs may be linked to market value of underlying asset
Principal protection	Principal is protected irrespective of the value of underlying real estate	Principal is linked to market value of underlying asset
Pricing valriable	Based on expected yields, current interest rates, creditworthiness of asset owner and issuer or guarantor	Based on expected yields, current levels of return, market value of underlying asset, expected value of underlying asset at maturity
Recourse	No recourse of security holder in case of distress	Recourse to underlying asset in case of distress
Principal agent problem	May exist	Moral hazard should be minimized

Source: Iqbal.[18]

the typical pricing model uses variables such as the probability of prepayment or refinancing, which depends on the expected interest rate levels in the future, the loan-to-debt ratio, the credit score of the borrower, and other considerations. Since the principal of the security is guaranteed through credit-enhancing mechanisms, the security is priced in the same way as a coupon-bearing debt security with an early prepayment option.

In the case of an Islamic security, however, the price will depend on variables determining the expected periodic cash flows in the future, but in addition it will have to take into consideration the expectation of future market values, or the residual values of the underlying assets. In the absence of any guarantee of the principal, the redemption value of the security will depend on the expected market value of the asset at the time of maturity of the security. Another factor which influences the pricing of an Islamic security is the underlying risk-sharing agreement. In an asset-linked security, the price of the security will also incorporate the riskiness of the underlying assets and the investor will be sharing the risk through fluctuations in the price of the security. Investors will be exposed to the risks associated with the portfolio of assets and will share the losses. This will put greater emphasis on the need for prudent selection of the underlying assets and close monitoring of the assets' performance, and should motivate securitization specialists to structure good-quality securities that offer valuable and secure investment opportunities.

Principal-agent problems are treated in a different way: in a conventional securitization, securitization can create considerable agency costs if agents (borrowers, originators, issuers, arrangers, investors, servicers, credit rating agencies, and third-party guarantors) are tempted to pursue their own economic interests. For example, uncertainty about the future value of the securitized assets could lead to moral hazard by originators if default risk is completely passed on to the investors. The advantage of the originator with regard to information about the quality of borrowers and the historical performance of individual asset exposures could also give rise to adverse selection when security selection favors the originator rather than the investor.

In a Shariah-compliant securitization, moral hazard should be minimized by the Shariah-compliant contract structures. For example, the musharakah arrangement with pre-determined profit-loss sharing ratios aims to regulate incentive structures.[19] Additionally, the Shariah requirements to maintain high moral values and ethics by the stakeholder would discourage practices such as "predatory lending" or "walking away."

Shariah-compliant securitization is not without its challenges. An Islamic lender that wishes to securitize its mortgage loan portfolio (we assume that the underlying contractual arrangements are Shariah-compliant) faces a number of challenges in structuring a Shariah-compliant security:

- Ownership and linkage with the assets. Typically, a conventional mortgage backed security (MBS) issue comprises many small mortgage loans which are collateralized against individual properties. These serve to back the security. It could be difficult to establish an equal distribution of ownership rights among investors. This question could become critical in the case of an increasing number of foreclosures. To ensure an equal distribution, the issuer may be required to establish an investor registry to establish a link between the underlying assets and the investors.
- Linkage with the asset value. As already mentioned above, the valuation of the security depends to a great extent on the quality of the underlying assets as expressed by the loan-to-value ratios (LTV), the terms of the loans, and other factors. As the market value of the underlying assets also has a considerable impact on the value of the security, there may be considerable fluctuations in the security value, depending on the location and quality of the properties. These could be a deterrent for investors.

- Pricing the sukuk (Islamic bond) – a Shariah-compliant MBS, however, must determine additional ratios which may add a great deal of insecurity to the fair price of the security. For example, the determination of the market value and the expected value of the underlying assets at maturity may lead to stark differences depending on the scenario selected for the valuation (rising house prices or declining house prices). It is likely that the issuer may overstate the expected value.
- Credit enhancement is a challenge. Direct guarantees of performance may face constraints as they impose restrictions on risk-sharing and may not be acceptable if such blanket guarantees are given by an entity that may not have a direct stake in the underlying pool of assets.
- Duration mismatches.[20] Depending on the structure of the security, any duration mismatches within the security may be passed directly onto the investor as the issue has to remove pre-paid parts from the underlying assets. Duration mismatches could be reduced in a pass-through structure.

Credit enhancements to securitize housing microfinance portfolios

Credit enhancements bridge the gap between the stand-alone quality of the portfolio of assets transferred by the originator, and the target rating of the instrument based on the needs of various investors. Credit enhancement is comparable to equity in a business; it determines the extent of leverage in transactions, the layer of protection against expected and unexpected losses. There are three types of credit enhancements.[21] Not all of them are necessarily Shariah-compliant:

1. Originator provided.

The originator assumes part of the credit risk:

- *Excess spread or profit*. It represents the excess of the inherent rate of return in the securitized portfolio over the expenses of the transaction; senior servicing fees; and the rate of return offered to investors. Excess spread retention is considered the most common credit enhancement.
- *Cash collateral*. It refers to the special purpose vehicle (SPV) retaining a cash balance, which is subordinated to the interests of the investors. The cash reserve can be created either up front, by retention of a part of the funding of the transaction by the SPV, or by the originator making a subordinated loan to the SPV.
- *Over-collateralization*. It refers to the originator transferring a higher value of receivables, but being paid for a lesser value and leaving the balance as a security interest with the SPV.

2. Structural credit enhancements.

These arise from the structure of the liabilities, and refer to the redistribution of risks among the investors, so that one section of the investors provides credit enhancements to the other. The most common form is the stratification of securities into senior, mezzanine, and junior or subordinated securities. The senior securities are protected by the subordinated securities. They are considered the safest and, consequently, have to be content with a very low rate of return. The subordinated securities are those paid after settling the claims of the senior and the mezzanine security holders. Cash flows are organized in a waterfall structure. The definition of the individual tranches and their rights is contained in the waterfall clause of securitization contract. In terms of ratings, the stratification of liabilities is done to provide a triple A rating for the most senior class. Consequently, the other tranches receive a lower rating. The junior class, which is retained by the originator, is typically not rated.

3. Third party credit enhancements

Third parties assume specific risks of a securitization transaction. The most common form of third party credit enhancements are:

- *Pool insurance*. It provides cover for the assets in the pool. It is frequently used with the securitization of housing loans. Policies often cover the risk of foreclosure of the underlying housing loan. There are two forms of pool insurance: primary insurance covering a particular loans; and portfolio insurance covering a pool of housing loans.[22]
- *Letters of credit*. The originator arranges for a letter of credit from a third party, usually from an acceptable bank. It can be considered a more advanced form of credit guarantee where the insurer may cover such risks as interest rate variations.
- *Credit derivatives*. They are one of the most common forms of third party credit enhancement and involve the transfer of credit risk to a counterpart by way of a credit default swap transaction. Typically, derivatives are not in compliance with Islamic finance principles.

Enabling Securitization of Islamic Housing Microfinance Portfolios with Shariah-Compliant Credit Enhancement Instruments

Conventional and Islamic MF have very similar features and objectives (see Table 2). They differ mainly in terms of the mode of financing (for example, risk sharing elements as well as prohibition of interest (riba) and certain transactions), and the emphasis on ethical and religious principles. Therefore, it appears feasible to arrange a securitization of MF portfolios using the same structures and methodologies as a conventional securitization.

However, the securitization agent may not use the same credit enhancements as many of them are not considered Shariah-compliant. Given the associated risks with the securitization of housing microfinance portfolios, a credit enhancement is necessary to attract lower risk premiums to be paid to investors, and to allow for the offering of products which are affordable to households. For a Shariah-compliant HMF securitization structure, two forms of credit enhancements can be used:

1. Qard Hassan (= beautiful loan)

Qard hassan (QH) is a loan granted to the needy and is mentioned in the Quran as “beautiful” (al-hassan). It is a voluntary loan devoid of any expectation on the creditor’s part of monetary return, but the loan is granted to please

Table 2. Comparison between Islamic and conventional microfinance.

Items	Islamic Microfinance	Conventional Microfinance
Liabilities (sources of funds)	External funds, Islamic charitable sources	External funds (e.g. deposits)
Assets (deployment of funds)	Islamic financial instrument	Interest based
Target group	Family (or individual)	Individuals or groups
Disbursement	Goods and/or cash	Cash
Repayment incentive	Monetary and religious	Monetary
Dealing with default	Group/center pressure and/or spouse guarantee, and Islamic Ethic	Group/center pressure may be used (in case of group lending schemes)
Social development program	Can be included and may have a religious component (social and ethical behavior	Can be included

Source: Ahmed (2002).[23]

Allah with the expectation of His Blessing. Additionally, while the debtor is obliged to return the principal, the creditor, of his or her own free will, does not press the debtor for an exact timing of its return. In the case where, despite the debtor's best efforts, the debtor's circumstances make it difficult to repay the loan, then the creditor would forgive the loan. In the case of qard hassan, God promises multiple returns on such a "beautiful loan." Qard hassan is called "beautiful" (hassan) probably because in all the verses of the Quran, in which this loan is mentioned, it is stipulated that it is made directly to Allah, and not to the recipient (see, for example, Quran Verse 17, Chapter 64).

Typically, MFIs attract QH funds in form of deposits which can be structured as savings, current and time deposits. As stated, the depositor does not receive any return on her/his deposits. In some cases, she/he may pay a fee to the MFI for the administration of the QH deposits. The depositor is entitled to claim these back from the MFI. QH funds have successfully supported micro- as well as SME lending in several OIC countries. They are a regular source of funds for many MFIs in South-East Asia.[24] In Iran, there are established dedicated financial intermediaries or banks specializing in the intermediation of QH funds.

Waqf (= endowment)

A waqf is a trust or endowment in which the contributor endows a property in perpetuity for specific purposes. No property rights can be exercised over the corpus (privately owned property). Only the usufruct or return will be applied towards the objectives of the waqf (typically charitable).

Extensive research by Cizakca (1998) has documented the historical significance of this Islamic instrument.[25] Although awqaf (plural of waqf) has been known in civilized human societies prior to Islam, it was Islam which put this institution to versatile uses especially for the benefit of poor segments of the society. Consequently, awqaf flourished in several Muslim communities, especially during the Ottoman civilization, and provided important social services especially in the form of mosques, schools, hospitals, potable water sources, and support for the poor. Very early in the history of Muslim societies, a practice emerged whereby a person could contribute up to one third of his/her wealth at the time of his/her death. An important characteristic of waqf relates to its objective, that is, the idea of birr (doing charity out of goodness).[26] The concept of waqf functions as follows: a founder who has accumulated private wealth decides to endow his personal property for a specific, often pious, purpose. The amount of the original capital (or corpus), the purpose for which it is endowed, and all the other conditions of management are clearly registered in a deed of endowment submitted to the authorities. In this way, the privately accumulated wealth of a pious Muslim becomes God's property. The founder stipulates strictly how the annual revenue of the waqf should be spent. This revenue (usufruct) may be allocated completely for a social welfare purpose, such as health, education, or civil services to poor (waqf khayri), or to a group of specified beneficiaries. Typically, awqaf institutions (AIs) provide such services at no cost without being a burden on the government. On the macroeconomic front, AIs can be seen as serving the ultimate goal of reducing government spending, which contributes to reducing the budget deficit, inflation and government borrowing (other things being equal).[27]

The cash waqf is a special type of endowment and it differs from the ordinary real estate waqf in that its original capital, asl al-mal or corpus, consists purely or partially, of cash. A key feature of cash waqf is that it generates income which in turn supplies the capital necessary to provide social services or poverty alleviation services. The concept of cash waqf opens the door to an innovative use of such capital. The management of the waqf is entrusted to trustees, whose functions may be fulfilled by the founder him or herself during his or her lifetime. Thus, there are four major components of any waqf: the founder; the beneficiaries; the trustees; and the endowed capital, or corpus, itself.

Figure 2 depicts a simplified structure of a cash waqf. The waqf manager or nazir collects the contributions from the waqif or contributors and makes investments (e.g. housing, SMEs, etc.). The returns from the investments (after deduction of all costs) will be allocated by the nazir to charitable programs (e.g. improvement of health services, infrastructure for poor people or others). As in the original waqf design, it is important that the value of the contributions made by the waqif will remain constant to fulfill the criterion of perpetuity.[28]

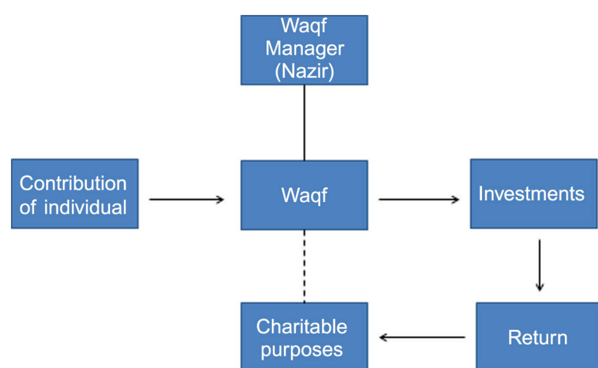

Figure 2. Simplified structure of a cash Waqf.

4. Putting the model together

General prerequisites for securitization

Islamic securitization has specific requirements with regard to following Shariah rules and general requirements, which are the same as for conventional securitization. The most important are:[29]

- Conducive legal and tax framework. Securitization must be supported by basic security laws, clear and reasonable off-balance sheet valuation guidelines for securitized assets and the guarantee of the bankruptcy remoteness of the SPV or SPM among others. As necessary, it also includes a specific securitization law.
- Significant asset volumes. Lenders should have sufficiently large pools of loan portfolios for securitization to achieve economies of scale to justify the advantage of securitization over alternative funding sources. Ideally, these loan portfolios correspond to certain standards to facilitate the assessment of the credit quality of the underlying portfolio backing the bond issued by the SPV/SPM.
- Lender preparedness. The originator's organization (MFI) must be prepared for securitization, especially departments in charge of underwriting, servicing, information management and treasury.
- Investor demand. Various factors influence investor demand for securitized assets. These include the performance of the loan pools, liquidity in the market, the availability of a benchmark or yield curve. Typically, investors compare the return on an asset backed security issue with that of government bonds as the quasi risk-free alternative investment, and expect an attractive risk-adjusted return to compensate for the higher risk.

Structuring a securitization using Waqf and QH deposits as credit enhancement

As the nature of QH and waqf funds differ, both fund types can be applied at different levels of an asset backed security. By structuring the ABS issue as a waterfall, waqf and QH deposits could be integrated into the issuance in such a way that they provide credit enhancement to the senior notes. Being better protected against default, the senior notes would have a lower interest rate, which is expected to lead to a lower interest charged to the borrower (= individual household having a HMF loan), thereby increasing affordability.

To comply with the perpetuity principle, the waqf funds should be invested at a level where the probability of default could be higher than of a senior note but still lower than that of junior note (which is typically held by the originator). As the QH investors do not necessarily expect the return of her/his deposits, these can be used at the junior tranche level. Figure 3 depicts a simplified structure of the waterfall of the ABS issue as well as the structure of the SPV balance sheet. Referring to the conventional credit enhancement structure, the following elements can be observed:

- Originator provided: overcollateralization of the SPV receivables.
- Structural credit enhancement: waterfall structure with mezzanine and junior securities.
- Third party protection: waqf and QH funds. The use of a waqf fund as mezzanine tranche which will give a first level of defense against any default risk of the underlying HMF portfolio. The third and the last tranche could be financed by QH funds which also serve as quasi-equity. This tranche will absorb credit risk and loss of principal in case of defaults. It serves as the final buffer against any credit risk and provides a cushion against losses to waqf investments.

The balance sheet of the SPV/SPM reveals that there are two layers of protection: on the asset side through the over-collateralization; and on the liability side through the QH deposits and waqf funds.

- On the asset side: the share of over-collateralization amounts, for example 10% (e.g. the outstanding principal value of the loan is US$ 110 which will be transferred to the SPV but the SPV will raise funding for US$ 100. The balance of the assets will be retained as collateral).
- On the liability side: the QH funds assume the role of the originator holding the "unrated piece". From the Islamic finance perspective, the QH funds enable the lending to low income groups by offering the QH deposits by Islamic financial intermediaries. In this way, Islamic financial intermediaries become channels to organize and distribute QH financing to deserving projects.
- Proposed percentages for the liability side: 10% for the QH funds and 5–10% for waqf funds. The remaining funds can be sold to investors preferring senior notes. Although the proposed percentages for the credit enhancements are quite high, this extra credit enhancement is considered necessary to attract market-based financing as investors are likely to perceive such a security to be quite risky given the nature of the underlying loan portfolio.
- Additional credit enhancement could be built into the structure by using the return from the waqf certificates. In this case, the returns will not be deployed for charitable purposes and will be withheld by the waqf manager.

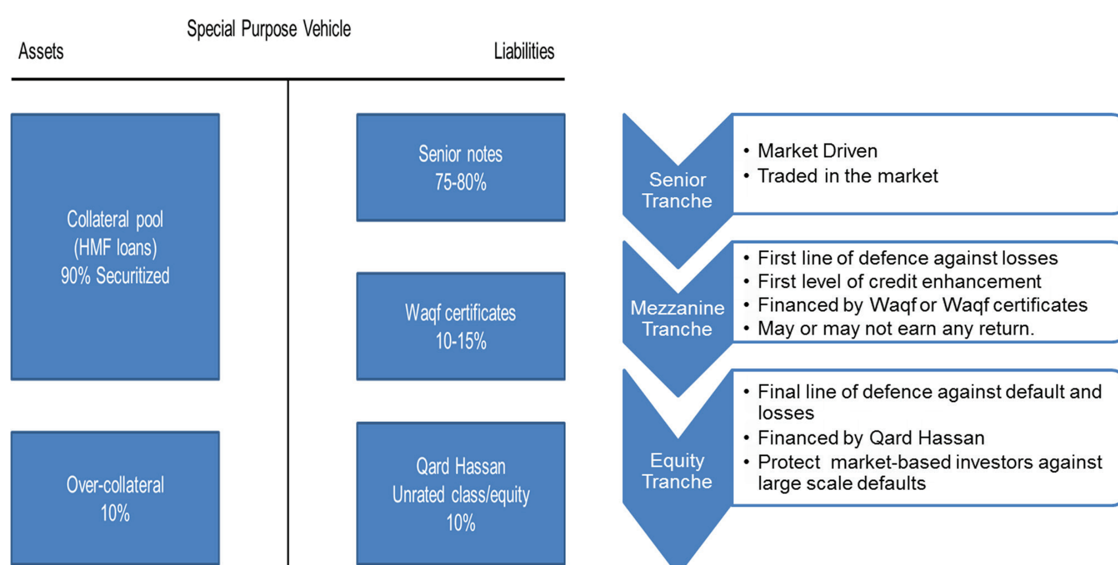

Figure 3. Simplified structure of the use of Waqf and QH funds as credit enhancement and simplified structure of the SPV balance sheet.

- Alternatively, returns from the waqf certificates could be used for administration of SPV/SPM to lower the overall transaction cost of the securitization.

5. Feasibility of the proposed model

To assess the feasibility of the proposed structure, certain criteria will be applied. As the member states of the OIC are in very different stages of development, the analysis provides a perspective from the MF industry and refers to individual OIC countries in selected cases only. Table 3 provides a simplified overview.

Criteria:

1. Enabling environment. This comprises not only a conducive regulatory framework for securitization, but also conditions which allow the Islamic microfinance industry to flourish.
2. Market preparedness. This criterion assesses the preparedness of investors to invest in the securities offered as well as investors to provide funding for the establishment of waqf funds as well as a sufficient number of QH investors.

Table 3. Simplified feasibility analysis of proposed Waqf/QH securitization model.

	Criterion	Overall status	OIC country which is considered a comparatively high performer for this criterion
1. Enabling environment	Capital market infrastructure	Most OIC countries do not have necessary infrastructure to allow for the securitization of loan portfolios	Malaysia, Turkey, Indonesia
	Financial sector development	Underdeveloped financial sector with a small MFI industry	Malaysia, Turkey
2. Market preparedness	Size of MFI industry	Very small size	
	Originator and investor preparedness	Potentially limited	
	Availability of waqf and QH funds	Most countries have established waqfs and banks collect QH deposits	Indonesia, Pakistan, Iran, Saudi Arabia
3. Shariah-compliant standards and HMF products	Prevalence of shariah-compliant standards and regulation	Especially in GCC countries, Pakistan, Iran and Indonesia. Some countries lack legal framework for waqf	

3. Shariah-compliant standards and HMF products. Questions of relevance concern whether there is a demand for Shariah-compliant HMF products, or whether there are already well-established standards, which are known to the investor community.

Although Table 3 indicates a weak capital market infrastructure, the set up from a purely technical standpoint appears feasible, especially in those markets which have some capital market activities (e.g. Saudi Arabia or Indonesia). Some countries, such as Indonesia, have also implemented conventional housing finance securitization models,[30] which could help stimulate the appetite among investors to buy Islamic HMF-backed securities. These issuances are likely to benefit from the assigned reputation of MF-portfolios as having good credit quality, as MFIs are considered to be good at servicing their loan portfolios.[31]

The implementation of such a model is likely to face several obstacles which range from a very small industry (US$ 600M) concentrated in countries with a weak enabling environment (e.g. Sudan), to a weak and inadequate infrastructure for the establishment of a continuous flow of securitization transactions, allowing for liquidity, transparency and visibility.

In addition, the number of charitable investors is probably also limited. Although some countries have considerable QH deposit volumes (e.g. Iran), a viable model requires a continuous flow of QH deposits into the SPV as the value of the QH deposits is likely to erode over time due to the relative high and volatile inflation rates in many OIC countries.

One point which requires further clarification is how it can be ensured that the selling MFI will have “skin in the game”: a mechanism must be established which requires the selling MFI to take back any defaulting loan which it has sold previously to the SPV/SPM. The MFI is also likely to remain the servicer of the HMF loans sold. Thus, the proposed model supports the funding side, but does not provide capital relief.

Another point deals with the management of the SPV/SPM. The waqf fund manager could be in charge of it; however, this may lead to a potential conflict of interest. Depending on which type of institution is in charge of the overall securitization process, increased transaction costs can arise.

In conclusion, the development of a feasible approach requires substantial improvement of the enabling environment and the market infrastructure in most OIC countries. In addition, a stronger development of the Islamic MF industry is warranted to raise the profile and the attractiveness of further investment flows into the industry.

6. Conclusions: A potential model

Figure 4 summarizes the proposed structures of securitization using waqf and QH funds as credit enhancements. The green dashed lines and boxes illustrate an approach for developing a sustainable model combining waqf and QH funds.

Initially, a MFI sells its HMF portfolio to an SPV/SPM which issues senior notes and waqf certificates to investors. The

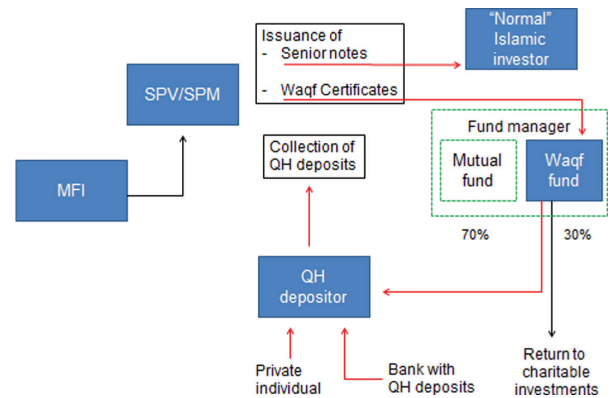

Figure 4. Simplified summary of a securitization structure using Waqf and QH funds as credit enhancement and proposed structure for a feasible model.

SPV also receives QH funds to offer additional protection to investors against default of the underlying portfolio. By providing waqf and QH funds to the transaction, the contributors fulfill the social and religious goals as required by Islam for these instruments.

A potential approach to developing a viable and sustainable model could be through the establishment of a waqf mutual fund model. Such models have been already established in Indonesia:[32]

- The contributor divides his or her contribution into a mutual fund and waqf fund. A potential breakdown could be to invest 30% of her/his contribution into the waqf fund and 70% into the mutual fund. Whereas the mutual fund aims to achieve a market based return, the waqf fund will operate under the same principles as outlined here.
- The waqf manager manages both the mutual fund and the waqf fund.

Such a model would target the socially responsible investor who aims to make some return on his or her investment but is ready to share part of the returns and funds for a good purpose. In this way, the investment model would be in a position to broaden its appeal beyond the classical charitable investor. In addition, it allows the waqf fund manager to build up a more liquid and sustainable investment vehicle over time. In addition, the returns from the waqf fund could be used to increase the volume of available QH funds to be used for the junior tranche in the securitization transaction. In this way, the returns can compensate for the eroding value of the QH funds, or serve as replenishment for those QH funds which have not been returned to the QH depositors as loans of the underlying HMF portfolio have defaulted.

In conclusion, this proposed structure is a way of integrating Islamic social instruments to support access to affordable housing for low income groups. As the markets for housing microfinance loans are quite small, the fund manager may also consider direct investments into MFIs and developing the securitization model over time once higher volumes are available. The returns from the waqf funds can be used in several ways:

1. To support the volume of available QH funds.
2. To offer constructive support to low income households.
3. To offer advisory services to the MFI to improve risk management and corporate governance capacities, as well as to help build standardized HML portfolios and facilitate their securitization at a later stage.

In this way, the fund manager supports expansion of the Islamic MF industry in a responsible manner. Simultaneously, it allows for the combination of innovations in finance with the goal of financial inclusion in compliance with Shariah principles. A marketable instrument would be introduced to provide funding for much-needed housing finance in OIC countries, where it is to be offered to low income groups. With the introduction of securitization of housing microfinance loans, financial institutions would be able to pool their assets and issue marketable securities. In this way, they will share the risks with the market, as well as free up the capital for further mobilization of housing finance.

Abbreviations

AI	Awqaf institution
CGAP	Consultative Group to Assist the Poor
GCC	Gulf Cooperation Countries
HMF	Housing microfinance
IFI	International financial institution
IFSB	Islamic Financial Services Board
LTV	Loan to value ratio
MF	Microfinance
MFI	Microfinance institution
NGO	Non-governmental organization
OIC	Organization of Islamic Corporation
QH	Qard hassan
SMF	Sarana Multigriya Finansial
SPV	Special purpose vehicle
SPM	Special urpose mudarabah

Notes

1. List of OIC countries can be found at www.oic-oci.org.
2. N. S. Shirazi, M. Zulkhibri, S. S. Ali (2012). Challenges of Affordable Housing Finance in IDB Member Countries using Islamic Modes. *Islamic Research and Training Centre*, page 3.
3. The term microfinance institution is used in a broader sense, comprising besides the typical MFIs, NGO, co-operatives or other non-bank financial institutions which specialize in lending to low income groups.
4. C. Luetzenkirchen, C. Weistroffer (2012). Microfinance in evolution. *DB Research*, Current Issues, page 2.
5. R. Atkins (2013). ECB's Draghi in drive to drive to revive slicing and dicing. *Financial Times*, Thursday May 9, 2013, p. 21.
6. N. Karim, Michael Tarazi, X. Reille (2008). Islamic Microfinance: An Emerging Market Niche. *CGAP Focus Note,* No. 49, p. 5.
7. F. Daphnis, Bruce Ferguson (2004). Housing Microfinance: A Guide to Practice. *Kumarian Press Inc.,* p. XV.
8. For a summary of the differences between microfinance loans and housing microfinance loans, see S. R. Merrill (2009). Microfinance for Housing: Assisting the "Bottom Billion" and the "Missing Middle". Urban Institute Center on International Development and Governance, IDG Working Paper No. 2009–05, p. 2.
9. Data from A. Mohensi-Cheraghlou (2013). Islamic Finance and Financial Inclusion: A Few Must-know Facts. GFDR Seminar, World Bank, p. 1.
10. M. El-Zoghbi, M. Tarazi (2013). Trends in Sharia-Compliant Financial Inclusion. CGAP Focus Note, No. 84, p. 7.
11. B. K. Grewal (2011). Constraints on Growth in Islamic Finance. IFSB 4th Public Lecture on Financial Policy and Stability, p. 13. IFSB (2013). Islamic Financial Services Industry Stability Report, p. 142.
12. J Drummond (2011). Youths fear housing shortage. *Financial Times* April 1, 2011.
13. Accion (2006). Who will buy our Paper: Microfinance Cracking the Capital Markets. Number 18, p.1; CRISIL (2012). CRISIL – rated MFI securitization transaction expected to continue demonstrating robust performance.
14. M. Obaidullah, T. Khan (2008). Islamic Microfinance Development – Challenges and Initiatives. *Islamic Research and Training Institute*, Policy Dialogue Paper No. 2, p. 34.
15. H. Askari, Z. Iqbal, N. Krichne, A. Mirakhor (2012). Risk Sharing in Finance – The Islamic Finance Alternative. *John Wiley & Sons (Asia) Pte. Ltd*. p. 125 sqq.
16. Y. Zöngür, "Comparison between Islamic and Conventional Securitization: A Survey", Review of Islamic Economics, Vol. 13, No. 2, 2010, pp. 81–118, p. 90.
17. The table highlights the differences from a theoretical perspective. At present, sukuk issues resemble in most cases conventional securitization structures.
18. Z. Iqbal (2011). Economics of Sukuk. Washington DC, p. 18 – 19.
19. A. Jobst (2009). Islamic Securitization after the Subprime Crisis. *Journal of Structured Finance*, Vol. 14, No. 4, pp. 41–57
20. Duration is common measure of interest rate sensitivities.
21. V. Kothari (2006). Securitization. The Financial Instrument of the Future. *John Wiley & Sons (Asia) Pte. Ltd*, pages 211 sqq.
22. In addition, there are monoline insurance companies which are not engaged in traditional insurance functions but merely provide insurance against defaults in financial transactions. They are most common in the US.
23. H. Ahmed (2002). Financing Micro Enterprises: An Analytical Study of Islamic Microfinance Institutions. Journal of Islamic Economic Studies No. 9(2).

24. M. Obaidullah, K. Tariqullah (2008). Islamic Microfinance Development – Challenges and Initiatives. Islamic Development Bank, Policy Dialogue Paper No. 2, p. 19.
25. M. Çizakça (1998). Awqaf In History And Its Implications For Modern Islamic Economies, Islamic Economic Studies, Vol. 6, No. 1, November 1998.
26. H. Ahmed (2007) Waqf-Based Microfinance: Realizing the Social Role Of Islamic Finance, Islamic Research and Training Institution (IRTI), Proceedings of International Seminar on "Integrating Awqaf in the Islamic Financial Sector" Singapore, March 6–7, 2007.
27. M. Çizakça (1998). Awqaf in History and its Implications For Modern Islamic Economies, Islamic Economic Studies, Vol. 6, No. 1, November 1998.
28. M. Khademolhoseini (2008). Cash-*Waqf* – a new financial instrument for financial issues: an analysis of structure and Islamic justification of its commercialization. Imam Sadiq University, p. 3.
29. F. Roy (2011). Primary Mortgage Market Development in Emerging Markets – Is the Central and Eastern Europe Experience Replicable in Sub-Saharan Africa, in D. Koehn, J.D. v. Pischke (editors), Housing Finance in Emerging Markets. Springer Verlag Berlin Heidelberg, p. 171.
30. Sarana Multigriya Finansial (SMF), 2011. Development of Housing Finance in Indonesia. International Seminar for Asian Housing Finance Market, Seoul, June 22.
31. R. Cull, A. Demirguc-Kunt, J. Morduch (2008). Microfinance meets the Market. World Bank Policy Research Paper No. 4630.
32. M. Khademolhoseini (2008). Cash-*Waqf* – a new financial instrument for financial issues: an analysis of structure and Islamic justification of its commercialization. Imam Sadiq University, p. 11.

References

Accion. "Who will Buy our Paper: Microfinance Cracking the Capital Markets." Number 18. 2006.

Ahmed H. "Financing Micro Enterprises: An Analytical Study of Islamic Microfinance Institutions." Journal of Islamic Economic Studies No. 9(2), 2002.

Ahmed H. "Waqf-Based Microfinance: Realizing The Social Role Of Islamic Finance." Islamic Research and Training Institution (IRTI), Procceding of International Seminar: "Integrating Awqaf in the Islamic Financial Sector" Singapore, March 6–7, 2007.

Askari H, Iqbal Z, Krichne N, Mirakhor A. Risk Sharing in Finance – The Islamic Finance Alternative. John Wiley & Sons (Asia) Pty. Ltd. 2012.

Atkins R. ECB's Draghi in drive to drive to revive slicing and dicing. Financial Times, Thursday May 9, 2013.

Çizakça M. "Awqaf In History And Its Implications For Modern Islamic Economies." Islamic Economic Studies, 6(1), 1998.

CRISIL CRISIL– rated MFI securitization transaction expected to continue demonstrating robust performance. 2012.

Cull R, Demirguc-Kunt A, Morduch J. Microfinance meets the Market. World Bank Policy Research Paper No. 4630, 2008.

Daphnis F, Ferguson B. Housing Microfinance: A Guide to Practice. Kumarian Press Inc., p. XV. 2004.

Drummond J. Youths fear housing shortage. Financial Times April 1, 2011.

El-Gari MA. "The Qard Hassan Bank", paper presented at the International Seminar on Nonbank Financial Institutions: Islamic Alternatives, March 1–3, 2004, Kuala Lumpur, jointly organized by Islamic Research and Training Institute, Islamic Development Bank and Islamic Banking and Finance Institute Malaysia. 2004.

El-Zoghbi M, Tarazi, M. Trends in Sharia-Compliant Financial Inclusion. CGAP Focus Note No. 84. 2013.

Grewal BK "Constraints on Growth in Islamic Finance." IFSB 4th Public Lecture on Financial Policy and Stability. 2011.

IFSB Islamic Financial Services Industry Stability Report, 2013.

Iqbal Z. Economics of Sukuk. Washington DC. 2011.

Jobst A. "Islamic Securitization After the Subprime Crisis." Journal of Structured Finance, 14(4). 2009.

Karim N, Tarazi Michael, Reille X. Islamic Microfinance: An Emerging Market Niche. CGAP Focus Note, No. 49. 2008.

Khademolhoseini M. Cash-Waqf – a new financial instrument for financial issues: an analysis of structure and Islamic justification of its commercialization. Imam Sadiq University. 2008.

Kothari V. Securitization. The Financial Instrument of the Future. John Wiley & Sons (Asia). 2006.

Luetzenkirchen C, Weistroffer C. "Microfinance in evolution." DB Research, Current Issues. 2012.

Merrill, S. R. "Microfinance for Housing: Assisting the 'Bottom Billion' and the 'Missing Middle'. Urban Institute Center on International Development and Governance, IDG Working Paper No. 2009–05. 2009.

Mohensi-Cheraghlou A. "Islamic Finance and Financial Inclusion: A Few Must-Know Facts." GFDR Seminar, World Bank. 2013.

Obaidullah M, Khan T. Islamic Microfinance Development – Challenges and Initiatives. Islamic Research and Training Institute, Policy Dialogue Paper No. 2, 2008.

Roy, F. "Primary Mortgage Market Development in Emerging Markets – Is the Central and Eastern Europe Experience Replicable in Sub-Saharan Africa." In D. Koehn, J.D. v. Pischke (Eds), Housing Finance in Emerging Markets. Springer Verlag, Berlin, Heidelberg. 2011.

Sarana Multigriya Finansial (SMF). Development of Housing Finance in Indonesia. International Seminar for Asian Housing Finance Market, Seoul, June 22. 2011.

Shirazi NS, Zulkhibri M, Ali SS. Challenges of Affordable Housing Finance in IDB Member Countries using Islamic Modes. Islamic Research and Training Centre. 2012.