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Global Perspective on Islamic Finance

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“O Believers: devour not Riba, doubled and redoubled; 
and fear Allah, in the hope that you may get prosperity.”

*Sura Ale-Imran (verse No. 130)*

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Editor’s Note

In Islamic finance contracts, use of technology can help in completion of different steps involved in a typical Islamic finance transaction, more quickly and efficiently. It will also ensure efficient monitoring and completion of documentary requirements. To capitalize on the advantages of Fintech, standardization in Shari’ah rules is vital. Standardized operating procedures can enhance the scope of automation through Fintech in the contract mechanics and execution.

Islamic banks face the challenge of efficiency given that they need to participate more intensely in the Islamic finance contracts. If the additional procedures and documentation for ensuring Shari’ah compliance can be achieved more efficiently with Fintech, then it will also bring efficiency in Islamic banking products and operations.

Furthermore, Fintech can help in effective marketing and cross-selling of financial products in Islamic banking by providing interactive exchange of information and communication with the customers. Fintech would also make the financial markets more competitive by reducing information asymmetries and enabling comparison of product features across financial institutions.

The average score on mobile phone penetration in Muslim majority countries is similar to the average for middle income countries, i.e. 103 out of 1,000 people, according to the data for 2018 provided by FINDEX database of World Bank. It is not the case with the number of ATMs and branches per 100,000 people in Muslim majority countries. The average number of branches in Muslim majority countries is around 10 per 100,000 people as against 12 and 20 in middle income and high income countries respectively, also according to the World Bank data for 2018. Likewise, the average number of ATMs in Muslim majority countries is around 25 per 100,000 people as against 36 and 66 in middle income and high income countries respectively, as per the World Bank data for 2018.
Such data highlights an opportunity for Islamic banks. They might be at a disadvantage when it comes to the physical infrastructure. However, Fintech opens up a new opportunity to reach the customers more efficiently and engage with them in a more interactive way. This will enable Islamic banks to increase their market share through online and mobile banking and this growth will not be dependent on physical infrastructure investments through extending physical branch network. Thus, it can be bring cost efficiencies in Islamic banks and allow them to break even more quickly than in the brick and mortar model.

This issue of Journal of Islamic Banking & Finance documents scholarly contributions from authors around the globe. Contributions in this current issue discuss the theoretical underpinnings of an Islamic economy, contemporary issues in Islamic finance and performance based empirical studies on Islamic banking and finance. Below, we introduce the research contributions with their key findings that are selected for inclusion in this issue.

“Liquidity Management for Islamic Banks in Indonesia: The Experience of Komoditi Syariah Jakarta Future Exchange (KS-JFX)” contributed by Muhammad Iman Sastra Mihajat, Ph.D, Head of Sharia, Oman Arab Bank critically evaluates the application of the product of Islamic money market in the light of shari'ah injunctions. He explains the three major contracts that are used for liquidity management in Islamic banks in Indonesia which are, wadi'ah, tawarruq and mudharabah. He then talks about the liquidity product introduced by the Jakarta Future Exchange - the Komoditi Syariah which he says has complied with shari'ah refering to Fatwa DSN-MUI No. 82, however, the shari'ah advisor of JFX has to supervise the product regularly to avoid misuse of the product to avoid distortions that may creep in. He discusses the Fatwa based on which such a product was developed and the contemporary development and challenges of finding products that Islamic Banks can use to park excess liquidity.

This paper “Green Sukuk for Financing Renewable Energy Projects” written by SitiRohaya Mat Rahim and ZamZuriyatiMohamad, investigates the application of the Green Sukuk, particularly, for financing the renewable energy. More precisely, three case studies had been chosen for discussion. In the first case study, we highlights “Hybrid Sukuk” framework adopted by Tadau Energy Sdn. Bhd. for financing solar photovoltaic (PV) plants.

The paper “Model for Financing Agro Projects in Islamic Banking Institutions” written by Muhammad Ridhwan Ab. Aziz and Muhammad Mohamad Yusoff, aim of Islamic financing in agriculture is to finance agriculture-
based projects and to prevent any involvement of haram elements by using banking and financing instruments which is Shariah-compliant among agro-entrepreneurs. However, there are several risks that need to be faced by agro-entrepreneurs which may force them to accommodate possible loss from effect of risks using the same funding. Both agro entrepreneurs and banking institutions are increasingly seeking effective and sustainable strategies and approaches to mitigate, transfer, or cope with these inherent risks.

This paper “Islamic Finance: Challenges of Islamic Banking in Pakistan” written by Shaikh, Asif Zaheer and Dr. Shah, Ume Laila, say that Islamic banking, a major segment of Islamic finance, is expanding rapidly. This valuates position of Islamic finance and Islamic banking, around the world in general and particularly in Pakistan. History of Islamic banking in Pakistan is protracted and at present this sector is growing significantly.

The paper in this issue is titled “Shariah Compliance Prediction Model for Shariah Compliant Stocks Based on Historical Discriminant Trend Analysis”. It is written by Usman Khurshid and Assoc. Prof. Dr Syed Musa Alhabshi. Shari’ah stocks screening methodologies had a significant impact in the realm of Islamic finance portfolio stocks since the early 1990s. The research provides a Shari’ah governance tool for Shari’ah stocks screening methodologies, which will help Islamic investors and stakeholders to better understand the Shari’ah compliant stocks and the mechanisms of Shari’ah stocks screening methodologies around the world. The sampled stocks were analyzed using the modified discriminate function to forecast the Shari’ah compliance level for the stock based on trends from historical Shari’ah compliance level of the stocks i.e. green, yellow and red. Forecast results provide the variations of Shari’ah compliance level of the stocks over the years for a robustness evaluation of 5 global Shari’ah stocks screening methodologies. The results highlight that the Standard & Poor and Dow Jones Shari’ah screening methodologies are more robust than others as they have a highest and stable number of green Shari’ah compliant stocks from the sample of 1440 stocks from the year 2010 to 2016/17. The Shari’ah compliance trend from the historical data analysis can be further used to forecast the future Shari’ah compliance direction of the stocks.

This paper “Factors Influencing the Adoption of Islamic Banking of Pakistan” written by Kashif Abbass, Hua-MingSong, Arsalan Tanveer, Muhammad Zeeshan & Shazia Shaheen Shaikh. To determine the factors that are influencing the adoption of Islamic banking amongst the 150 employees of the middle management were taken as a sample of the total population of the department. A convenience sampling technique is
used for data collected from the banks, five point Likert scale were used to get the response from employees, and all the questions are close ended. The data are analysed by applying co-relation, regression and descriptive analysis to find the result of variables (Religious Motives, Financial, Teaching of Islam, Reputation, Convenience and Responsiveness) by using SPSS (24.0).

Disclaimer

The authors themselves are responsible for the views and opinions expressed by them in their articles published in this Journal.

The opinions, suggestions from our worthy readers are welcome, may be communicated on e-mail: ia_ib@yahoo.com / facebook link: http://www.facebook.com/JIBFK
Liquidity Management for Islamic Banks in Indonesia: The Experience of Komoditi Syariah Jakarta Future Exchange (KS-JFX)

By
Muhammad Iman Sastra Mihajat, Ph.D.

Abstract
The development of Islamic banking in Indonesia has gained popularity since the last two decades that implies high demand on innovative product particularly for liquidity management for Islamic banks. At the same time, the liquidity management is something crucial and urgent to Islamic banking operation. In 2011, Jakarta Future Exchange (JFX) has launched one innovative Islamic money market instrument for Islamic bank as liquidity risk management namely Komoditi Syariah. This product was accommodated by Fatwa DSN-MUI No. 82/DSN-MUI/VIII/2011 to justify the sharī‘ah compliance of the product. This paper highlights the contemporary issues of liquidity risk management for Islamic banks in Indonesia. The paper also attempts to elucidate in depth the concept and mechanism of Komoditi Syariah of JFX and lays down several possible sharī‘ah issues in the structure. At the end of the chapter, the paper proposes parameters guidelines to comply with sharī‘ah, and proposes possible sharī‘ah structure that can be taken into consideration by Islamic financial industries for future structure for liquidity management product.

Keywords: Tawarruq, commodity murābahah, Bay al-‘Inah, liquidity management, Fatwa DSN-MUI No. 82.

1. Introduction

Islamic finance has emerged as one of the fastest growing industries in the world including in Indonesia. It shows from the fast development of Islamic banking and

* Author: Muhammad Iman Sastra Mihajat Head of Sharia, Oman Arab Bank. E-mail: muhammad.iman@oman-arabbank.com
finance worldwide in the last two decades and spread to all corners of the globe that received wide acceptance by both Muslim and non-Muslim alike (Iqbal and Molynex, 2005). The fast development in Islamic banking and finance has raised some issues especially the issue of lack of instruments/products for liquidity risk management. High demand for Islamic banking and finance products and services requires high innovation of products and services. As banking institutions, Islamic banks have to meet their liquidity needs in an appropriate manner in order to safely run their business, maintain good relations with the stakeholders and avoid liquidity mismatch problems (Abdul Majid, 2003; Greuning and Iqbal, 2008). Because of the nature of the Islamic banks, they issue liquid liabilities but invest in illiquid assets (Zhu, 2001).

Therefore, satisfactory financial instruments to should exist to manage the surplus liquidity position and deficit position of the Islamic banks. Such products aim to provide liquidity injection for the deficit banks and for the surplus banks to satisfy the interest of funding unit to generate more satisfactory profit to be distributed to the liability side. Liquidity risk commonly appears when there is mismatch between the maturity of the liabilities and assets of an Islamic bank (Ahmed, 2005) and arises when depositors collectively withdraw huge funds than the bank has immediately in hand (Hubbard, 2002). It also occurs due to the failures of the bank in managing the unfavorable economic conditions which leads to unpredictable liquidity withdrawals by depositors. Indeed, maintaining a robust liquidity management is very challenging and difficult in a competitive and open economic system with strong external influences and sensitive market players (Ismal, 2009 and 2010).

Therefore, the board of directors and senior management of Islamic banks should ensure that liquidity risk is effectively managed by establishing appropriate procedures and policies. Indeed Islamic banks should have adequate information systems to measure, monitor, control, and report the liquidity risk exposure. The reports should include among others, liquidity positions over particular time horizons for review of the board of directors and senior management (Khan and Ahmed, 2001). Theoretically, Islamic banks should be less exposed to asset-liability mismatch and equity duration risk, than their conventional counterparts. This comparative advantage is rooted from the nature of Islamic banks, which act as agents for their depositors particularly in the contract of mudhārabah which shares the profit according to the agreed ratio and passes all the losses to the depositors as capital provider (Greuning and Iqbal, 2008). In practice, however, either depositors or Islamic banks merely prefer to choose revenue sharing concept rather than profit and loss sharing which also adheres to sharī'ah injunction, referring to Fatwa No. 14 and 15/2000 on profit distribution and revenue sharing.

This paper attempts to elucidate the current development and mechanism of the Islamic money market in Indonesia, particularly the latest instrument of liquidity risk management in Islamic banks which is Komoditi Syariah of Jakarta Future Exchange (KS-JFX). This product was released based on Fatwa DSN-MUI No. 82/DSN-MUI/VIII/2011 to justify the sharī'ah compliance of the product. This paper also examines the contemporary issues of liquidity risk management for Islamic banks in Indonesia, lays down several possible sharī’ah issues in the structure of Komoditi Syariah of JFX, and proposed guidelines in order to comply with sharī’ah.
2. Definition and Urgency of Liquidity Management

Basel Committee on Banking Supervision (BCBS) defines liquidity management as: “Ability to fund increases in assets and meet obligations as they come due” (BCBS, 2000). According to Reserve Bank of Australia ‘liquidity management’ is “activities within a financial institution to ensure that holdings of liquid assets (e.g. cash, bank deposits and other financial assets) are sufficient to meet its obligations as they fall due, including unexpected transactions (Reserve Bank of Australia, n.d.).” Bank of Jamaica has provided a similar definition which states: “The availability of funds, assurance that funds will be available, to honour all cash outflow commitments (both on-and off-balance sheet) as they fall due” (Bank of Jamaica, 1996).

The role of liquidity management in Islamic financial industry is very critical to maintain the trust and confidence of the stakeholders. The inability to efficiently monitor liquidity risk and the underutilised surplus liquidity has led to weak asset-liability management, which translates into liquidity risk. Islamic bank have to monitor the impact of the future economic challenges, report over the falling asset prices, credit seizures and liquidity crunches to create better performance than their conventional counterparts (Pathak, 2009).

The urgency of liquidity management instrument in Islamic banking has attracted the concern of Islamic Financial Services Board (IFSB) to issue research note - “Technical note on issues in strengthening liquidity management of institutions offering Islamic financial services: the development of Islamic money markets”. The note states several issues that have to be taken into consideration pertaining to liquidity management as follows (Hassan, 2012):

1. The lack of instrument on liquidity management in Islamic financial services.
2. There are some different Shari’ah opinions on Islamic money market instruments that bring different approaches in the way of structuring the instruments in many jurisdictions.
3. In many circumstances, it has been observed that Islamic money market instruments are prohibited to be traded. Therefore, Islamic money market instruments are yet to gain the popularity in managing liquidity in IFIs. Even though if they are tradable, in terms of quantity and number of issuances they seem to be out of real demand in the market.
4. Although there are some instruments in Islamic capital market such as sukuk, with a variety of issuance, acceptance and tradability and in practice in many jurisdictions, these are not bought and held, and even not traded. The lack of issuance causes worry to the securities holders. Once they sell these securities, they cannot buy the same securities with the same returns.

Therefore, Islamic banks have to identify their future survival and growth which partly depend on their ability to manage the risks associated with their business (Noman, n.d.). Islamic banks also have to develop the culture of risk management, which means
Islamic banks need to actively pursue the risk management issue and avail themselves of any techniques that are available at hand without waiting for many other questions to be answered by their Shariah boards (Chapra and Khan, 2000). Because the liquidity profile of Islamic banks have been one of the most important strength of Islamic Financial Institutions (IFIs). This provides them with proper liquidity management techniques to cater as shock absorber against possible future shortage pertaining to investment opportunities and payment obligations (Pathak, 2009).

3. Liquidity Management Instruments for Islamic Bank in Islamic Money Market: Contemporary Development and Issues

There are, at least, three main sources of fund in Indonesian Islamic banking industry for short-term liquidity instrument namely wad’ah demand deposit, mudharrabah saving deposit and mudharrabah time deposit. The first one is the most unpredictable deposit accounts since depositors may withdraw their money at any time they wish. Historically, based on data from December 2000 into Aug 2009, the average depositors’ withdrawals were 8.89% per month. The second one is less predictable because there is also no requirement for depositors to inform the bank if they want to withdraw. Data shows the average of 5.39% withdrawals per month. The last one is the most predictable account. Islamic banks may exactly know the demand for short-term liquidity from the tenor and maturity date of such deposit. In spite of being in practice, the depositors may withdraw the money at any time they wish with some consideration, yet they have to inform the bank prior to withdraw. The data recognizes only 11.84% termination of the agreed tenor, the rest of them are always rolled over (Ismal, 2009; 2010). Other than that, Islamic banks may obtain liquidity injection from Bank Indonesia or borrow from Islamic money market (Pasar Uang Bank Syariah, PUAS). Either withdrawing from the interbank placement, or repurchasing Islamic Certificate of Bank Indonesia (Sertifikat Bank Indonesia Syariah, SBIS) which was formerly known as SWBI (Sertifikat Wadiah Bank Indonesia, Wadiah Certificate of Bank Indonesia) or withdrawing from the equity participation. The last option, Islamic bank may ask FPJP (Fasilitas Pembiayaan Jangka Pendek, Short-Term Financing Facility) from Bank Indonesia as the lender of last resort.

However, there are several issues currently faced by Islamic banks in Indonesia pertaining to liquidity management problems which can be summarized as follows:

1. Small number of participants,
2. The slow development of financial instruments,
3. Small market share of Islamic banking and finance which is less than 5%,
4. Less compatible sharīʿah inter-bank money market that lead Islamic banks to borrow from the parent’s bank for their capital injection,
5. Fewer lender of last resort facilities,
6. Less competitiveness of Islamic money market instrument
7. Different sharīʿah interpretations among the sharīʿah scholars, academicians and practitioners.
Furthermore, to strengthen the instrument of liquidity management, National Shari‘ah Board of Indonesian Council of Ulamā has been issued Fatwa DSN-MUI No. 78 year 2010 (Himpunan Fatwa Dewan Syariah Nasional MUI, vol. 2, 2012). This fatwa allows transaction of Islamic money market using principles of mudhārabah and mushārakah in Inter Bank Money Market with wa‘ād (promise) to repurchase, either promise to sell back or to buy back the securities. This is to ensure that the bank can generate the agreed return at the first place and to minimise the risk of rate of return. In 2012, Bank Indonesia offered the new instrument called Reverse Repo (Islamic Treasury bills) with sukuk as the underlying asset (Mihajat, 2012).

On the other hand, there is huge potential for Islamic money market instrument to fill the gap with instruments such as hedging, Islamic swap, Islamic currency swap, Islamic cross currency swap, Islamic derivatives (Islamic forward, Islamic futures and Islamic option) (Dusuki, 2009; Coyle, 2000). In spite that these products are still debatable among the scholars, risk can be minimised through laying down some shari‘ah guidelines and parameters to adhere to the shari‘ah injunction.

Among such products is the hedging instrument presented by Muslim scholars in the Organization of Islamic Cooperation (OIC) meeting with reservations which are: i) the purpose of transaction is purely for hedging purposes not speculation, ii) the transaction should be real transaction not fictitious contract, iii) it has to be real transfer of ownership of the underlying asset (Al-Suwailem, 2006). Some scholars even put 12 shari‘ah parameters in order to avoid speculative transactions in these instruments. There is another potential instrument for Islamic banking industry in Indonesia which is shari‘ah securitisation to manage the liquidity of the bank.

Lastly, in 2011, Jakarta Future Exchange softly launched the innovative product for liquidity management for Islamic bank in Indonesia called Komoditi Syariah of Jakarta Future Exchange (KS-JFX), which was formally launched in 2012 where the underlying assets for this instrument are commodities are cacao, coffee, coal and so on. The structure
used in this product is murabahah, although from the perspective of structure it is actually tawarruq concept. Despite DSN MUI has prohibited the use of tawarruq in the banking industry, they confine that this model can be used only for liquidity management in inter bank money market.

Generally, there are many instruments that are permitted for use for liquidity management in IFIs all over the world.

Table 1

<table>
<thead>
<tr>
<th>INSTRUMENT</th>
<th>THE COUNTRY</th>
</tr>
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<tbody>
<tr>
<td>Commodity Murabahah (interbank murabahah)</td>
<td>Bahrain, Saudi Arabia, Qatar, Malaysia, Pakistan, Kuwait, UAE, UK, etc.</td>
</tr>
<tr>
<td>Interbank Mudharabah</td>
<td>Malaysia, Indonesia, Bangladesh etc.</td>
</tr>
<tr>
<td>Qurud Mutabadalah</td>
<td>Saudi Arabia, Kuwait etc.</td>
</tr>
<tr>
<td>Interbank Wakalah</td>
<td>Bahrain, Oman, Jordan, Kuwait, Pakistan etc.</td>
</tr>
<tr>
<td>The issuance of many types of sukuk such as sukuk ijarah, salam, murabahah (the same that issued by corporate, sovereign - as monetary policy-)</td>
<td>Malaysia, Bahrain, UAE, Saudi Arabia, Pakistan, Indonesia, Qatar, Bahrain.</td>
</tr>
<tr>
<td>The issuance of short term securities such as Islamic Treasury Bill, BNMM, GII, Wadiah placement(^1), Central Bank Ijarah Certificate, Rahn Lending Facility, Short term Sharī‘ah financing facility (FPJPS)(^2), Islamic Certificate of Deposit (for monetary policy and holding of required and excess reserves)</td>
<td>Malaysia, Indonesia, Sudan, Brunei, UAE.</td>
</tr>
<tr>
<td>Musharakah Certificates(^3)</td>
<td>Sudan</td>
</tr>
<tr>
<td>Government Investment Certificates that use many contracts such as ijarah, salam, mudharabah</td>
<td>Sudan</td>
</tr>
<tr>
<td>Government Participation Papers (Musharakah)</td>
<td>Iran</td>
</tr>
<tr>
<td>Government Islamic Investment Bond (Mudharabah)</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>Islamic REPO(^4)</td>
<td>Bahrain, UAE, Malaysia, Indonesia</td>
</tr>
<tr>
<td>Islamic Reverse Repo</td>
<td>Indonesia</td>
</tr>
</tbody>
</table>

Source: Technical Note IFSB; Mihajat and Hasan, 2014; Author

---

1. In some countries there is no return (e.g., Sudan)
2. In Indonesia, FPJPS is instrument from Bank Indonesia normally for Islamic banks, inspite of this instrument use mudhārābah contract but it is guaranteed by the recipient bank by putting some liquid collateral, where the amount has to be the same with the amount of financing.
3. Issued by Central Bank Pusat and The Authority of Sudan.
4. The Structure used would be different.

Commodity *Murābahah* technically is trading of commodities using the contract of *tawarruq*, i.e., a purchaser buys a commodity from a seller on deferred basis and sells the commodity to another buyer, and the payment is made on the spot basis. Normally deferred payment (which will be given to the first seller) is higher than the spot payment (which will be accepted) from the second buyer. In effect, he will get cash and the same time has the liability to make payment to the first seller on deferred basis.

In Indonesia, the latest product that has been launched by Bursa Berjangka Jakarta for liquidity management for Islamic bank is Komoditi Syariah of Jakarta Future Exchange (KS-JFX). This instrument although presented as *murābahah*, in whole structured of product is based on *tawarruq* concept. This instrument was soft launched in September 2011, and officially launched in February 2012. This product has been approved by National Sharī‘ah Board of Indonesian Council of Ulama by issuing Fatwa No 82 2011, as sharī‘ah compliant product. The detailed of the product are described as follows (see Figure 1.1).

**Figure 1.1**

*Komoditi Syariah Islamic Jakarta Future Exchange*

![Diagram](source.png)


Modus operandi of Komoditi Syariah of Jakarta Future Exchange.

1. Islamic Bank (iB) deficit will approach iB surplus to get financing facility for the capital injection. iB deficit then promises to buy the commodities that was bought by iB surplus from the supplier with a certain agreed price based on *al-wa’d* (promise). The concept of *al-wa’d* is to minimise the risk of the iB surplus in case the iB deficit nullifies the contract. In case the iB deficit
nullifies the contract, it has an obligation to bear the actual cost of the transaction, not the opportunity cost.

2. iB surplus will buy the agreed commodity (normally via online) using the contract of sale (‘aqad al-bay’) where JFX is a mediator on behalf of the buyer and the seller to buy and sell the commodity to the supplier based on wakālah.

3. iB surplus will pay cash to the pihak supplier through JFX. The transfer of ownership might be in real physical transfer if they wish or through Sertifikat Tanda Pemilik Atas Komoditi (STPAK, Commodity Ownership Certificate) online.

4. iB surplus then sells the commodity from the supplier to iB deficit based on murābahah contract where iB surplus will disclose the commodity price and the expected profit.

5. iB deficit will pay on deferred basis or installment based on the agreement that is stipulated in the contract.

6. When the ownership has been transferred from iB surplus to iB deficit, iB deficit may sell it to anyone to obtain cash. Yet, for the purpose of cost efficiency, iB deficit will ask JFX to sell the commodity on its behalf to supplier B or C other than supplier A (the place iB surplus bought the commodity). DSN-MUI stresses that the first position of JFX as a representative of iB surplus should be aborted, since now JFX is representative of iB deficit to avoid the confusion.

7. The JFX will sell the commodity on behalf of him to supplier B or C other than supplier A (the place of iB surplus bought the commodity).

8. Then the supplier B or C will transfer the money to JFX. JFX then will transfer the money to iB deficit account on the same day.

In the structure of Komoditi Syariah, representative is not a financial institution. Instead, representative is JFX which sells it back to other distributor. This means that if Bank A makes financing to its customers (deficit bank), then the customers will delegate JFX to sell the commodity to the distributor. This may lead to some practical difficulties. How many banks provide financing facilities? What if all banks do the same thing at the same time. This of course leads to changes in the way of working of an exchange. Seeing the breadth of use of this commodity murabahah, some warnings should be given to all parties involved in the structuring and the adoption of commodity murabahah that some shari’ah negligences will occur.

In terms of ‘aqad in the structure, out of the five ‘aqad described in the Fatwa DSN-MUI No. 82, the structure shall need one more contract that must be considered namely al-wa‘du (promise to buy and to sell). The contracting parties (Islamic bank 2, the deficit bank) has to promise to buy the commodity purchased by commercial participants (Islamic bank 1, surplus bank) to obtain cash or hold such assets for future sale. Otherwise, the commercial participants will suffer the risk, lets say the price of commodity if it goes down, who will bear the loss of the cancelation of the transaction?
Among the sharī'ah issues in *tawarruq* practice is selling the same object to the first seller which will lead to a fictitious contract. The above proposal figure ensures that the commodity shall not back to the original seller. The additional of promise to buy the commodity from the iB deficit is made to mitigate the risk embedded in the transaction. It should be noted that this study seeks to discuss the relevant structures only, and looks to the aspects of their application to Islamic finance. Therefore, attention to the detailed concept in other matters should be reviewed prior to enabling the structures for liquidity management instrument using *murabahah* contract.

In addition to that, it is needed to ensure that Islamic bank really buys the asset or goods from the market, and sells it to customer and without adding frills to sell it to any party. The customer is free and has the right to decide to whom he wants to sell the asset. Since the ownership has been transferred from Islamic bank to the customer, the customer has full rights pertinent to the asset. It has no *hilah ghairu syar'iyyah* therein that causes the product not to be sharī'ah compliant.

AAOIFI (No. 30/2008) laid down several parameters to approve *tawarruq* to be sharī'ah compliant and permissible as follows:

1. The requirements of the contract for purchasing the commodity on deferred payment should be fulfilled where the commodity is real.
2. The commodity should be well identified to be distinct from other assets.
3. If the commodity is not available at the time of contract, the customer should be given a full description of the commodity such as the quantity and the place.
4. The commodity should be actually received by the customer.
5. The commodity must be sold to a party other than the original seller to avoid *bay' al-`inah*. 
6. The contract for purchasing the commodity on deferred payment and the contract for selling it for a spot price should not be linked together in such a way that the client loses his right to receive the commodity.

7. The customer should not delegate the Islamic bank or its agent to sell the commodity on his behalf after he actually receives the commodity.

8. The Islamic bank should not arrange proxy to a third party to sell on behalf of the customer.

9. The customer should sell the commodity by himself.

10. The Islamic bank should provide the information to the customer where to sell the commodity.

5. **Fatwa DSN-MUI No. 82/DSN-MUI/VIII/2011**

   In the Fatwa DSN-MUI No. 82/DSN-MUI/VIII/2011 it has been described that Komoditi Syariah has been approved by DSN-MUI where Jakarta Future Exchange (JFX) is the organiser of such commodity trading exchanges. JFX acts as intermediary among the parties that have a commodity and want to trade in this exchange market. This commodity exchange trading will be applied based on computerised system and online system by the members of Islamic commodity exchange. The Islamic bank should become a member in the first place before doing commodity trading among the Islamic banks (Republika, 8 August 2011).

   There are some Islamic contract agreements that are used in the implementation of the Fatwa No. 82. The first is *al-bayʿ* (sale and purchase), where participant will purchase the commodity from commercial supplier and supplier will meet the demand in accordance with expected commodity and sell it to commercial participant (surplus unit) in cash. Second, *murabahah*, where participant (surplus unit) will commercially sell the commodity as requested by deficit participant by way of *murabahah* in which capital plus expected margin on deferred basis or installments. Third, *bayʿ musawamah* (hidden profit sale) where the supplier, represented by JFX, will sell commercially the commodity of deficit unit without any obligation to inform the participants how much cost and margin is. Fourth, *wakalah* contract, in which JFX will sell asset if necessary on behalf of deficit unit to sell it to a different supplier from the initial supplier. Fifth, *muqaradah* contract, where supplier 1 of the commodity can barter the asset (commodity) with supplier 2, supplier 3 and vice versa. The goal is to ensure those assets are not returned to the same person or the same supplier.

   With the five contracts described in the DSN-MUI fatwa No 82, there is still one more contract that has to be considered, namely *al-waʿad* (promise). In commodity agreement in which the consumer of commodity wants the actual commodity from commercial participant, either to hold the asset or to sell in the future or to sell it to other than the supplier of the Shariʿah commodity exchange, JFX shall provide the delivery. However, where the consumer of the commodity wants to cancel the contract agreement with the commercial participant will lead the commercial participant to assume the risk of the commodity price. Therefore, consumers have to promise to buy the commodity purchased by commercial participants. Otherwise, once the consumer of commodity...
wants to cancel the transaction at the same time the commodity has been purchased by the commercial participant, the commercial participant will incur losses from the transaction (Hasan, 2012). As such, the commercial participant will face the commodity price risk, where the price of commodity purchased by commercial participants may go down, and then who will bear the losses from these cancelation of transactions? Therefore, there must be a contract of *al-wa’ad* (promise to buy the commodity) so that consumer will purchase the commodity from commercial participants (Hasan, 2012).

6. **Sharī‘ah Issues**

In spite of the Islamic money market instruments being in line with sharī‘ah (refer to Fatwa DSN-MUI), yet there are some sharī‘ah issues that need further review on the practice of this instrument. Among the issues that need further discussion are:

i) The issue of non-existence of subject matter in Komoditi Syariah of JFX. The sharī‘ah advisor of JFX has to ensure that all commodities when the transaction executed do exist, otherwise the transaction is fictitious. It has to be in accordance to sharī‘ah guidelines and parameters to implement.

ii) Like in mudharabah inter-bank money market, although it is mudharabah, yet the Islamic banks would get the fixed return from this transaction which is stipulated in the first agreement. From sharī‘ah point of view, fixing the return before it is generated is considered as *ribā*. The same sharī‘ah issue is faced in *wadi’ah* contract agreement. Despite Bank Indonesia does not promise to pay the return, it is widely known that any placement of SWBI by Islamic banks will be entitled for some percentage of return.

iii) Tradability of these instruments. Some of these instruments by their nature cannot be sold. An example of this is commodity *murabahah*. Debt resulting from the sale and purchase of commodities cannot be sold in accordance with the view of most contemporary scholars. The instruments that can be tradable are limited (Mihajat and Hasan, 2014).

7. **Conclusion**

This paper elucidates the development of Islamic money market instruments in Islamic financial industries in Indonesia and critically evaluates the application of the product of Islamic money market in the light of sharī‘ah injunction. There are three major contracts that are used for liquidity management in Islamic banks in Indonesia which are, *wadi’ah*, *tawarruq* and *mudharabah*. It can be concluded that theoretically the Komoditi Syariah of JFX has complied with sharī‘ah referring to Fatwa DSN-MUI No. 82, however, the sharī‘ah advisor of JFX has to supervise the product regularly to avoid misuse of the product to avoid the distortion.

It can be concluded that good liquidity management requirements are crucial in ensuring the well-being of the IFIs. Proper liquidation rate (not too liquid or less liquid) is important to ensure IFIs’ ability to meet their liabilities while not interfering with the financing ability to achieve the required return. Although there are many issues that still
exist, the need to create good liquidity management requires the cooperation and hard
work of all stakeholders in Islamic finance, not only in ensuring Shari`ah compliance of
all operations, structure and instruments used, but also to ensure the viability of
instruments to be used. Implementation of commodity *murabahah*, *mudharabah* and
tawarruq* model should not only comply with shari`ah (that of course is a priority) but
also should be viable for use for managing liquidity in IFIs. In a nutshell, Islamic
financial transactions have to be different from their conventional counterpart, not only in
the ways they practice their business, but above all the values which guide Islamic
bankings whole operation and outlook. The values as prevail within the ambit of shari`ah
should be expressed in the minutiae of every single aspect of the transactions.

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Green Sukuk for Financing Renewable Energy Projects

By
Siti Rohaya Mat Rahim, * and Zam Zuriyati Mohamad **

Abstract

This paper investigates the application of the Green Sukuk, particularly, for financing the renewable energy. More precisely, three case studies had been chosen for discussion. In the first case study, we highlights “Hybrid Sukuk” framework adopted by Tadau Energy Sdn. Bhd. for financing solar photovoltaic (PV) plants. The second case study, we reviewed on “Sukuk Wakalah” issued by BEWG (M) Sdn. Bhd., as an ideal solution for water treatment project. Finally, for the third case study, we have discussed in details about “Sukuk Murabahah” which being used by Sarawak Hydro Sdn. Bhd. for financing the hydroelectric plant (BAKUN hydroelectric project).

Keywords: Green sukuk, renewable energy, financing

JEL Code: G14,

1. Green Sukuk

Sukuk in Arabic is the plural of “sakk” that refers to a certificate of ownership of an asset. In more comprehensive description, The Accounting and Auditing Organisation for Islamic Finance Institutions (AAOIFI) defines sukuk as certificates of equal value representing undivided shares related to the ownership (and not debt) of the assets of particular projects or a special investment activity, extending even to contractual right held in trust for sukuk holders. To date, the issuance of green sukuk is designed to

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finance a sustainable, climate-resilient growth and environmental-friendly project. The growing trend in adopting green sukuk has not only been supported by the natural progression of sukuk market, but also in line with the increasing investors’ awareness on ethical and social responsible investment and the stringent capital requirement in funding the infrastructural projects.

The green sukuk has been developed to meet the criteria as Shariah-compliant financial products and at the same time able to contribute in financing meaningful projects such as those involving renewable energy and climate change. This is consistent with Malaysian agenda on environmental protection that is evidence through the introduction of green technology, green economy and green energy. Malaysia has been identified as a country that able to produce multiple resources of renewable energy resources, alike, biomass, biogas, bio-energy and mini hydro.

In brief, green sukuk accommodates the financing solution for sustainable and environmental activities. The Climate Bonds Initiative, the Clean Energy Business Council (CEBC) of the MENA, the Gulf Bond and Sukuk Association, established a Green Sukuk Working Group in 2012. This working group had been mandated to identify green energy projects that fall under Shariah-compliant categories for potential investors.

Figure 1 describes the process flow of the green sukuk structure. Sukuk issuer ought to raise the necessary funds to finance any environmental-friendly project. In this case, sukuk issuer is responsible to generate returns to the green sukuk holder. Whereas, the obligators shall be responsible for purchase undertaking of the asset at a maturity date (Alam, Duygun & Ariss, 2016).

![Figure 1: Green Sukuk Structure](image)
This paper is divided into five sections. Section 2, 3 and 4 outlines the three different case studies, in respect of hybrid sukuk, sukuk wakalah and sukuk murabahah. Some of the key features referred to the implementations of the green sukuk in solar photovoltaic (PV), water treatment and BAKUN hydroelectric plant project. The following section elaborates on some notable challenges and opportunities of the green sukuk. Finally, section 5 sets out the conclusion and recommendations.

2. Green Sukuk Development

In Malaysia, the “SRI Sukuk Framework” was launched by the Securities Commission (SC) in 2014 to facilitate in financing SRI projects. The introduction of the SRI sukuk framework is part of the SC’s developmental agenda to facilitate the creation of an eco-system that is conducive for SRI investors and issuers. This is also in line with the rising trend of green bonds and social impact bonds that have been introduced globally to facilitate and promote sustainable and responsible investing. The eligibility to entitle the SRI projects to this financial facility are attributed to (a) preserve and protect the environment and natural resources (b) conserve the use of energy (c) promote the use of renewable energy (d) reduce greenhouse gas emission and or (e) improve the quality of life for the society.

The first Malaysia SRI sukuk was through Ihsan Sukuk Bhd, a Special Purpose Vehicle (SPV) by Khazanah Nasional Bhd. The first tranche was issued in June 2015 and managed to raise funds worth RM100 million with a periodic distribution rate of 4.3% per annum, redeemable in 7 year tenure. In the latest development, Malaysia, the global frontrunner in Islamic finance, saw its first sukuk under a new sustainability framework issued in July 2017 when the Malaysian solar power firm Tadau Energy came out with a green sukuk with a tenure of 16 years, raising RM 250 million from investors. This first green sukuk is the result of collaboration between Securities Commission Malaysia, Bank Negara Malaysia and the World Bank Group, an effort to develop an ecosystem to facilitate the growth of green sukuk and to introduce innovative financial instruments to accommodate global infrastructure needs and green financing.

2.1 Renewable Energy

This section focuses on the applications of green sukuk in financing some renewable energy projects. According to Natural Resources Canada, renewable energy refers to the energy that derived from natural resources and can be naturally replenished or renewed within a human lifespan. These natural resources include solar energy that generated from sunlight, hydropower that generated from moving water, bioenergy that generated from biomass, wind energy generated by converting wind currents and ocean energy that derived from the sea. The renewable energy is seen as an alternative solution to some detrimental environmental problems, one of which is carbon emission. Malaysia has agreed to reduce the carbon emission up to 40% during the Copenhagen Climate Change Summit in December 2009.

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1 Datuk Ranjit Ajit Singh, Chairman of the SC. Media Releases/Statements, 28 August 2014.
However, there are barriers on the development of renewable energy in Malaysia. One of the challenges for the implementation of renewable energy is from a financial aspect. Difficulties in getting financing and bank loan for renewable project were due to the involvement of high risks and lack of technical knowledge on the financiers’ part. A new dimension brought by the green sukuk is seen as a potential financier for the renewable energy. Below are three case studies that demonstrate the green sukuk as a financier for renewable energy projects.


This study presents three case study viability of green sukuk issuance in Malaysia. The first case study highlights Tadau Energy Sdn. Bhd. The starting point of Tadau Energy Sdn. Bhd. began, when it was successfully issues the SRI Sukuk Programmed effectively on 27th July 2017 (Mujahid & Ali, 2016). Pursuant to the Sukuk offerings, Tadau Energy Sdn. Bhd recommended Sukuk Ijarah amounted to RM 250 million (nominal value). The project will took 16 years to complete. This sukuk will be used by Tadau Energy Sdn. Bhd to install solar photovoltaic (PV) plants in Kudat, Sabah. The plant is expected to generate a total capacity of 50 MWac. The first sukuk redemption value amounted to RM 14,000,000.00 will paid in the 2nd year of the project. This first case study highlights the involvement of green sukuk in a project by Tadau Energy Sdn. Bhd. The starting point of Tadau Energy Sdn. Bhd. began when it successfully issued the SRI Sukuk Programmed effectively on 27th July 2017. Pursuant to the sukuk offerings, Tadau Energy Sdn. Bhd. recommended Sukuk Ijarah amounted to RM 250 million (nominal value). The project will take 16 years to complete. This sukuk will be used by Tadau Energy Sdn. Bhd. to install solar photovoltaic (PV) plants in Kudat, Sabah. The plant is expected to generate a total capacity of 50 MWac. The first sukuk redemption value amounted to RM 14,000,000.00 will be paid in the 2nd year of the project.

Tadau Energy Sdn. Bhd. is responsible to finance, design, turnkey engineering, procurement, construction, installation, testing, commissioning, deals with ownership, operation and maintenance of the solar photovoltaic (PV) plants. The project is classified as “Asset 1” under Power Purchase Agreement (PPA 1) referred as “Site Yong East.” The PPA 1 agreement was signed on 12 December 2016 between Sukuk issuer (Tadau Energy Sdn. Bhd.) and Sabah Electricity Sdn. Bhd. (SESB). This plant is estimated to generate 2 MWac solar photovoltaic (PV) energy and located in Jalan Sikuati, Kudat, Sabah. The scheduled cash on delivery (COD) of “Asset 1” is scheduled on 30th June 2017. “Asset 2”, under Power Purchase Agreement (PPA 2) referred as “Site Yong East, Site Bak Bak and Site Yong West.” The PPA 2 agreement was signed on 12 December 2016 between Sukuk issuer (Tadau Energy Sdn. Bhd) and Sabah Electricity Sdn. Bhd. (SESB). Nevertheless, the scheduled cash on delivery (COD) of “Asset 2” will be on 31st March 2018.

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3.1 Application of Hybrid Sukuk

“Hybrid Sukuk” refers to a sukuk structure that combines two or more differing elements. These elements could comprise more than one Shariah contract, a mixture of debt and equity or underlying assets consisting of tangible and intangible assets. Flow diagrams illustrates the applications of “Hybrid Sukuk” in the case of Tadau Energy Sdn. Bhd. are shown in Figure 2 and Figure 3. We shall discuss below some aspects of Hybrid sukuk as a financing mode. In the case of Tadau Energy Sdn. Bhd., let’s discuss two different phases of “Hybrid Sukuk”, which are (i) at inception and during construction of assets and (ii) post-completion of the assets and at maturity date.

Interestingly, al-istisna’ agreement was used at inception and during the construction of assets. This al-istisna’ agreement was basically offered to infrastructural and development projects which required advance payment of fund, in full or in installments, for the construction of assets and non-tradable. Meanwhile, Ijarah agreement is needed for sale and lease-back structure and as payments supported by lease rentals.

Tadau Energy Sdn. Bhd. engaged in the Ijarah Mawsufah Fi Al-Zimmah. Ijarah agreement is required upon completion of construction. The essential points of hybrid sukuk in the case of Tadau Energy Sdn. Bhd. are as follows:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| Step 1 | Tadau Energy Sdn. Bhd. enter an agreement between sukukholders. In this case, Tadau Energy Sdn. Bhd. acts as “Sukuk Trustee” or “Lessor”. The following agreement were signed on behalf of sukukholders:  
(i) Istisna’ Agreement  
(ii) Ijarah Agreement  
(iii) Service Agency Agreement  
(iv) Purchase Undertaking |
| Step 2 | Under Istisna’ Agreement, Tadau Energy Sdn. Bhd. acts as “Contractor” in respect of each solar photovoltaic (PV) plants. The “contractor” will build, construct and deliver the asset in respect to Istisna’ price. |
| Step 3 | Whereas, Tadau Energy Sdn. Bhd. shall acts as the “Lessee” when entering into “Ijarah Agreement”.  
In this agreement, “Sukuk Trustee” or “Lessor” agrees to lease and the “Issuer” or “Lessee” agrees to take on the lease of “Asset 1” and “Asset 2” under “Ijarah Mawsufah Fi Zimmah” or “Forward Lease”. |
| Step 4 | Tadau Energy Sdn. Bhd. as the “Issuer” shall issue hybrid sukuk (Al-Istisna’ and Al-Ijarah) to the sukukholders’. |
| Step 5 | Pursuant to a “Service Agency Agreement”, Tadau Energy Sdn. Bhd. as the “Servicing Agent” shall perform all repairs, replacements and maintenance works on each of solar photovoltaic (PV) plants. |

Post-completion of the Assets and at Maturity

Step 6 | Upon completion of construction, Tadau Energy Sdn. Bhd., which is the |
“contractor”, shall notify the “Sukuk Trustee” of the completion and delivery of the asset.

Step 7 (a) During the Lease period, “Lessee” will pay the Lease Rentals to the “Sukuk Trustee” or Lessor pursuant to “Ijarah Agreement”.

The Final Lease Rental shall include the following:
(i) last periodic distribution amount
(ii) nominal value of the relevant maturing tranche and
(iii) the ownership expenses

Step 7 (b) Upon a Dissolution Event, Sukuk Trustee acts on behalf of sukukholders for any Purchase Undertaking activities.

Exercise Price for the Purchase Undertaking will be equal to the amount of Istisna Price + Ownership Expenses + all accrued unpaid lease rental.

Step 8 (a) Tadau Energy Sdn. Bhd. as the “Purchaser” will be grant a “Purchase Undertaking” to the Sukuk Trustee.

“Sale of the Asset” here in allow Tadau Energy Sdn. Bhd. (Purchaser) to undertakes the asset from Sukuk Trustee at the relevant Exercise Price. This process undertakes via “Sale Agreement”.

Step 8 (b) At the end of the Lease Period, Sukuk Trustee shall made periodical distribution amounts to the sukukholders based on the contract of hibah (gifts).

Figure 2: An Inception and During Construction of Assets
4. BEWG (M) Sdn. Bhd. (Water Treatment)

The second case study involves BEWG (M) Sdn. Bhd., a subsidiary of Beijing Enterprises Water Group Ltd. BEWG (M) Sdn. Bhd., also known as one of the leading companies in the water treatment industry that offers complete range of comprehensive solutions to a wide range of clients, especially the government and states projects. This project was awarded by the Terengganu government to BEWG (M) Sdn. Bhd. with the aim to refurbish and upgrade water treatment distribution in Bukit Sah, Kemaman, Terengganu (Figure 4). Notwithstanding, the Terengganu government aims to solve...
Kemaman district’s water shortages problem. Consequently, the main work of BEWG (M) Sdn Bhd is to undertake piping and water tank system from Petronas Water Treatment to Kemaman, Terengganu distribution with the total capacity of 110,000 tons per day.

**Figure 4: Refurbishments and upgrading work for Bukit Sah Water Treatment Plant in Kemaman, Terengganu.**

BEWG (M) Sdn Bhd issuing RM 400 million of *Sukuk Wakalah* with tenure of 8 years. This project costs RM 499 million or equivalent to 1.1 billion RMB. During this project, BEWG (M) Sdn Bhd will be involved in providing related services such as water treatment engineering, waste water treatment engineering, water purification, river and raw water treatment, sewerage treatment and water recycling. The construction cost of RM 79 million was internally funded by BEWG (M) Sdn Bhd, whereas the remaining balance of RM 21 million (injected under 80:20, sukuk and equity financing mix). This 3-year project has started in November 2015 and is expected to be completed in November 2018. The Terengganu state government will make six annual payment amounted to RM 686.9 million to BEWG (M) Sdn. Bhd. over the 5 year period.

BEWG (M) Sdn Bhd is undertaking RM 400 million of Sukuk Wakalah with tenure of 8 years. This project cost RM 499 million or equivalent to 1.1 billion RMB. During this project, BEWG (M) Sdn Bhd will involves in providing related services such as water treatment engineering, waste water treatment engineering, water purification, river and raw water treatment, water treatment specialist, sewerage treatment and water recycling. The construction cost of RM 79 million were funded internally by BEWG (M) Sdn Bhd, whereas the remaining balance of RM 21 million (injected under 80:20 sukuk and equity financing mix). This three year project have started in November 2015 and expected to be completed in November 2018. Terengganu state government will make six
annual payment amounted RM 686.9 million to BEWG (M) Sdn Bhd over the 5 year period. The company, currently have deferred payment RM 129.6 million. Nonetheless, BEWG (M) Sdn Bhd seen as being able to meet its first schedule redemption of RM 90 million in 2020.

4.1 Application of Sukuk Wakalah

BEWG (M) Sdn Bhd has opted for the sukuk wakalah model. Under this model, a principal (the investor) will appoint an agent as an “Investment Wakeel” (Figure 5). The duty of an “Investment Wakeel” is thereby to invest the funds provided by the principal (the investor). Simultaneously, the “Investment Wakeel” agrees to lend his/her expertise and management throughout the project. Profit return of the investment via a wakalah structure will only be received upon the agreed profit return ratio between the principal (the investor) and the agent “Investment Wakeel” at the outset. Meanwhile, any profit in excess of the agreed upon profit return will be kept by the “Investment Wakeel” as a performance or an incentive fees.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Wakalah Agreement is signed between Sukuk Trustee (sukukholders) and BEWG (M) Sdn Bhd. (Sukuk issuer). BEWG (M) Sdn Bhd act as “Investment Wakeel” to the sukukholders.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>BEWG (M) Sdn. Bhd. as the “Sukuk issuer” shall issue the Sukuk Wakalah, whereas, sukukholders subscribe to the Sukuk Wakalah. The “Investment Wakeel” will invest the Sukuk Wakalah into relevant investment portfolio (Wakalah Investment).</td>
</tr>
<tr>
<td>Step 3</td>
<td>“Investment Wakeel” should maintain at least 33% of the Wakalah Investment in respect to the Shariah-compliant business.</td>
</tr>
<tr>
<td>Step 4 (a)</td>
<td>BEWG (M) Sdn. Bhd., as the “buyer”, issues a Purchase Order (PO) to the “Investment Wakeel” to purchase the Shariah-compliant commodities from the Sukukholders at the Deferred Sale Price.</td>
</tr>
<tr>
<td>Step 4 (b)</td>
<td>“Investment Wakeel” will purchase the Shariah-compliant commodities (on spot basis) from the commodity suppliers’ at Bursa Suq Al-Sila.</td>
</tr>
<tr>
<td>Step 4 (c)</td>
<td>Once the “Investment Wakeel” acquires the Shariah-compliant commodities, the “Investment Wakeel” will sell it to the “buyer”. The price is equivalent to the Commodity Purchase Price, plus the Aggregate Profit Margin (payable at deferred payment basis).</td>
</tr>
<tr>
<td>Step 4 (d)</td>
<td>BEWG (M) Sdn. Bhd. as the “buyer”, via its agent will immediately sell the Shariah-compliant commodities to the “Bursa Malaysia Islamic Service Sdn Bhd” (BMIS) or a “Commodity Broker A” known as a commodity supplier on the spot basis for cash. Usually, a selling price is equivalent to the Commodity Purchase Price.</td>
</tr>
</tbody>
</table>
Step 5 | Consequently, BEWG (M) Sdn. Bhd., as the “obligor” shall make periodical payment to Sukukholder from any return generated from the “Wakalah Investment”. The periodic distribution rate is calculated based on an actual per 365 days.

Step 6 | Upon completion of such purchase, the Purchaser appoints the Commodity Trading Participant (CTP) to sell the commodities to the commodity buyer. Transaction trade at market price (selling price = purchase price).

Step 6 (a) | Purchase undertaking took place from the “obligor” to the Sukuk Trustee on a Scheduled Dissolution Date or the Dissolution Date, whichever is earlier.

Step 6 (b) | Further, Sukuk Trustee shall issue a “Sale Undertaking” to the BEWG (M) Sdn. Bhd. (Sukuk issuer) at the Exercise Price by entering into a “Sale Agreement” upon Voluntary Early Redemption.

Step 7 | BEWG (M) Sdn. Bhd. proceeds to the “Wakalah Investment” including Exercise Price and Deferred Sale Price.

Any returns generated from the “Wakalah Investment” shall be utilized to redeem Sukuk Wakalah at the Dissolution Distribution Amount on the Scheduled Dissolution Date or the Dissolution Declaration Date upon Voluntary Early Redemption.

Step 8 | During the construction period, BEWGL will act as “Corporate Guarantor”, just in case BEWG (M) Sdn. Bhd. fails to make periodical payment to the Sukukholders. BEWGL is responsible for:

(i) periodical distribution

(ii) exercise price and

(iii) deferred sale price

However, after the construction period, BEWGL will ensure BEWG (M) Sdn. Bhd. (Sukuk issuer) has sufficient liquidity to meet the periodical payment to the Sukukholders.
5. Sarawak Hidro Sdn. Bhd. (BAKUN hydroelectric)

The third case study highlights Sarawak Hidro Sdn. Bhd. Effectively, on 16th August 2017, Sarawak Energy Berhad (SEB), a wholly owned by Sarawak state government has successfully acquired 100% of share in Sarawak Hidro Sdn. Bhd (The Star Online, 2017). Sarawak Energy Berhad (SEB) acquired Sarawak Hidro Sdn. Bhd. at price of RM 2.5 billion including RM 6 billion loan. Previously, Sarawak Hidro Sdn. Bhd. was involved directly in 2,400 MW (BAKUN hydroelectric plant) which is the largest hydroelectric plant in Malaysia since July 2011. BAKUN hydroelectric project located in Central Sarawak on Rejang River, 180 km by road (east coast of Bintulu, Sarawak). This plant builds by 205 meter high concrete facing the rock dam. This hydroelectric dam cost of about USD$ 1.6 billion. Since 1st June 2011, Sarawak Hidro Sdn. Bhd. secured “Power Purchase Agreement” (PPA) with the Sarawak state government for 30 years. The electricity charges from BAKUN dam to the latter is at 6.25 cent per kilowatt with an annual increase of 1.5% (Figure 6). Prominently, BAKUN hydroelectric project is among of the highlighted agenda under Sarawak Corridor of Renewable Energy (SCORE), a major development plan for Sarawak. In essence, SCORE would need higher electricity supply by year 2020 to 2030. This electricity power supply could be generated from hydroelectric. Total hydroelectric capacity estimated to increases from 966 MW to 12,000 MW and 20,000 MW by 2020 and 2030, respectively (Sovacol & Bulan, 2011).
5.1 Application of Sukuk Murabahah

Sukuk Murabahah describes as a contract of exchange based on sale and purchase contracts with a predetermined cost and profit. The details discussion of Sukuk Murabahah of Sarawak Hydro Sdn. Bhd. is shown in Figure 5. For Sukuk Murabahah are more likely to be used in respect to purchases of goods by public sector. In this case, Sarawak Hydro Sdn. Bhd. needs to purchase an item of huge price and may purchase it through credit sales by paying in installments. Sarawak Hydro Sdn. Bhd. as the seller will amortize the cost and return (profit margin) over the period of installments. At the same time, Sarawak Hydro Sdn. Bhd. as the issuer will issues Sukuk Murabahah certificates according to the number of installment (Yusoff, Kamdari, & Malik, 2016). Each certificate having a maturity date, represent a property right of the Sukukholders. On the basis, the Sukukholder can transfer his or her rights to another party.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Sarawak Hydro Sdn. Bhd. enters into an agreement, appointed as the purchase agent on behalf of Sukukholders.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>Sarawak Hydro Sdn. Bhd. issues a Purchase Order (PO) to the Purchase Agent. Purchase Agent will irrevocably undertake to purchase the commodities from the Sukukholders with regards to “Deferred Sale” price.</td>
</tr>
<tr>
<td>Step 3</td>
<td>The Purchase Agent, purchase commodities on the spot through Commodity Trading Participant (CTP) from the commodity seller at the purchase price.</td>
</tr>
<tr>
<td>Step 4 (a)</td>
<td>Sarawak Hydro Sdn. Bhd. issues Sukuk Murabahah and acts as the Sukuk issuer. Sukukholders pay the principal’s amount or the purchase price to Sarawak Hydro Sdn Bhd (Sukuk issuer).</td>
</tr>
<tr>
<td>Step 4 (b)</td>
<td>The Sukuk Murabahah evidence the Sukukholder’s ownership of the commodities.</td>
</tr>
</tbody>
</table>
Step 5 Once the commodities are sold to purchaser, Sukukholder’s entitlement to receive the Deferred Sale Price.

Step 6 Upon completion of such purchase, the Purchaser appoints the Commodity Trading Participant (CTP) to sell the commodities to the commodity buyer. Transaction trade at market price (selling price = purchase price).

Step 7 Sarawak Hydro Sdn. Bhd. as purchaser received the Mudharabah profits and pay periodic return to the Sukukholders on the relevant periodic payment date.

On the expiry of the specified time period of subscription, the Sukukholders’ are given the right to transfer the ownership by sale or trade.

6. Conclusion

The advantages of green sukuk include tax deduction until the financial year of 2020. Besides that, the government through the Ministry of Malaysian Investment Development Authority (MIDA) offers tax incentives for green technology activities. Recently, fund allocations up to RM 5 billion are being offered as financing incentives under the Green Technology Financing Scheme (GTFS). It is indisputable that the emergence of the green sukuk does help in solving many environmental issues. Specifically, our three case studies proved that it not only managed to overcome power supply problem, it also effective in improve the water quality. As present practice, each of the case studies adopted different sukuk model for financing their activities. For instance, Tadau Energy Sdn. Bhd. used hybrid sukuk, BEGW (M) Sdn. Bhd. practiced sukuk wakalah and Sarawak Hydro Sdn. Bhd. promoted sukuk murabahah.
References


Model for Financing Agro Projects in Islamic Banking Institutions

By
Muhammad Ridhwan Ab. Aziz*
Muhammad Mohamad Yusoff**

Abstract
The main aim of Islamic financing in agriculture is to finance agriculture-based projects and to prevent any involvement of haram elements by using banking and financing instruments which is Shariah-compliant among agro-entrepreneurs. However, there are several risks that need to be faced by agro-entrepreneurs which may force them to accommodate possible loss from effect of risks using the same funding. Both agro preneurs and banking institutions are increasingly seeking effective and sustainable strategies and approaches to mitigate, transfer, or cope with these inherent risks. Hence, the main aim of this paper is to develop a suitable financing model as a solution to the risks. The methodology of the research in this paper is mixed methodology, using qualitative and quantitative approach in answering research questions. The methodology of data collection is semi-structured interviews and survey questionnaires. This paper shows various noteworthy findings such as agro preneurs’ risks issues, awareness on Islamic financing, and Shariah-compliant financing constructs. The newly developed agro financing mechanism that complies with shariah law will be proposed in the end of this paper.

Key words: Risks; agriculture; agriculture financing; Islamic banking institutions; Islamic Finance

1. Introduction
Although Muslim entrepreneurs are encouraged to involve in any businesses including agribusiness, it is recommended to them to get financing skills to perform their
businesses. Poor financing skills may result in poor outcome from the business as well as low income to the entrepreneurs themselves since they have weak control on available funds and other resources. In Malaysia, they are given choices to finance their agro projects, but in the case for those who are unable to finance their projects with their own capital, they can seek either through government support programs or apply financing loan at banks.

Several studies indicate that subsidies distribution might not contribute to economic efficiency (Fatimah Said et al., 2006). There are also studies indicate the government still dealing with rising debt and widening deficit issues which might affect the economy, which needs to be controlled or the economic growth might be distorted (Nur Hayati Abd Rahman, 2012). If in case there are agricultural risks such as natural disaster and agro-food market loss incurred, the government will be the one to bore the cost in the end. This reverts back to the need of agro entrepreneurs to apply financing loans.

There are several banking institutions in Malaysia that offered financial supports to agro-entrepreneurs (Joni Tamkin et al., 2009c). However, agro-entrepreneurs who finance their projects through banks need to use some part of the funds to cover the loss, and at the same time may have to deal with shortage of funds for agro-projects’ uses. This would cause the financing schemes failed to fulfill the entrepreneurs’ needs as initially planned.

Therefore, this article aims to identify risks associated with agro-projects among agro-entrepreneurs. After conducting analysis, the researcher will attempt to suggest a new financing mechanism as a remedy against the risks. Muslim agro-entrepreneurs should also realize the benefits of financing their projects using Shariah-compliant products and services not only because to guarantee the ḥalāl outcome, but also to ensure the entrepreneurs’ work and effort will be an acceptable ‘ibādah in their life.

2. Literature Review

Islam and entrepreneurship are closely connected with each other. In fact, there are several valid dalils from the Holy Quran and Hadith which mention about business and its benefits (Mohd. Faizal P. Rameli et al., 2013). Islamic financing instruments which are Shariah-compliant can go along with businesses including agro projects. One of the roles of Islamic financing in agriculture is to prevent the involvement of prohibited (haram) elements while funding agriculture-based projects (Muhammad Ridhwan et al., 2013).

In Malaysia, there are few Islamic banks or Islamic windows of conventional banks that offer Islamic financing facilities for agro entrepreneurs in agriculture. These banks are Agro Bank (previously known as Bank Pertanian Malaysia Berhad), Bank Kerjasama Rakyat Berhad Malaysia Berhad (commonly known as Bank Rakyat) and Maybank Islamic Berhad (Muhammad Ridhwan, 2012).

Lack of financing is one of the main reasons why agriculture industry cannot be developed further in Malaysia and elsewhere. Furthermore, both Islamic and
conventional banking system are not intensively provide funding to agriculture or due to several factors, including risk of agriculture, incompatible sources of financing, lack of banking experts and people marginalizing the agriculture sector. Until now, Agro Bank is the only bank that able to provide funding and financing facilities to Agro entrepreneurs intensively, although the bank should introduce more comprehensive Islamic banking products with different Shariah concepts (Muhammad Ridhwan et al., 2013).

Risk could be estimated through objective or subjective procedures, which differs with uncertainty. Risk also could be divided into two types – business risk and financial risk. The main concern here is that farmers (or agro-entrepreneurs) may have insufficient data to estimate the risks. At least there are five strategies to reduce risks – diversification of production and marketing plans, formal insurance and the maintenance of liquid insurance reserves, cooperative marketing of farm products, future and cash forward contracts, and outside equity financing (Penson Jr et al., 1980)

Agriculture is a very risky economic activity. There are some elements in agriculture that is not controllable which causes unexpected economic returns to farm households. Farmers of developing countries had limited access to several local risk management instruments and financing facilities by local banks, forcing them to use inefficient traditional methods (Mark, 2010). Local small farmers who lived in rural or remote areas lack access to reliable and affordable agricultural financing due to low education levels, subsistence farming dominance and inability to access the financing instruments factors (Renate et al., 2010). Agriculture sector in Africa failed miserably with the poor farmers unable to improve their lifestyle through the sector, but the factors of the failure are caused by collapsed agricultural development banks, corruption, inadequate infrastructure, and poor soils and seeds for farming (Jonathan M. et al., 2010).

In addition, there are higher risks in agricultural investments due to various factors, although it is rare because the risks involve weather and natural disaster effects towards agro productions. Recent and advanced farming technology was able to minimize the effects. Although there are few banks offered Islamic financing facility, but due to importance of agriculture towards Malaysian economy, these banks are willing to provide financial support towards agro entrepreneurs, which is good opportunity to expand the agro business (Joni Tamkin et al., 2009a). This statement was also supported in an article which examines the concept of agribusiness in Islam and financing facilities for agriculture by Islamic banks (Muhammad Ridhwan, 2011).

*Muzāra’ah* (partnership in agriculture) in literal meaning is “planting” or “crop”, originated from the word “*zara’a*”. In terms of *fiqh*, it is an agricultural contract between land possessor and cultivator, which means yield of land and seed given to the cultivator while farm produce is divided for both parties of the contract (Wahbah, 1989). Most Muslim jurists allow and permit the usage of this contract (Ahcene, 2012).

*Muzāra’ah* was required in financing agro projects since sale is not possible before harvest time unlike other contracts which require the item of sale to be present on time. In a study to analyze *Muzāra’ah* contract and its possible application in Islamic banks, it is
mentioned that there is an equal opportunity and possibility for Islamic banks in Malaysia to initiate the contract for helping agro entrepreneurs (Muhammad Ridhwan, 2010). In 2011, another study had been conducted to analyze various contracts of cultivation from the perspective of Islamic Commercial Law. There are plenty of opportunities available for Muslim in Malaysia in order to embark in agro projects based on Shariah-compliant Islamic financing (Muhammad Ridhwan, 2011). Some Islamic banks offered tawarruq as monetization or cash procurement contract to avoid bay’ al-‘īnah usage in credit cards. One example of Islamic financing product which uses tawarruq is Commodity Murabahah-i by Maybank Islamic bank (Ali Abusalah Elmabrok Mohammed et al., 2016.) and Property Financing-i by CIMB Islamic bank (Suraya Ismail et al., 2015).

There were 24 articles related to Islamic agribusiness and agribusiness financing had been published from 2003 to 2013, in which Malaysian and Pakistan had the most contributors. Still, there is a need to have more studies related to Shariah-compliant financing in Islamic institutions, which is based on Fiqh Muamalat contracts (Muhammad Ridhwan et al., 2013).

3. Research Method

The research methodology used for this research is mixed method, which combines quantitative and qualitative methods through the use of questionnaires and literature research respectively.

For quantitative method, semi-structured questionnaires are used since the information gathered from respondents is the most accurate manner. The questionnaires had been targeted towards 400 Muslim farmers (read: agro-entrepreneurs) of Sungai Besar (Selangor), Teluk Intan (Perak) and Sungai Sumun (Perak), Malaysia since these areas are known to have large agro-based plantations. Each respondent is required to answer all 27 close-ended questions in the form around 10 to 20 minutes. After performing a thorough survey, data gathered from respondents’ answers are analyzed through the use of SPSS software (Version 20) statistically. This study will analyze the frequency of each variable in the survey questions, since each respondent has their own evaluation on the issue, which is useful in this analysis. Results of the analysis will determine the level of assessment of each respondent on various aspects of this study.

For qualitative method, the researcher performed library and internet research to acquire several sources of literature reviews. The researcher will able to list known risks in agriculture or agribusiness and available Islamic contracts to finance agro projects. The financing mechanism which had been developed from phase-to-phase, based on the findings gathered from the analysis will be developed and revealed in this paper. The development of the full model for the financing of agro project in Islamic banking institutions is derived from both quantitative and qualitative data analysis.

4. Results and Discussion

The Distribution of Agro-Entrepreneurs in Local Agricultural Activities:

The data of this research had been gathered from male and female respondents. The main agricultural activities involved in this study are “banana” (cash crop banana production), “paddy” (both paddy plantation and rice production), “rubber” (rubber tree plantation and rubber production), “palm oil” (palm oil plantation and palm oil
production), “fishery”, “livestock” and “others”. “Others” are mostly activities involving fruit tree plantation and fruit production, such as pineapples and rambutans.

![Pie chart showing distribution of main agricultural activities]

**Fig. 1: Distribution of Main Agricultural Activities**

From the survey, the data are analyzed and the analysis is shown in Fig. 1. The numbers in brackets are number of frequency distribution of agro-entrepreneurs involving in main agricultural activities. Fig. 1 reveals that majority of respondents involved in palm oil activities (128 respondents or 32%) and fruits plantation activities fell as the least involved respondents (68 respondents or 8%). There are similar percentage of respondents involved in both banana and rubber-based activities (17%). It is also noted that while performing survey, the researcher was informed that some respondents which involved in palm oil activity were previously involved in rubber activity. The reason of this conversion is that rubber prices had been reduced drastically in 1990s, forcing some of rubber plantation switched to more profitable palm oil plantation instead (Encyclopedia of the Nations, 2013).

![Pie chart showing distribution of agro-entrepreneurs' income]

**Fig. 2: Distribution of Agro-entrepreneurs’ Income**

Second analysis is translated into Fig. 2. The numbers in brackets are number of frequency distribution of agro-entrepreneurs based on their salary or income per month. Figure 2 shows that majority of respondents involved had salary around RM1001 to RM3000 (195 respondents or 48.75%). There is only one respondent with salary around more than RM8000 (0.5%), who was known to be an oil palm estate owner. Two more respondents had salary between RM5001 and RM8000.
The Involvement of Risks in Agro Projects:

Risks had been identified in this paper includes production risk ("production"), technological risk ("technological"), price or market changes ("market price"), animal or plant diseases risk ("diseases"), pests attack risks ("pests or wild animals attack"), financial and credit risk ("financial"), and changes of government and institutional policy risk ("government"), weather or climate change risk ("weather"), natural disaster risk ("natural disaster") and personal risk ("personal") in this study. These risks were itemized based on studies conducted by Handan (2012) and Julie, et al. (2010).

![Fig. 3: Distribution of Agro-entrepreneurs’ Risk Involvement](image)

Fig. 3 evidences the list of all risks mentioned previously with number of respondents that involved or at least had experience encountering those risks. Please note that each respondent faced multiple risks in their agro projects. It is revealed that majority of respondents commonly encountered risks related to pests or wild animals attack (131 respondents), proves that most agro-entrepreneurs require funds to buy pesticides (for plantations) or better security (for animals). Technological risks (48 respondents) are the least common risk encountered by agro-entrepreneurs, since the agro-entrepreneurs were not desperate to upgrade their current tools and machineries for agro-projects use.

Proposed Full Model – MzT-A Financing Scheme-i:

The financing model, as shown by Fig. 4, will be known as “MzT-A Financing Scheme-i”, in which “Mz” is initials for “muzāra‘ah”, “T” is for “tawarruq”, “A” is for “Agropreneurship”, and “i” is for “Islamic”. The flow of this model as follows:
1. The bank introduces this model to customers (both agropreneurs and land owners alike) via advertisement and promotions. Land owner, who is unable to work on his land for agricultural purposes, register at the bank to seek for anyone who could work on the land. Agropreneur, who had capabilities to do agro-projects but have no land to work on, also contacted the bank to fulfil any job vacancies as advertised by banks.

2. When both land owner and agropreneur are met with arrangement by the bank, the contract will be signed by both parties and the bank will act as an intermediary. Both parties reach mutual agreement and had known between each other, in which the land owner agreed to provide the land to the agropreneur (based on muza‘ra’ah contract), and the agropreneur agreed to work on the land owner’s land. Further discussion between parties including estimated harvest time, possible profit gained from crops and cost of resources needed, such as seeds and machineries.

3. The land owner provides the land to the agropreneur who will work on the land until harvesting season as described in al-muza‘ra’ah contract.

4. The financing process will occur between the agropreneur and the bank – the bank will provide loan to the agropreneur, and the agropreneur may repay with sale’s profit. The bank may charge some processing fee during the repayment.

5. The loans can be used by the agropreneur to purchase inputs for agro projects, including seeds, fertilizers, pesticides and machineries.

6. Optionally, the agropreneur may pay small amount of contributions and to be collected in this fund (to be handled by takāful company).

7. If a misfortune occurs (because of risks, such as destruction by natural disaster or pests attack), any unfortunate agropreneur may contact both bank and takāful company about what has happened and they will process the application for damage compensation – the reimbursement hopefully could recover the loss so the agropreneurs may able to continue to work on his agro project again.

8. When the harvesting time arrives, the agropreneurs (or the land owner) will sell the harvested crops (raw or as processed agro product) at markets locally or through export markets.

9. The profit gained from market sales will be divided between the land owner and the agropreneur based on profit ratio which had been agreed prior the contract signing. In this case, the agropreneur will receive larger portion of profit since he had worked hard on the land.

10. The tabarru’ fund’s main purpose is to compensate any loss if the agropreneurs faced misfortune (car accident involving the agropreneur, destruction of agro project site by disaster, etc.).
5. Conclusion

It can be concluded that there are several risks which have been encountered by agro-entrepreneurs in agriculture projects and require them to finance their projects using Shariah-compliant financing and banking products. Local Islamic banking institutions should take these risks into consideration in providing monetary funds to the agro-entrepreneurs in order to ensure the funds could accommodate the loss from effect of those risks and support agro projects. It is also common for agro projects to have many kinds of risks, ranging from natural-based risks (e.g., climate changes, pest attacks, etc.) to technical-based risks (e.g., technological issues, financial problems, etc.). The loss caused from risks may halt the progress of agro-projects and also may involve monetary
funds to accommodate it, although the funds itself are needed to finance agro-projects. Based on the theoretical analysis in this paper, it can also be concluded that none of the Islamic banking institutions in Malaysia able to offer financing for agro project based on specific *fiqh muamalat* contracts. Thus, the new financing mechanism which was developed in this paper is based on specific *fiqh muamalat* contracts and hopefully good enough to help agro-entrepreneurs to provide capital, along with the optional *takāfūl* scheme to cover the loss caused by those risks on agro-projects without interfering funds used for capital purpose.

**Acknowledgement**

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Islamic Finance: Challenges of Islamic Banking in Pakistan

By

Shaikh, Asif Zaheer*
Dr. Shah, Ume Laila

Abstract:

Islamic finance is growing with remarkable pace, especially Islamic banking, a major segment of Islamic finance, is expanding rapidly. This evaluates position of Islamic finance and Islamic banking, around the world in general and particularly in Pakistan. History of Islamic banking in Pakistan is protracted and at present this sector is growing significantly. However Islamic banking is confronting with number of challenges, which restrain it from sustainable growth in Pakistan. Growth level of Islamic banks should be steeper to contribute substantial share in country’s economy. It is important to formulate effective policies, at institutional and operational level to address these challenges through close collaboration of key stakeholders.

Key Words: Islamic Finance, Challenges, Islamic Banking, Pakistan

1. Introduction

The aim of Islamic economic and financial model is communal welfare. Islamic Finance (IF) is thriving quickly over the last decade while its major segment Islamic Banking (IB) became one of the important sectors in number of countries particularly in Islamic world (Kammar, et. al, 2015). It is projected that IF will keep expanding along with economic development in those countries where a sizable Muslim and comparatively unbanked population is living. The major input for IF is provided by the oil producing companies. These companies are mainly owned by Muslim who seeks to invest in Shariah-complaint financial institutes. The growth of IF may benefit in number

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of ways, for instance; IF is less prone to enter into crisis due to its feature of risk-sharing, which encourage improvement of risk management and decrease the leverage on both sides, customer as well as financial institutions (FI). IF increases business activities and also provide support in accelerating the economic cycle. IF is considered as more stable than conventional finance (Ibid). There is significant growth in IF industry and accordingly in IB globally. Pakistan is among those countries where IB is flourishing with depth and outreach. However the industry is still facing number of challenges at legal, operational and institutional level. The objective of this paper is to study the history, present position of IB in Pakistan and focusing on key issues refraining from a sustainable growth of industry along with suitable recommendations.

1.1 Islamic Finance:

Islamic Finance can be defined as provision of financial services as per Islamic law (Shariah) (Ibid). IF is based on rule of strict prohibition from prefixed and guaranteed return. It is also known as non-interest bearing finance (Iqbal, 1997). IF can be categorized into three broad types which are summarized hereunder (Hussain et. al., 2015):

1. Profit and loan sharing: Products include Mudarbah, Musharika
2. Non-PLS contracts: It includes Murabaha, Istisna, Salam and Ijarah
3. Fee based products: These are services, it includes Wakalah and Kafalah

1.1.1 Islamic Banking (IB):

IB is largest segment of Islamic Finance with USD 1,571 Billion out of total USD 2.190 Billion, as reflected in Table 2. IB can be differentiated from conventional banking in various dimensions (Samad, 2004). Balance sheet is one of those dimensions. Table 1 is showing difference between Balance sheet of Islamic Financial Institute and Conventional Financial Institute; the fund base liability of IB is formed by deposits in non-interest current accounts and profit & loss (PLS) sharing investment accounts. While on asset side unlike conventional banks, IB does not lend funds and earn certain rate of interest as cost of funds, but it is engaged in different business activities such as sales, leasing, PLS financing or fee based services. The profitability of IB comes through these transactions and accordingly it is distributed among investors/ depositors. On treasury side IB is restricted to undertake certain derivatives, for instance; futures and foreign exchange forwards (IFSB, 2016).

<table>
<thead>
<tr>
<th>Table-1 Balance Sheet of Conventional Financial Institution (CFI) and Islamic Financial Institution (IFI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BALANCE SHEET OF IFI</strong></td>
</tr>
<tr>
<td>Assets</td>
</tr>
<tr>
<td>Cash or Cash Equivalents</td>
</tr>
<tr>
<td>Investment in securities</td>
</tr>
<tr>
<td>Sales Receivables</td>
</tr>
<tr>
<td>Investment in Leased Assets</td>
</tr>
</tbody>
</table>
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Investment in Real Assets
Equity-profit sharing Financing
Investment in Subsidiaries
Fixed Assets
Other Assets

Investment in Subsidiaries
Fixed Assets
Other Assets

Liabilities
Current Accounts
Other Liabilities

Liabilities
Current Accounts
Savings and Time deposits
Other Liabilities

Equity of PSIA (Profit Sharing Investment Accounts)
Profit Sharing Investment Accounts (Unrestricted)
Profit Equalization Reserve
Investment Risk Reserve

Owner’s Equity
Contingencies or other off balance sheet items

Owner’s Equity
Contingencies or other off balance sheet items

Note: Differences are shown in Red
Source: Hussain et. al. (2015)

1.2 Current Position of Islamic Banking around the world:

IF is broadening its circumference and providing a wide range of services and products. Presently total assets of IF around the world have reached US$ 2,190 Billion up to first half of 2018. Table 2, reflects matrix of Islamic Financial assets in regions. It can be observed that overall market is concentrated in MENA and GCC. But new markets are also emerging in other parts of world. The table is showing that GCC (Gulf Cooperation Council alliance of Saudi Arab, Kuwait, UAE, Qatar, Behrain& Oman) is leading with 42.3% in total IF assets i.e US$ 927.1 Billion (IFSB, 2019).

Table: 2 Regional breakdown of Global Islamic Finance (GIF) in 1H2018 (USD Billion)

<table>
<thead>
<tr>
<th>Region</th>
<th>Banking Assets</th>
<th>Sukuk Outstanding</th>
<th>Islamic Funds Assets</th>
<th>Takaful Contributions</th>
<th>Total</th>
<th>Share %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>266.1</td>
<td>323.2</td>
<td>24.2</td>
<td>4.1</td>
<td>617.6</td>
<td>28.2%</td>
</tr>
<tr>
<td>GCC</td>
<td>704.8</td>
<td>187.9</td>
<td>22.7</td>
<td>11.7</td>
<td>927.1</td>
<td>42.3%</td>
</tr>
<tr>
<td>MENA (ex-GCC)</td>
<td>540.2</td>
<td>0.3</td>
<td>0.1</td>
<td>10.3</td>
<td>550.9</td>
<td>25.1%</td>
</tr>
<tr>
<td>Africa (ex-North)</td>
<td>13.2</td>
<td>2.5</td>
<td>1.5</td>
<td>0.01</td>
<td>17.2</td>
<td>0.8%</td>
</tr>
<tr>
<td>Others</td>
<td>47.1</td>
<td>16.5</td>
<td>13.1</td>
<td>--</td>
<td>76.7</td>
<td>3.5%</td>
</tr>
<tr>
<td>Total</td>
<td>1,571.3</td>
<td>530.4</td>
<td>61.5</td>
<td>27.7</td>
<td>2,190</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: IFSB, 2019

IB is developing rapidly in most of the parts around world. In 2008 total assets of Global Islamic Banking (GIB) industry was only USD 650 billion, while after 9 years these assets surged approximately 246% and reached at 1,600 billion in 2017 as displayed in Figure 1. The figure depicts that GCC is maintaining its growth unlike MENA, Asia and others. However, it is forecasted that the value of global Islamic Banking assets may decline slightly in terms of USD, because currency exchange rates in major Islamic
markets are not pegged with USD and economic conditions in few Islamic banking jurisdictions are difficult due to which domestic currencies could depreciate against USD.

Figure-1 GIB Assets Growth (2008- 2018F)

\[F=\text{Forecast}\]

According to IFSB (2019) Iran is sustaining its historical place in terms of jurisdiction for IB assets, with major share of GIB assets is owned by Iran with 32.1%, followed by Saudi Arabia and Malaysia with 20.2%, and 10.8 % respectively.

Figure-2 GIB Assets by Jurisdiction (1H2018)

Source: IFSB, 2019

Amidst the softened growth momentum is recorded in global financial system in 2018 due to various reasons including increasing trade wars and geopolitical tensions so far IFSI has recorded growth rate of 6.9% y-o-y at 1H2018. IB sector remained dominant in Global IF. Among 36 jurisdictions reported in the IFSR 2019, Market share of Islamic banking sector is continuously increasing in relation to total banking sector in at least 19 counties and remained constant is 6 countries.
2. **Islamic Banking in Pakistan**

In 1948 the founder of Pakistan Mr. Muhammad Ali Jinnah highlighted the development of banking practices with Islamic principles. He said in one of his speech;

“I shall watch with keenness the work of your Organization in evolving banking practices compatible with Islamic ideas of social and economic life. We must work our destiny in our own way and present to the world an economic system based on true Islamic concept of equality of manhood and social justice” (Jinah, 1948)

2.1 **History of IB in Pakistan:**

IB has protracted history in Pakistan. The first attempt of converting the conventional banking system into IB system was made in 1980. It has led to major change in Banking Companies Ordinance 1962 (BCO’62) and associated regulations to support non-interest based banking transactions in Pakistan. Following are some key developments around 80s (Mehmood, 2002) stated;

1. In 1979, state-owned “House Building Finance Corporation (HBFC) and two mutual fund companies, NIT and ICP have started non-interest based operation.
2. In 1980, new law introduced as Mudarba Ordinance, while legal framework was amended for issuance of new non-interest bearing instrument for corporate financing known as “Participation Term Certificate (PTC)”
3. In 1984, Banking Tribunals Ordinance has introduced procedure for recovery of non-interest based finance.
4. In order to mobilize deposits based on PLS, in 1981 exclusive counters, for operation of non-interest based transactions, were introduced in every nationalized bank. Besides, banks were restricted from particular interest based transactions. Resultantly Islamic mode of financing was developing.
5. In 1985, Central Bank of Pakistan directed that, all financing to Government or public sector organizations will be through interest free modes.
6. In 1985, all transactions made through commercial banks in Pak Rupees were directed to be interest free. This has resulted in significant increase of PLS deposit share in total deposits from 9.2% in 1981 to 61% in 1985.

Although the impact of these steps was positive for expansion of IB in Pakistan, nevertheless an unplanned and sudden change in overall banking system posed difficulties in implementation of new system. Some of products were challenged in court as “un-Islamic” thus court ordered to formulate guidelines and address the issues. However Islamic banking system was re-launched in Pakistan in 1990 and at present it is flourishing rapidly (Akhtar, 2007).

2.2 **Current Position of IB in Pakistan:**

Banking sector in Pakistan is growing rapidly in terms of network and profitability. (Abbas et al. 2014) Islamic Banking is also growing progressively in terms of improved Shariah compliance, better returns and quality of service. Central Bank and all other stakeholders are playing positively due to which Pakistan; with its superior legal and statutory framework, is now included among the countries with fastest growing IB
industries around the world (Ali, 2015). One of studies by Kabir (1999) claims, that Pakistan has effective framework for improvement of IB regulations.

Keeping pace with growth, assets of IB are increased up to PKR 2,790 Billion in March 2019 from PKR 2,334 Billion in March 2018. In terms of market share, IB constituted 15% share in overall banking industry of Pakistan. Branch network has also been increased by 10.8 % to reach at 2,869.

**Table: 3 Overall growths in IB industry of Pakistan**

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Industry Progress</th>
<th>YoY Growth (%)</th>
<th>Share in Overall Banking Industry (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets (net) (Rupees in billion)</td>
<td>2,334</td>
<td>2,658</td>
<td>2,700</td>
</tr>
<tr>
<td>Deposits (Rupees in billion)</td>
<td>1,916</td>
<td>2,203</td>
<td>2,199</td>
</tr>
<tr>
<td>Number of Islamic banking institutions</td>
<td>21</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Number of Islamic banking branches*</td>
<td>2,589</td>
<td>2,851</td>
<td>2,869</td>
</tr>
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</table>

Source: Data submitted by banks under quarterly Reporting Chart of Accounts (RCoA)
*Including sub-branches

Meanwhile total financing by IB institutions were PKR 695 billion as in 2016 which is increased up to PKR 1,525 Billion, wherein *Diminishing Musharika* remained most preferred mode of financing with 35.8% towards total IB financing. Overall quality of IBI assets is better than the assets of conventional banking.

![Figure 3 IB Financing Mix March 2019](source: SBP, Ibid Bulletin, March 2019)
The following figure 4 shows that the overall profitability is continuously growing except from June 2014 to June 2015. This decline was due to losses of Rs.0.25 by IBs. The merger of a conventional bank into an IB has resulted into this loss.

**Figure-4Bi-Annual Profitability of IB Industry**

![Graph showing bi-annual profitability of IB Industry]

Source: SBP, Ibd Bulletin, June 2016

### 3. Challenges of Islamic Banking in Pakistan

Although IB is rapidly expanding in depth and breadth and it is successfully working in Pakistan, nevertheless there are number of challenges at various levels, and it is facing hurdles in development and sustainability. Following are some issues in Islamic Banking Industry of Pakistan;

#### 3.1 Limited product range:

IB face challenges of innovative products or services to utilize deposit effectively as well as financially under the system of profit & loss sharing. In order to compete in market, IB require to offer tailored products and services which are; meeting customer’s business needs, easily saleable, profitable for IB as well as according to Shariah law. The assets backed financial products of IBs mainly depends on customers such as manufacturing based firms, which needs funds for purchasing machinery, furniture, commercial vehicles, raw material or industrial equipment. Due to limited product range IB can only serve the customer for purchasing fixed or current assets (other than cash) only. While customers require funds for other expenses also, such as payment of utility charges, diesel cost or other variables costs associated with production. Therefore in order to meet entire working capital requirement, these customers incline towards conventional banks for working capital loans. Further IB is not designed to serve service oriented customers, which is eventually tapped by conventional banks. For instance, in Pakistan IB does not provide facility of \(^1\)bank guarantee unless those guarantees are not fully collateralized against liquid security in bank, otherwise in case of claim IB would need to establish a forced loan on account of customer to pay-off the claim, while loan

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1. Bank Guarantee is written undertaking from bank to pay the claimant on behalf of client if client fails to settle debt or fulfill contractual obligations
with interest is prohibited in IB. However conventional banks are providing this facility against immovable collateral and in case of receipt of claim, CB can create forced finance and pay-off the claim.

Another product is Credit Card (CC). It is the revolving facility, approved by the bank with certain credit limits and time period. Card holder makes payment for day to day purchasing of consumer goods or withdraws cash. It is one of the major types of plastic money and currently becoming a necessity in Pakistan. Conventional banks, credit the merchant’s account immediately upon purchase of goods by the card holder, and deduct the payment from the approved loan limit for card holder. Card holder will repay the amount after 30 days, either in full or in instalments with certain percentage of interest amount. Since usury or Interest is forbidden in Islamic Law, therefore in Islamic Banks a credit card is served as charge card where customer pays principle and service charges only. At present, Islamic credit cards are introduced by number of Islamic banks in the world. However, in Pakistan this product is still at initial stage. In addition to product development, IB needs to be aggressive for deposit mobilization in order to boost domestic financial savings in Pakistan. Because, significant part of savings in Pakistan is still not channelled into financial system due to deficiencies in conventional banking and reservations of the customers with religious mindset. IB should tap the investors and companies which are holding high net worth and looking for lucrative returns. This could be helpful to compete with conventional banking industry.

3.2 Absence of pricing benchmark for IBs:

In Pakistan, Islamic banks are working in an environment where conventional banking is dominant and presently KIBOR (Karachi Inter Bank Official Rate) is being used as benchmark for pricing of conventional finance (Shaikh, 2018). IBs are using same benchmark to determine their pricing. Therefore central Bank should introduce standard pricing formula in the light of Shariah principles for Islamic Banks.

3.3 Lack of public awareness:

Although there are number of financing modes in Islamic Banking system as compare to conventional banking system however due to unfamiliarity with Islamic mode of financing and its modus operandi, majority of people in Pakistan have no choice except conventional banking (Awan, 2014). Further, a major percentage of population assumes that conventional banks and Islamic banks are in-principally same because both includes profit rate. Therefore, it is essential to take steps for creating public awareness and increase knowledge about IB. In this regard public education campaign, distribution of Islamic banking manuals, interpretation of Shariah laws for financial transactions, text books and reading material should be provided to bankers, customer and other stakeholders. Furthermore, social media, TV, radio, billboards or public places may also be used for key differences, advantages or disadvantages, procedures and Shariah implications of IB.

In Conventional banks, types of financing are actually variants of loan transaction, whereas in IB there is trade, leasing, partnership etc.
3.4 Failure in financing projects with high-return:

Owners of the projects with high-returns prefer to borrow from conventional banks which charges low interest rate on corporate financing. Therefore only those projects will be available for IB that has equal or low return than prevailing rate of interest. This situation limits the capacity of IB and the usage of mudarba and musharika modes of investment. Thus it does not provide space to compete with conventional banks.

3.5 Risk management of IBs:

IBs are not only facing commercial credit risk but also the risks related to the instruments, such as market risk of Salam financing or claim of assets damage or loss of stock damage prior to contract in Murabaha financing. These and other risks can be managed through the proper structure of financial contract according to the product, nature of business and security. While IBs may reduce commercial credit risks through following options;

1. Innovative arrangement of collateral, guarantees of third party with strong net worth, acquisition of credit rating of client.
2. Choice of appropriate IB product with minimum risk and according to need of customer.
3. Pricing of financial product as IBs have advantage of product range unlike conventional banks. Furthermore, in order to strengthen regulations, supervision and practices of conventional financial institutes around the world, BCBS (Basel committee on Bank supervision) has introduced Basel accord. In this context Basel-I accord was issued in 1988, afterwards Basel-II was issued in 2004 whereas BASEL-III is also introduced which is considered as more comprehensive and covers market liquidity risk, capital adequacy risk and stress testing (Pérez, 2016). However, these accords does not meant for IB industry. Therefore it is required to correlate BASEL accord with Islamic financial system also.

3.6 Absence of Islamic financial instruments with fixed income flow:

In Pakistan, almost all conventional Banks and other financial institutes such as national saving center, issues certificates with stable income flow. The target customers of these products are mainly pensioners, widows and other vulnerable. However, Islamic banks are not offering such type of products at large. In order to tape this segment of customers there is a challenge for IBs to design similar product within Shariah Law.

3.7 Absence of Islamic microfinance:

Microfinance (MF) is considered as an important tool for poverty alleviation in developing economies. Although interest based MF products are successful in Muslim majority countries, yet these products are not acceptable by all poor Muslim customers, due to “interest factor” which is considered as obscene in Shariah. In this situation Islamic microfinance institutes (IMFIs) has great potential to serve that niche and fight against the poverty. Karim et. al, (2008) claimed that Islamic MF is emerging market
niche. Based on survey in 125 IMFIs from 19 Muslim counties, researchers found that IMF reached to only 300,000 clients while 33% of these clients are in Bangladesh alone.

Pakistan is a developing country with major population living in rural areas. Poverty is one of primary issues of Pakistan, while being an Islamic State with majority of poor Muslim population, there is huge potential for Islamic Microfinance Institutes in country. Although there are few institutions that are providing Islamic microfinance such as “Akhuwat” and “Islamic Relief”, but at present there is no formal Islamic microfinance bank, working in the country (Akhter et. al, 2009). These institutes do not fulfil the demand. In order to serve poor with Islamic Microfinance (IMF) and establish sustainable IMFIs in Pakistan, it is important to primarily focus on; designing affordable IMF products, capacity building, improving operating activities for efficient output, managing business risk and integration of IMF with NGOs, Government departments for Charity and religious affairs (Auqaf).

3.8 Conflict on Sharia verdict / Fatawa:

In Pakistan there are number of sects and school of thoughts, due to which a general Shariah verdict / “fatawa” on any transaction of IB may be accepted by one group but declined by other, which may create conflict and ambiguity(Ahmed, 2013). There should be a single institute; consisted on Islamic scholars of all sects, allowed for verdict or “fatawa” regarding IB or IF. Every IB transaction particularly disbursement of funds, must rout through “Sharia scholars” who thoroughly study the transaction and provide verdict with clear explanation.

3.9 Absence of secondary market:

Secondary Market is paramount in any financial system. Secondary Islamic financial market can enable IB to invest their idle funds as per Shariah law, because these institutes need to off load their short term liquidity. In Pakistan secondary market is not working actively while a nominal available market is working only on interest based financial system. Government securities or T-bills are also traded on interest base return. Resultantly conventional banks have more investment avenues as compare to IB. Furthermore financial market in Pakistan provide facility to conventional banks for short term tradable instruments such as interbank transactions, overnight funds and other borrowing options. This fulfils the short term liquidity need of conventional banks only. Therefore it is required to launch Sharia complaint SLR securities and treasury bills for IBs. Islamic Repos also required to be structured. Moreover unlike conventional Banks, IBs cannot purchase shares of following types of companies;

I. Companies that are involved in interest-based business
II. Companies that has borrowed interest based loan
III. Companies that are involved in business not approved by Shariah board (Nathie, 2008).

Therefore, in view of above restrictions IBs has substantially limited opportunities for investment in capital market Also, due to absence of Islamic capital and money market, IBs are unable to get funds if required.
3.10 Lack of qualified and trained manpower in IB:

IB in Pakistan is facing shortage of qualified and experienced manpower from low management to top management level (Ahmed, 2013). Most of IBs recruits staff from conventional banking industry with no background in IB which increases ineffective human capital. In addition to that, research and development is also essential for innovation of products and adoptability of new technology. But only few Islamic financial institutes in Pakistan are working on R&D and developing full-fledged training centers.

Conventional banks are usually concerned for the timely recovery of principle amount of loan and due markup, instead of economic side of lending. This is mainly because the nature of financial instrument is loan-based. Accordingly there staff mostly “entertains” loan applications only without visiting the customer, analyzing the investment avenues and inspect each transaction. On other side impact of financial instruments of IB is in two folds;

1. IBs are required to focus on outreach to achieve economic application of funds in market
2. After financing, IBs are required to monitor all transactions, deliveries of stock against that finance and selling that stock in market.

This requires additional expertise and knowledge for marketing and monitoring Islamic financial products, therefore staff of IBs must be capable to deal with this situation. In this regard specific courses for each area of Islamic Banking and specialized trainings with hands on practice should be arranged. Government of Pakistan should establish institutes for certification, trainings and research on Islamic Finance.

3.11 Profit depression and delay in debt repayment:

Conventional Banks can compensate the losses from delayed payments, by charging compound interest on daily basis (Shahruddin, et. al., 2013). Islamic Banks also charge higher percentage of profit, in case of late payment but the additional amount does not accumulate in actual profitability of IB. Shariah law restricts lenders to charge penalty in case of delay in payment (Qur’an, Ch 2:279). The additional amount goes to charity or Sadaqato discourage wilful defaulters. Consequently it depresses the profitability and thus IBs are placed in comparatively weaker position in terms of profit earning as compare to conventional Banks.

Delay in recovery of debt is one of the major issues of IB is Pakistan, which increase NPLs. Defaults can adversely affect business of IBs as well as their settlement with various depositors. Therefore IBs have to address these problems through the process of effective analysis and projection of customer’s business, this process starts from receiving customer’s application for finance till final repayment by the customer.
Further it is essential to redefine legal rights of lenders. For instance, due debt may be charged over debtor's assets. Certainly margin will be allowed to debtor to for Shariah recognized necessary personal needs.

3.12 Window of Islamic Bank in Conventional Bank:

Dual banking system prevails in number of Muslim countries including Pakistan. However it is gradually shifting to interest free banking. Government of Pakistan allowed for establishment of full-fledge branches of IB in conventional Banks or IB subsidiaries by conventional Banks. These banks are not prepared to expand IB and only meeting the central bank’s regulatory requirements. It create doubts in Muslim community that whether the income of IB windows operation is completely segregated, interest free and it is as per Shariah Law throughout the transaction process. In order to protect interest of investors in Islamic Banking, it requires a careful monitoring to avoid admixture of operating activities or income from Islamic banking with conventional banking.

Conclusion

In the light of above discussion, it can be concluded that although the IB industry is growing as whole, nevertheless its performance is predicated on a lucid financial regulatory framework and legal framework that can extend guidelines for operations and guarantee stability according to dictation of Islamic Law. In Pakistan, with promising prospects and potential, IB needs to grow further for making its considerable share in overall financial sector and support economic development. IB was introduced as an alternative of financial service within prescribed Islamic Law. In order to strengthen IB, some remarkable efforts are taken by stakeholders since inception. However its operations are encumbered by number of challenges. Given that entire banking industry is growing substantially in Pakistan, the development level of IB should be steeper to contribute its share with its full potential. It is important to formulate effective policies at institutional, operational and technological level. Central Bank of Pakistan being a regulatory authority is required to work closely with Islamic Banking industry and Government agencies and address the issues for sustainable growth. Central Bank of Pakistan has given responsibility to IB for practicing and promoting Shariah based principles of Islamic economic system. Therefore, IBs must reflect unique fiduciary obligations for investment account holders to select only Shariah based investments. IBs should also implement sound risk management principles in conformity with principles of IFSB (Islamic financial Services Board).
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Jinnah, Muhammad Ali (Founder of Pakistan). (1948). Speech at the foundation laying stone of the State Bank of Pakistan


Shariah Compliance Prediction Model for Shariah Compliant Stocks Based on Historical Discriminant Trend Analysis

By
Usman Khurshid
Assoc. Prof. Dr Syed Musa Alhabshi

ABSTRACT

Shari’ah stocks screening methodologies had a significant impact in the realm of Islamic finance portfolio stocks since the early 1990s. These enabled a more inclusive investment community among overall Islamic financial community that led to the growth of Islamic financial institutions including Islamic banks and takaful. Over the years different Shari’ah stocks screening methodologies have been developed by the leading indices in different jurisdictions both at the agency and regulatory level. All the newly developed Shari’ah screening methodologies shared a common core i.e. screening out the Shari’ah non-compliant business activities e.g. alcohol, gambling. On the other hand, the threshold of the financial ratio was the distinguishing feature among the methodologies from applications of different juristic rulings. Even though Shari’ah stocks screening methodologies are a vital tool for Islamic equities sphere, there is a lack of empirical research on the Shari’ah governance dimension of the Shari’ah stocks screening methodologies. Therefore, understanding the degree of possibility of Shari’ah compliant stocks to become Shari’ah non-compliant will enhance the level of Shari’ah governance of the Shari’ah compliant stocks. The research aims to fill this gap by providing a Shari’ah governance tool for Shari’ah stocks screening methodologies, which

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will help Islamic investors and stakeholders to better understand the Shari’ah compliant stocks and the mechanisms of Shari’ah stocks screening methodologies around the world. The sample in this research includes 1440 Shari’ah compliant stocks spanning 69 countries with high market capitalization, over a period between 2010-2016/17. The sampled stocks were analyzed using the modified discriminate function to forecast the Shari’ah compliance level for the stock based on trends from historical Shari’ah compliance level of the stocks i.e. green, yellow and red. Forecast results provide the variations of Shari’ah compliance level of the stocks over the years for a robustness evaluation of 5 global Shari’ah stocks screening methodologies. The results highlight that the Standard & Poor and Dow Jones Shari’ah screening methodologies are more robust than others as they have a highest and stable number of green Shari’ah compliant stocks from the sample 1440 stocks from the year 2010 to 2016/17. The Shari’ah compliance trend from the historical data analysis can be further used to forecast the future Shari’ah compliance direction of the stocks.

Keywords: Shariah stocks screening methodologies, Shariah non-compliance risk, Discriminant Analysis, Historical Shariah compliance trend analysis.

1. Introduction

Shari’ah screening is a governance tool developed by the Muslim Jurists which allows Muslim investors and fund managers to invest in selected Shari’ah approved stocks/shares of the company. Shari’ah screening was introduced in late 1990s when security commission of Malaysia released the first list of Shari’ah compliant stocks. (Islamic Capital Market-Principles and practice, ISRA, 2015)

Since then several other Shari’ah stock indices with their Shari’ah screening methodology are developed which uses different Shari’ah screening criteria allowed by Muslim Jurists to determine the Shari’ah compliance of the stocks. All Shari’ah stocks screening criteria have same minimum requirement i.e.

1. A company must be doing business in sectors of economy which are considered Shari’ah compliant.

2. Financial ratio analysis of the company financial statements to determine the financial stability of the company.

All Shari’ah screening criteria are endorsed by senior Shari’ah scholars of Islamic finance and therefore are acceptable to Muslim investors and fund managers around the world. Catherine (2011)
Table 1 Comparison of Global Shari‘ah stocks screening methodologies

<table>
<thead>
<tr>
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<th>AAOIFI</th>
<th>DJIM</th>
<th>MSCI Islamic</th>
<th>FTSE</th>
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<td>Interest bearing debt/market</td>
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<td>Interest bearing securities/</td>
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<td>Cash and receivables/total</td>
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<td>Total debt/total assets</td>
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<td>Cash and interest-bearing</td>
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<td>securities/total assets</td>
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<td>Accounts receivables and</td>
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<td>33.33%</td>
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<td>cash/total assets</td>
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<td>average market capitalization</td>
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Source: Islamic Capital Market-Principles and practices, ISRA, P.g. no. 508,509

1 All non-halal income such as interest, pork, gambling and alcohol related income
Different Shari’ah screening methodologies has been developed for different regions and market but the basic structure remained same. Marzban (2009). The results of the Shari’ah screening methodologies is either the stock is compliant or non-compliant. No significant work has been done on the enhancement of results in these methodologies such as level of Shari’ah compliance of the compliant stock. If the stock is profitable and the return are expected to be high, it is preferable to the fund manager to invest in such stock but Shari’ah stock screening methodologies are not providing enough information about the Shari’ah compliance level of the individual stocks or any forecast of the Shari’ah compliance level of the stock.

In the start of every financial year a fund manager or private investor must recheck the Shari’ah compliance status of the stock to determine if the stock is still Shari’ah compliant. This process is compulsory for the fund managers who have portfolio of Shari’ah compliant stocks. Once a stock is declared Shari’ah compliant a fund manager can keep the stock in the portfolio but if the stock is declared non-compliant then the fund manager must dispose of the stock. If the price of the stock is lower than the cost price, then the fund manager can keep the stock unless the dividends + selling price match the cost price of the stock. It is not only a loss to the fund manager but also increase the operation cost and effort in portfolio management. There is a possibility that the stock over the years was inclining towards the non-compliance but due to lack of information about the Shari’ah compliance level of the stock the fund manager could not made a balance decision between the profitability and Shari’ah compliance.

There is a need for a Shari’ah governance tool which can enable investors and fund manager to better understand the Shari’ah compliance of the stocks for current and future investment. This information will also enable an investor or the fund manager to make an investment decision by accurately calculating Risk (Shari’ah non-compliance risk) and return. At the same time such Shari’ah governance tool for Shari’ah stocks screening, up to a certain level, predict and forecast the future Shari’ah compliance level of the stock based on the historical Shari’ah compliance trend in the stock. This tool will not only
make the governance of the Shari’ah compliant portfolio more effective but will also build the confidence of the investors on the Shari’ah compliant portfolio.

2. Literature, Model and Methodology

The previous studies on discriminant analysis and the model building under the discriminant function such as Schwartz (1975), Altman (2000), Pinches and Mingo (1973), Srinvas and Manickavasagam (2010), jasmine and Sonja (2015) has suggested that the discriminant analysis which was initially used in the biological and behavioural studies in 1930s has later been applied to financial problems such as consumer credit evaluation and investment classification. The Shari’ah stocks screening methodologies for the financial screening use the financial ratios and Altman (1968) suggested that the ratio analysis is no longer important analytical technique in the academic environment due to the relatively unsophisticated manner on which it has been presented. Altman (1968) and Altman (2000) in his studies used the discriminant analysis model for the prediction of the corporate Bankruptcy and predicting the financial distress of the companies respectively. In the study of predicting financial distress in companies Altman (2000) modified the tradition Z Score equation to perform the required analysis. In other previous studies such as Pinches and Mingo (1973) a multivariate or multiple discriminant analysis was used to propose the prediction model for the industrial bonds rating.

The model proposed in this research will also use modified and multi Z score-based discriminant analysis. The variables for the modified Z scores equations i.e. Z1 and Z2, in this research are same as the Shari’ah stocks screening methodologies i.e. Leverage, Liquidity and Receivables, along with non-halal income variable respectively to break down the different financial aspects that affect the Shari’ah compliance of the stocks. The study will further analyse the stocks from the Shari’ah governance framework countries (SGF) i.e. countries that has introduced SGF for Islamic financial institutions, based on the Z scores equations from the analysis and sector of business.

The model developed in this research for identifying and evaluating the level of Shari’ah compliance of the stocks have two phases, same as the stocks screening methodologies i.e. 1. Quantitative (Financial ratios) and Qualitative (business screening). The model is based on the discriminant analysis because of its ability to statistically predict categorical dependent variable by one or more continuous or binary independent variables. Discriminant function has been used in previous researches to understand the risk profile of different variables. In this research the purpose of the discriminant analysis is to provide the benchmark for the Shari’ah compliance level in the Shari’ah complaint stocks. This benchmark will then be used to back test the level of compliance in the compliant stock. The original discriminant function equation is modified to fit in the Shari’ah stocks screening methodologies for this research. The financial ratio analysis
will be conducted using the Z score equations which are based on the discriminant analysis function.

The flow chart for the conceptual framework is as following:

![Flow Chart for the Conceptual framework](image)

2.1 **Quantitative Variables (Financial Ratios)**

The quantitative screening (Financial ratio) process of the Shari’ah stocks screening is further in two tiers.

1. Financial ratio analysis
2. 5% non-halal income analysis

The traditional equation of discriminant analysis function i.e. Z equation is

\[ Z = W_1X_1 + W_2X_2 + W_3X_3 + \ldots + W_nX_n \]

Where:

- \( Z \) = discriminant score for the stock
As for this research, quantitative analysis has two tiers therefore the Z score equation will be used twice i.e. (1) financial ratios and (2) 5% non-halal income analysis. This modification is encouraged by the previous researches such as Altman (2000) and the multiple discriminant analysis for the industrial bond rating. Pinches and Mingo (1973) Therefore, the equations for this will be:

\[ Z_1 = W_1X_1 + W_2X_2 + W_3X_3 + \ldots + W_nX_n \]
\[ Z_2 = V_1Y_1 + V_2Y_2 + V_3Y_3 + \ldots + V_nY_n \]

Where:
- \( Z_1 \) = discriminant score for the financial ratios (independent variable)
- \( W \) = discriminant weight of the financial ratios (dependent variable)
- \( X \) = independent ratios (dependent variable)
- \( Z_2 \) = discriminant score for the tint income variable (independent variable)
- \( V \) = discriminant weight of the tint income variables (dependent variable)
- \( X \) = independent tint income variables (dependent variable)

Both \( Z_1 \) and \( Z_2 \) will perform the analysis separately based on the characteristics of their respective dependent and independent variable. The score will also be different as financial ratios (\( Z_1 \) Analysis) have different level of acceptance in different Shari’ah stocks screening methodologies.

### 2.1.1 Attributes of Variables

The dependent variables of financial ratios included in \( Z_1 \) are as follows:

1. \( X_1 \) = Total debt/ (total assets OR 24-month Market value of stocks OR 36 months market value of stocks)
2. \( X_2 \) = Cash+ short term investment+ other investment/ (total assets OR 24-month Market value of stocks OR 36 months’ market value of stocks)
3. \( X_3 \) = Net receivables/ (24-month Market value of stocks OR 36 months’ market value of stocks). OR (Net receivables+ cash/total assets)

The independent variable for \( Z_2 \) in this research includes:

1. Non-operating interest income/operating income

Table 2 Weightage percentiles of the dependent variables of \( Z_1 \)
The discriminant score is developed by placing the maximum values of the threshold allowed in the variables according to the screening methodology. As illustrated in table 3.5, the total discriminant score for DJ is 32.967. This score represents the maximum value of the Z1 under which the stock remains Shari’ah compliant in DJ Shari’ah screening methodology using the discriminant analysis, if the score of Z1 under DJ become 33 then the variables has exceeded the allowed threshold and the stock become non Shari’ah compliant.

The discriminant score for 5% non-halal income or Z2 is developed with the same principle, the maximum value for the non-operating interest income/total income is included in the Z2 equation. The total score is 4.98 i.e. the maximum value of Z2 under which the stock remains Shari’ah compliant. The total score is divided by 3 to formulated three categories/level of the Shari’ah compliant. 1/3 is the Green Shari’ah compliant i.e. Highly Shari’ah compliant. 2/3 is the yellow Shari’ah compliant i.e. intermediate Shari’ah compliant and finally greater than 2/3 represent Red Shari’ah complaint i.e. Substantial risk Shari’ah compliant.

The total discriminant score is divided by 3 and every 1/3 is categorized as the Shari’ah compliance level of the stock. The 1/3 is the Green Shari’ah compliant i.e. Highly Shari’ah compliant. 2/3 is the yellow Shari’ah compliant i.e. intermediate Shari’ah compliant and finally greater than 2/3 represent Red Shari’ah complaint i.e. Substantial risk Shari’ah compliant.

![Table 3 Discriminant score for Z1](image)

The discriminant score for 5% non-halal income or Z2 is developed with the same principle, the maximum value for the non-operating interest income/total income is included in the Z2 equation. The total score is 4.98 i.e. the maximum value of Z2 under which the stock remains Shari’ah compliant. The total score is divided by 3 to formulated three categories/level of the Shari’ah compliance. 1/3 or less than 1.66 is green Shari’ah compliant i.e. high Shari’ah compliant, 2/3 or >1.66 but <3.32 is yellow Shari’ah compliant i.e. intermediate and greater than 3.32 is Red Shari’ah compliant i.e. Substantial risk Shari’ah compliant as illustrated in the table 3.6.
### Table 4 Discriminant Score for Z2

<table>
<thead>
<tr>
<th></th>
<th>GREEN</th>
<th>YELLOW</th>
<th>RED</th>
<th>TOTAL SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DJ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S&amp;P</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FTSE</td>
<td>&lt;1.66</td>
<td></td>
<td>&gt;1.66</td>
<td>&gt;3.32</td>
</tr>
<tr>
<td>MSCI</td>
<td></td>
<td>&gt;1.66&lt;3.32</td>
<td>&gt;3.32</td>
<td>4.98</td>
</tr>
<tr>
<td>AAOIFI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2.1.2 Shari’ah Compliance Categories/Level (Financial Ratios and 5% Non-Halal Income)

1. **GREEN**
   
   Green represent the stocks which are in safe zone of the Shari’ah compliance. Green range stocks are more Shari’ah compliant according to their financial ratio or 5% non halal income analysis and investor/fund managers are encouraged to invest in these stocks.

2. **YELLOW**
   
   Yellow represents the stock which is in intermediate zone and is either going to the danger zone or has been there (based on the historical data analysis) for a while. This level is a caution zone for the investors to keep the stock under observation.

3. **RED**
   
   The red range represents that the stock is close to be non-compliance and there is a high probability that it will cross to the non-compliance zone in future. The red range represent the critical level of the Shari’ah compliance for the stocks and the fund managers are encouraged to avoid investing in such stocks for long term i.e. more than one financial year, and if the stock is already in the portfolio then fund managers are encouraged to replace them with high Shari’ah compliance stock i.e. green range stock.

   The score is derived from the threshold allowed in stock screening methodology. The green, yellow and red ranges are 1/3, 2/3, higher than 2/3 of the total score of the methodology. The green, yellow and red range can be re designed according to the fund managers own risk appetite. In this research, we calculate this score by simple formula of dividing the allowed percentage of the individual ratio by 3. Everyone zone is 1/3 of the allowed percentage of the ratio based on the methodology.

### 3. Analysis and Discussion

The analysis includes the financial data from 2010 to 2016. The historical discriminant analysis will provide the detailed information about the Shari’ah compliance of the selected stocks over the year under all 5 global Shari’ah stocks screening methodologies. This analysis will highlight the Shari’ah compliance behaviour of the
stocks over the years under different Shari‘ah screening methodologies. The result of the analysis will categorize stocks in green, yellow and red Shari‘ah compliant range and the optimal (best) Shari‘ah compliant stocks and the least Shari‘ah compliant stocks in every year.

These historical discriminant analysis results can help investor/fund manager to understand the Shari‘ah compliance level of the stock and to develop a forecasting tool for the Shari‘ah compliance of the stocks.

The historical Z1 analysis include the discriminant financial ratio analysis for all 5 global Shari‘ah stocks screening methodologies for the year 2010, 2011, 2012, 2013, 2014, 2015 and 2016. The analysis will discuss the variation in the overall Shari‘ah compliance level of the stocks over the years for all the 5 global stocks screening methodologies. The historical discriminant analysis provides the insights on the working of the Shari‘ah screening methodologies and the comparison of the stocks Shari‘ah compliance behaviour in different methodologies in same year. The historical discriminant analysis highlights the different effects of screening methodology on the stocks and how the methodologies are different for each other. The analysis also provides the bird eye view of the screening methodology as to which global Shari‘ah screening methodology is stringent and which one is lenient in Shari‘ah screening the stocks.

3.1 Dow Jones (DJ)

The overall results of the Dow Jones Shari‘ah stocks screening methodology from the year 2010 to 2016 is presented in figure 5.1 and table 5.1 below.

Table 5 Historical Z1 discriminant analysis results for Dow Jones methodology

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>824</td>
<td>911</td>
<td>891</td>
<td>873</td>
<td>1053</td>
<td>853</td>
<td>723</td>
</tr>
<tr>
<td>Yellow</td>
<td>360</td>
<td>353</td>
<td>399</td>
<td>433</td>
<td>234</td>
<td>330</td>
<td>332</td>
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<tr>
<td>Red</td>
<td>163</td>
<td>99</td>
<td>73</td>
<td>49</td>
<td>35</td>
<td>100</td>
<td>156</td>
</tr>
<tr>
<td>N/A</td>
<td>95</td>
<td>76</td>
<td>76</td>
<td>84</td>
<td>117</td>
<td>156</td>
<td>228</td>
</tr>
</tbody>
</table>

![DJ historical chart]

 repaint: green, yellow, red, N/A
3.2. S&P

The overall discriminant analysis results of the Standard & Poor Shari’ah stocks screening methodology is presented in table 5.2 and the figure 5.2 below.

Table 6 Historical Z1 analysis results for S&P methodology

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Green</td>
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<td>920</td>
<td>956</td>
<td>1087</td>
<td>872</td>
<td>771</td>
</tr>
<tr>
<td>Yellow</td>
<td>343</td>
<td>333</td>
<td>385</td>
<td>360</td>
<td>207</td>
<td>317</td>
<td>313</td>
</tr>
<tr>
<td>Red</td>
<td>120</td>
<td>79</td>
<td>59</td>
<td>40</td>
<td>29</td>
<td>96</td>
<td>127</td>
</tr>
<tr>
<td>N/A</td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>83</td>
<td>116</td>
<td>154</td>
<td>228</td>
</tr>
</tbody>
</table>

Figure 4 Historical Z1 analysis result chart for S&P methodology

The S&P Shari’ah stocks screening methodology remained stable and more stocks become green/high Shari’ah compliant over the years. Like DJ Shari’ah stocks screening methodology, S&P also seen a sudden increase in green range stocks in 2012.

3.3 FTSE

The overall result of the FTSE Shari’ah stocks screening methodology is presented in the table 5.3 and the figure 5.3 below.

Table 7 Historical Z1 analysis results for FTSE methodology

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>444</td>
<td>422</td>
<td>469</td>
<td>538</td>
<td>330</td>
<td>404</td>
<td>394</td>
</tr>
<tr>
<td>Yellow</td>
<td>794</td>
<td>769</td>
<td>754</td>
<td>737</td>
<td>502</td>
<td>685</td>
<td>692</td>
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<tr>
<td>Red</td>
<td>143</td>
<td>108</td>
<td>79</td>
<td>37</td>
<td>54</td>
<td>138</td>
<td>186</td>
</tr>
<tr>
<td>N/A</td>
<td>61</td>
<td>140</td>
<td>137</td>
<td>127</td>
<td>553</td>
<td>212</td>
<td>167</td>
</tr>
</tbody>
</table>
The discriminant analysis for the FTSE Shari’ah stocks screening methodology over the years suggest that the methodology is strict on the Shariah compliance status of the stocks. Based on the historical discriminant analysis results trend, majority of the stocks were placed in yellow or intermediate Shariah compliance range.

3.4 MSCI

The overall analysis results for the MSCI Shari’ah stocks screening methodology is presented in the table 5.4 and the figure 5.4 below.

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>309</td>
<td>297</td>
<td>329</td>
<td>353</td>
<td>244</td>
<td>285</td>
<td>283</td>
</tr>
<tr>
<td>Yellow</td>
<td>808</td>
<td>765</td>
<td>804</td>
<td>847</td>
<td>527</td>
<td>705</td>
<td>686</td>
</tr>
<tr>
<td>Red</td>
<td>264</td>
<td>237</td>
<td>169</td>
<td>112</td>
<td>115</td>
<td>237</td>
<td>303</td>
</tr>
<tr>
<td>N/A</td>
<td>61</td>
<td>140</td>
<td>137</td>
<td>127</td>
<td>553</td>
<td>212</td>
<td>167</td>
</tr>
</tbody>
</table>

The discriminant analysis for the MSCI Shari’ah stocks screening methodology over the years suggest that the methodology is also strict on the Shariah compliance status of the stocks like FTSE. Based on the historical discriminant analysis results trend, majority of the stocks were placed in yellow or intermediate Shariah compliance range and the methodology is stable in yellow range.

3.5 AAOIFI

The overall analysis results for the AAOIFI Shari’ah stocks screening methodology is presented in the table 5.5 and the figure 5.5 below.
Table 9 Historical Z1 analysis results for AAOIFI methodology

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>741</td>
<td>408</td>
<td>453</td>
<td>527</td>
<td>366</td>
<td>461</td>
<td>476</td>
</tr>
<tr>
<td>Yellow</td>
<td>428</td>
<td>580</td>
<td>606</td>
<td>610</td>
<td>412</td>
<td>561</td>
<td>572</td>
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<tr>
<td>Red</td>
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<td>306</td>
<td>239</td>
<td>171</td>
<td>106</td>
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<td>220</td>
</tr>
<tr>
<td>N/A</td>
<td>126</td>
<td>145</td>
<td>141</td>
<td>131</td>
<td>555</td>
<td>218</td>
<td>171</td>
</tr>
</tbody>
</table>

Figure 7 Historical Z1 analysis result chart for AAOIFI methodology

The discriminant analysis for the AAOIFI Shari’ah stocks screening methodology over the years suggest that the methodology is flexible on the Shariah compliance status of the stocks. Based on the historical discriminant analysis results trend, majority of the stocks were changing the range frequently.

S&P, Dow Jones and AAOIFI Shari’ah screening methodology are more Shari’ah compliance friendly and have highest number of stocks in green Shari’ah compliance range respectively. S&P and DJ both use market capitalization as denominator where as AAOIFI partially use market capitalization and total assets.

MSCI Shari’ah stocks screening methodology is strict on the Shari’ah compliance and majority of the stocks screened under MSCI are yellow and red Shari’ah compliant. FTSE followed MSCI on the strictness on the Shari’ah compliance based on the results from both 2016/2017 and historical data analysis.

3.6 Historical Z2 Analysis Results and Discussion

Table 10 Historical Z2 analysis results

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Green</td>
<td>1295</td>
<td>1253</td>
<td>1261</td>
<td>1260</td>
<td>833</td>
<td>1164</td>
<td>1205</td>
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<td>21</td>
<td>24</td>
<td>21</td>
<td>21</td>
<td>30</td>
</tr>
<tr>
<td>N/A</td>
<td>78</td>
<td>137</td>
<td>131</td>
<td>135</td>
<td>560</td>
<td>226</td>
<td>179</td>
</tr>
</tbody>
</table>
The Z2 or 5% non-halal income analysis have same variables for all the 5 global Shari’ah stocks screening methodology therefore the results of Z2 is same for all 5 methodologies for the year.

The Z2 analysis results represents the stability in Shari’ah stocks screening methodologies and an assurance to the investors/fund managers that stocks with high market capitalization and stocks which are Shari’ah compliant according to all 5 global stocks screening methodologies have very historical probability to become non-compliant from 5% non-halal income analysis.

### 3.7 High Shari’ah Compliant and Least Shari’ah Compliant Stocks

The highly Shari’ah compliant stocks are stocks which are in green range for both Z1 and Z2 discriminant analysis. The green range represent the good/high level of Shari’ah compliance and have less probability to become non-compliant in next financial year.

The least Shari’ah compliant stocks are the ones which are in red range for both Z1 and Z2 analysis and have high probability to become non-compliant in future. These stocks are high risk stocks in terms of Shari’ah non-compliance risk. Red range represent the stocks which are least Shari’ah compliant and have the strong probability to become non-compliant in next financial year.

#### Table 11 Historical High Shariah compliant stocks in Shariah Stocks Screening Methodologies

<table>
<thead>
<tr>
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<th></th>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>DJ</td>
<td>606</td>
<td>663</td>
<td>536</td>
<td>766</td>
<td>787</td>
<td>799</td>
<td>768</td>
</tr>
<tr>
<td>S&amp;P</td>
<td>653</td>
<td>685</td>
<td>566</td>
<td>846</td>
<td>816</td>
<td>840</td>
<td>844</td>
</tr>
<tr>
<td>FTSE</td>
<td>360</td>
<td>379</td>
<td>309</td>
<td>505</td>
<td>447</td>
<td>405</td>
<td>408</td>
</tr>
<tr>
<td>MSCI</td>
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<td>260</td>
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<td>283</td>
<td>277</td>
</tr>
<tr>
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<td>345</td>
<td>497</td>
<td>433</td>
<td>389</td>
<td>670</td>
</tr>
</tbody>
</table>

#### Table 12 Historical Least Shariah compliant stocks in Shariah Stocks Screening Methodologies
<table>
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<tr>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DJ</td>
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<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>S&amp;P</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
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<td>2</td>
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<td>7</td>
</tr>
<tr>
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<td>12</td>
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<td>5</td>
<td>3</td>
<td>6</td>
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<td>10</td>
</tr>
<tr>
<td>AAOIFI</td>
<td>11</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>7</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

Based on the results of the optimal and least Shari’ah compliant stocks for the sample 1440 stocks and for 7 years starting from 2010 to 2016, the Standard & Poor (S&P) Shari’ah stocks screening methodology is more robust and provide investors/fund managers with more options to select from the optimal stocks and have less number of least Shari’ah compliant stocks.

4. Limitations of The Research

1. The sample for the research i.e. 1440 global stocks are high market capitalization stocks and are therefore more stable then mid-level market capitalization or low-level market capitalization.

2. The Z2 analysis i.e. 5% non-halal income analysis include variables such as interest income, income from alcohol products, income from pork-based products. But due to the disclosure requirements in different jurisdictions the data for these variables is not available on the public sources such as Bloomberg, therefore the research used the same variables for 5% non-halal income as used in Amanie Screening System which is endorsed by the Shari’ah board of Amanie Group, using the public data portals i.e. none operating interest income/Total Income.

5. Policy Recommendations

1. Shari’ah governance elements and need a Shari’ah governance tool which not only provide the compliance and non-compliance status for the stock but also give the detailed information about the Shari’ah compliance level of the stocks. The model developed and tested in this research can be a benchmark for Shari’ah governance in Islamic capital market.

2. The market capitalization as a denominator for the Shari’ah stocks screening is not stable as seen in the historical result analysis for green level complaint stocks in year 2012 for Dow Jones and Standard and poor, more stocks become Shari’ah compliant because of the fluctuations in the market capitalization. Indices using total assets for the denominators did not show the same change for sudden increase in green level stocks for 2012. This represents that without any effort from the companies and because of the change in the market capitalization stocks become more compliant.
which does not represent the essence of Shari’ah. Therefore, total assets or other variables should be encouraged to use as a denominator.

3. S&P, Dow Jones and AAOIFI Shari’ah screening methodology are more Shari’ah compliance friendly and have the highest number of stocks in green Shari’ah compliance range respectively. S&P and DJ both using market capitalization as denominator whereas AAOIFI partially use market capitalization and total assets.

4. MSCI Shari’ah stocks screening methodology is strict on the Shari’ah compliance and majority of the stocks screened under MSCI are yellow and red Shari’ah compliant. FTSE followed MSCI on the strictness on the Shari’ah compliance based on the results from the historical data analysis.

5. There is a need for comprehensive Shari’ah governance framework for the capital market but due to the nature of the business of capital markets it cannot have a Shari’ah governance framework like Islamic banks. Therefore, the Shari’ah governance framework for Islamic capital market should be market regulated rather institutional. The Shari’ah governance framework for Islamic capital market will ensure the transparency in Islamic capital market instruments regarding the Shari’ah compliance.

6. The Shari’ah governance framework for Islamic capital market should be based on the market data and continuous evaluation of the data. The research provides discriminant analysis to be one of the tools to assess the Shari’ah compliance of the Islamic capital market instruments. The discriminant analysis can be further modified to provide the continuous Shari’ah compliance evaluation of products like sukuk and Islamic derivatives.

6. Conclusion

The Shari’ah compliance discriminant score allow the fund managers/investors to categorize compliant stocks in different level based on their Shari’ah compliance, this bring robustness to the current stocks screening methodologies and allow the fund managers to not only select the complaint stocks but to select best compliant stocks. The discriminant score can be adjusted using the profile of the investor i.e. risk averse or risk taker.

The proposed enhanced model for Shari’ah stocks screening methodologies provide new information set for the stocks such as level of compliance and the probability of stock becoming non-compliant. When the analysis is conducted on the historical data of the stock it provide details of the historical compliance level of the stock such as compliance level of stocks over the years which enable the Islamic fund manager/investor to forecast the Shari’ah compliance of the stocks based on historical trends i.e. stock becoming more compliant, becoming more non-compliant or static over the years. The analysis results also compare different methodologies and present the effects of different methodologies on the Shari’ah compliance level of the stocks.
S&P, Dow Jones and AAOIFI Shari’ah screening methodology are more Shari’ah compliance friendly and have the highest number of stocks in green Shari’ah compliance range respectively. S&P and DJ both using market capitalization as denominator whereas AAOIFI partially use market capitalization and total assets.

MSCI Shari’ah stocks screening methodology is strict on the Shari’ah compliance and majority of the stocks screened under MSCI are yellow and red Shari’ah compliant. FTSE followed MSCI on the strictness on the Shari’ah compliance based on the results from both 2016/2017 and historical data analysis.

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Factors Influencing the Adoption of Islamic Banking of Pakistan

By
Kashif Abbass, Hua-Ming Song, Arsalan Tanveer
Muhammad Zeeshan & Shazia Shaheen Shaikh

Abstract:
The purpose of the study is to determine the factors that are influencing the adoption of Islamic banking. To determine the factors that are influencing the adoption of Islamic banking amongst the 150 employees of the middle management were taken as a sample of the total population of the department. A convenience sampling technique is used for data collected from the banks, five point Likert scale were used to get the response from employees, and all the questions are close ended. The data are analysed by applying co-relation, regression and descriptive analysis to find the result of variables (Religious Motives, Financial, Teaching of Islam, Reputation, Convenience and Responsiveness) by using SPSS (24.0). The results of the study show that all variables are significant and all the variables influence the customers while the adoption of Islamic banking.

Keywords: Adoption of Islamic Banking, Religious Motives, Financial teaching of Islam, Reputation, Responsiveness, convenience

1. INTRODUCTION

The Banking industry has become most significant factor for the development of the economy of a country. The Banking sector is playing a significant role in the
economic development, financial stability and social wellbeing of an economy. The main purpose of conducting this research is to find out major factors contributing to adoption of Islamic Banking and to recognize those factors that need more consideration to develop Islamic Banking Industry in Pakistan economy. Now a days lot’s of Islamic banks are working in Pakistan banking system like Meezan bank, Dubai Islamic Bank, ALbarka Bank, Bank Islami etc which are working on the base of Islamic grounds. As per evaluation of June 2018, the Number of Islamic banking working in Pakistan are 2685 which are providing services in different districts of Pakistan. This study intends to examine the preferences of general people of Pakistan regarding the adoption of Islamic Banking irrespective of the fact that they have accounts with Islamic/conventional Banks or not. Moreover, this study will help to rank the variables in order of their importance in adopting Islamic Banks as per the current and potential customers’ preferences (A.Bashiret al., 2014). In Pakistan, the banking sector is improving service quality dimensions with an active participation of local and foreign stakeholders (Awan et al., 2011).

Banking environment is significantly affected by technological, structural and regulatory factors throughout the world. Banking has integrated globally by implementing regulatory changes (Angur et al., 1999). Banks can perform a wide range of activities by implementing structural changes to become more competitive in the financial market. In recent times, banks are involved to provide quality services by using technological changes in the environment. These rapid changes allow the banking sector to improve service quality and customer satisfaction (Angur et al., 1999; Arasli et al., 2005; Herington & Weaven, 2007; Metawa & Al-Mossawi, 1998; Newman & Cowling, 1996; Raza et al., 2015). Previously, many studies have been conducted in the context of service quality and customer satisfaction (Ahmed et al., 2010; Arasli et al., 2005; Caruana et. al., 2000; Newman & Cowling, 1996). The goal of the banking system is to improve Social Welfare of individuals, utilization of resources, providing employment opportunities, increasing prosperity, and increased per capita income of individuals by providing savings and investment opportunities to individuals in the country. After the industrial revolution of the 18th century, the banking sector has become an important economic development indicator. Banks are providing their products and services to customers in global boundaries by the customers’ oriented operations. The Islamic banking system is one of the important sectors in the banking industry, which is contributing to the development of the economy of a country. The Islamic banking system is growing all around the world and contributing a lot in the society. Islamic banks, Islamic micro finance banks and Islamic financial institution are developing in Muslim countries and they are also developing in non-Muslim countries and worldwide. The Islamic banking system is developing specially in Middle East and South Asian countries. A number of Islamic banks, and Islamic Micro Finance banks have been established in international boundaries. There are many International Islamic banks in non-Muslim countries like Europe, the United State of America and United Kingdom. Individuals in non-Muslim countries are also accepting some Islamic financial Instruments. These Islamic banks are appealing individuals, investors, and financier who
favor Islamic financial instruments, like Murabaha, Mudaraba, Istasna, Musharaka, Ijara, and Takaful. The Islamic banking system is growing in those countries where the majority of the population is Muslim. It is also growing in other nations where the populations of Muslims are in the minority, such as China, and United Kingdom. The major difference between the conventional banking system and Islamic banking system is only in the terms of objectives, interest based transactions, risk sharing between bank and customers and some other factors. Islamic banks follow the Shariah and true teaching of Islam and interest free transactions. The Islamic banking system follows the Shariah, Shariah is an Islamic law, rules, regulations, guidelines, philosophies and principles which have been employed from the Holly Qurran, Sunna of Prophet Muhammad (Peace Be upon Him) and Fiqh. The first Islamic bank was established in 1963 in Egypt. This first Islamic bank was established in the name of Mit Ghamr Local Savings Bank. This bank was first initiated steps in the field of Islamic banking industry. This Islamic bank covered the area of finance, insurance, mortgage, and asset management. The annual growth rate of this bank was 10% to 15%. The real development in the Islamic banking industry was started 1970 when Dubai Islamic Bank established in 1975. The Dubai Islamic bank is also known as a world first Islamic bank in the Islamic banking industry. The Dubai Islamic bank started new investment opportunities and techniques to individuals, investors and financiers. On 14 August 1947, a new Islamic country came into existence in the world map name as Islamic Republic of Pakistan. It came into existence due to fulfil the religious, social, cultural and economic needs of Muslims. When Pakistan came into existence, the banking sector of Pakistan faced many crises and constraints. The banking sector of Pakistan grew more after financial liberations. The Islamic banking system is growing worldwide; it is also growing and developing in Pakistan.

2. THEORETICAL FRAMEWORK

Adoption of Islamic Banking is a dependent variable in this study. In this study, five variables are considered as independent variable that may influence the customers in the adoption of Islamic banking. Religious motives, financial teaching of Islam, reputation, convenience, and Responsiveness are considered as independent variable in this study. In this study, independent variables have been selected from:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious Motives</td>
<td>Awan and Bukhari (2011)</td>
</tr>
<tr>
<td>Convenience</td>
<td>Ramadan (2013)</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>Awan and Bukhari (2011)</td>
</tr>
</tbody>
</table>
2.1 RELIGIOUS MOTIVES

Religion is the combination of norms, values, and culture. Islam is the finest religion in the world. Islam is a complete code of life for every Muslim. Religion influences its followers in everyday life. Most of the decisions of the followers are based on the religious motives, either’s they should do this or not. Religion answers these questions. 97% of the populations are Muslim in Pakistan and they follow the true teaching of Prophet Muhammad (Peace Be upon Him). The Muslims follow the Shariah laws, rules, regulation and principles. The previous studies show that religious motives are a significant factor in the adoption of Islamic banking. Walkhid and Afrita (2007) stated that religion is an important factor in the adoption of Islamic banking. Metawa and Almossawi (1998) founded that religion is a significant factor that influence the customers in the adoption of Islamic banking. Khattak and Rehman (2010) also found that religion is the most significant factor that affect the customers while selecting a bank. Omer (1992), Dusuki and Abdullah (2007) and Hassan et al. (2012) also concluded that religion is the most significant factor that influence the customers while selecting a bank.

2.2 FINANCIAL TEACHING OF ISLAM

Muslims follow the true teaching of Prophet Hazarat Muhammad (Peace Be upon Him). As described that Islam is a complete code of life and it guides in every field of life. Islam also discusses the way of financing and investment. These financial teachings can be obtained from the life of Prophet Muhammad (Peace Be upon Him). Mudarabah, Musharakah, Ijara, and Murabaha are ways of Islamic finance. In Pakistan, Shariah Board plays an important role for the financial moods and guidelines to banks while developing a new product. Muslims have knowledge about the financial teaching of Islam. They know interest in not allowed in Islamic economies. Islamic economies follows the Shariah rules, regulations, and principles. Islamic banks are formulating their product on the basis of financial teaching of Islam. Previous studies show that financial teaching of Islam is an important factor that influence the customers while the adoption of Islamic banking. Hamid and Nordin (2001) found that financial teaching of Islam is the most significant factors in the adoption of Islamic banking. Marimuthu (2010) found that most of the customers have knowledge of financial teaching of Islam and they adopt a bank on this basis. Financial teaching of Islam is considered as an important influencing factor in the adoption of Islamic banking. Customers have appropriate knowledge of finance regarding to Islam. Islamic banks are providing financial teaching of Islam to its customers. So financial teaching of Islam be a significant factor in the adoption of Islamic banking.

2.3 REPUTATION

Reputation is a good will or an image of a person, brand, or anything. Most of the people focus on goodwill or image of a brand, product, or service. Their decision is based
on the reputation, good will or image of the product, brand and service. In banking, most of the customers select a bank on the basis of reputation of the bank. Islamic banks have a good image in the eye of customers and customers adopt Islamic banks on the basis of one factor that reputation. The previous studies shows that reputation is an important factor that influences the customers while selecting a bank. The result of the most studies shows that reputation has an influence on customers and they choose a bank due to reputation. Sudin, et al., (1994) found that reputation is the significant factor in the adoption of Islamic banking. Marimuthu, et al., (2010) also found that most of the customers select an Islamic bank on the basis of reputation. In this study, the reputation of the Islamic banks is also considered as an important factor that influences the customers in the adoption of Islamic banking. Customers select an Islamic bank due to good brand image, reputation and good will of the bank’s reputation may a significant factor in the adoption of Islamic banking.

2.4 CONVENIENCE

Customers select a bank on the base of convenient location. Most of the banks are located in a convenient location and customers choose these banks due convenient location of banks. The previous study on conventional banking shows that convenience is an important factor that influences the customers while selecting a bank. In Islamic banking, this is the first study in which convenience is taken as independent variable. Although in conventional banking, there is a lot of study on customers’ bank selection criteria and these studies shows that convenience is a significant factor. Rao and Sharma (2010) investigated that convenience is a significant factor that influence the customers in the adoption of banking. In this study, convenience is also considered as an important influencing factor in the adoption of Islamic banking. Customers select a bank that is near to their homes and offices. So convenience be a significant factor in the adoption of Islamic banking.

2.5 RESPONSIVENES

Responsiveness of the bank staff are an important factor in the adoption of Islamic banking. Polite, courteous and cooperative bank staff influences the customers in the adoption of Islamic banking. The staff of Islamic banks gives importance to each customer and gives response at the time to every customer. The employees of Islamic banks give the reorganization to each customer as a valued customer. Previous studies on the Islamic banking stated that responsiveness is the significant factor in the adoption of Islamic banking. Ramadan (2013) stated that responsiveness is the significant factor in the adoption of Islamic banking. Al-Ajmi, Al-Saleh and Hussain (2009) founded that friendly bank staff is the significant factor that influence the customers while selecting a bank. Most of the customers select an Islamic bank due to the responsiveness of bank staff. Customers give high rank to responsiveness while selecting a bank. So responsiveness may be a significant factor in the adoption of Islamic banking.
3. STRUCTURAL MODEL AND RESEARCH HYPOTHESES

A conceptual framework is developed to create a relationship between dependent and independent variable. It provides help for better understanding the relation among the variable. In this study, Researcher has assumed following model.

![Figure 2. Framework](image)

**EXPECTED EFFECTS OF RESEARCH CONSTRUCT**

3.1 Research Hypothesis

H1: Religious Motive has a significant influence on the adoption of Islamic Banking.

H2: Awareness and financial teaching of Islam has a significant influence on the adoption of Islamic Banking.

H3: Reputation has a significant influence on the adoption of Islamic banking.

H4: Convenience has a significant influence on the adoption of Islamic banking.

H5: Responsiveness have a significant influence on the adoption of Islamic banking.

4. METHODOLOGY

This study is based on exploratory research at the initial stage to achieve the background research problem and to investigate the past research hypotheses (Churchill, 1995). Finally, the results of the research identified the variables & formulated hypotheses based on previous empirical studies. The next step is to design the descriptive research to find the characteristics of respondent’s exact percentage, validity, means, and standard deviation of latent variables. In addition, this kind of study will never show the relationship among the variables (Zikmund, 2000), this explanatory study explains the association between constructs of research. In order to test the hypothesized model (Figure 2), a quantitative, cross-sectional field survey approach was employed to collect the data from the target participants. A survey approach helps to obtain the perceptions of a large number of potential users. In addition, this approach has also been widely used in earlier work (Abbasi et al., 2011; Alsajjan & Dennis, 2010; Venkatesh & Bala, 2008; Venkatesh et al., 2003). The survey questionnaire was designed using existing scales in the literature. To minimize the possibility of sampling bias, the authors approached participants in diverse locations. The data for this research were gathered randomly from
potential participants at different branches of the Islamic banks of Pakistan. For the collection of primary data, structured questionnaires were used. The questionnaire was divided into two sections: The first section of the questionnaire is based on demographics information of the respondent i.e. (gender, age, education, and income). The second section of the questionnaire is based on the dependent variable of the study (Adoption to Islamic banking) and independents variables that are Religious Motives, Financial Teaching of Islam, Reputation, Convenience, and Responsiveness. The research instrument is contained five independent and one dependent variable and it contains 31 questions. Respondents of the study were asked to rate their opinion on a five point Likert scale, 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 to agree, and 5 for strongly agree. A pilot survey was conducted before the actual survey was conducted. Pilot survey was conducted to check the respondent’s acceptance the questionnaire and wording of the questionnaire. Positive responses were received from the respondent while conducting the pilot survey. They understood questionnaire and wording of questionnaire easily. After pilot survey, actual data collection was started.

5. SAMPLING TECHNIQUE

Tabachnik and Fidell (2001, p. 117) suggested the following formula to compute sample size.

\[
N \geq 50 + 8m \\
N \geq 50 + 8(5) \\
N \geq 90
\]

In this study, the sample size was 150 respondents. A convenience sampling techniques were used to collect the data from respondents. The questionnaire was surveyed from the employees of Islamic bank of Pakistan. 150 questionnaires were distributed among the respondent and 142 questionnaires were received back. The overall response rate of the respondent is 94.67%. After the collection of the data from the respondents, the data were coded in SPSS (16) and analysed by using correlation and regression techniques.

<table>
<thead>
<tr>
<th>Names Of Banks</th>
<th>No of Questionnaire Distributed Among the Banks of Pakistan</th>
<th>Questionnaire Obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meezan Bank</td>
<td>30</td>
<td>28</td>
</tr>
<tr>
<td>Bank Islami</td>
<td>30</td>
<td>27</td>
</tr>
<tr>
<td>Dubai Islamic</td>
<td>30</td>
<td>29</td>
</tr>
<tr>
<td>Bank Al-Baraka</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Other</td>
<td>30</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>142</td>
</tr>
</tbody>
</table>
This table shows the information about the bank of respondents. 19 respondents have bank account in Meezan bank and they are 13.4% of total respondents. 71 respondents have bank account in conventional banks like HBL, UBL and MCB.

### 5.1 RELIABILITY ANALYSIS

Cronbach’s Alpha test measure the overall internal reliability of the instrument. To check the overall internal reliability of the instrument, the Cronbach alpha test was applied to the data. The value of Cronbach’s Alpha is 0.860. This computed value of Cronbach’s Alpha is above the standard value which is proposed by Nummally (1978), the standard value of Cronbach’s Alpha is 0.70. This computed value of Cronbach’s Alpha shows that the instrument is reliable.

### 5.2 PEARSON CORRELATION

The Pearson Correlation test was applied to the data to find out the relationship between dependent and independent variables. The summarized results of Pearson correlation are given below.

**Table 3. Adoption To Islamic Banking And Religious Motive**

<table>
<thead>
<tr>
<th>Adoption to Islamic Banking</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>142</td>
<td>.020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religious Motives</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>142</td>
<td>.020</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed).

This table shows that there is a weak but positive relation between adoption to Islamic Banking and religious motives. The computed value of Pearson correlation between adoption to Islamic banking and religious motives is 0.195 and sig. value is 0.20. r (142) = .195, p = .000. p value is less than alpha so it is statistically significant.
Table 4. Adoption to Islamic Banking and financial teaching of Islam

<table>
<thead>
<tr>
<th></th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption to Islamic</td>
<td></td>
<td>.404**</td>
<td>142</td>
</tr>
<tr>
<td>Banking</td>
<td></td>
<td>.000</td>
<td>142</td>
</tr>
<tr>
<td>Financial Teaching</td>
<td>.404**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>of Islam</td>
<td>.000</td>
<td>142</td>
<td></td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

According to the table, there is a positive, but a moderate relationship between Adoption to Islamic Banking and financial teaching of Islam. The computed value of the Pearson correlation between the adoption to Islamic banking and financial teaching of Islam is 0.404 and sig. value is 0.00. $r (142) = .404, p = .000$, p value is less than alpha so it is statistically significant.

Table 5. Adoption to Islamic Banking and Reputation

<table>
<thead>
<tr>
<th></th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption to Islamic</td>
<td></td>
<td>.415**</td>
<td>142</td>
</tr>
<tr>
<td>Banking</td>
<td></td>
<td>.000</td>
<td>142</td>
</tr>
<tr>
<td>Reputation</td>
<td>.415**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.000</td>
<td>142</td>
<td></td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

The analysis of the above table shows that there is a positive but moderate relationship between Adoption to Islamic Banking and Reputation. The computed value of the Pearson correlation between adoption to Islamic banking and reputation is 0.415 and sig. value is 0.00. $r (142) = .415, p = .000$, p value is less than alpha so it is statistically significant.

Table 6. Adoption to Islamic Banking and Convenience

<table>
<thead>
<tr>
<th></th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption to Islamic</td>
<td></td>
<td>.308**</td>
<td>142</td>
</tr>
<tr>
<td>Banking</td>
<td></td>
<td>.000</td>
<td>142</td>
</tr>
<tr>
<td>Convenience</td>
<td>.308**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.000</td>
<td>142</td>
<td></td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
Table shows that there is positive but weak relationship between Adoption to Islamic Banking and convenience. The computed value of Pearson correlation between adoption to Islamic banking and convenience is 0.308 and sig. value is 0.00. \( r (142) = .308, p = .000 \). p value is less than alpha so it is statistically significant.

### Table 7. Adoption to Islamic Banking Correlation and Responsiveness

<table>
<thead>
<tr>
<th></th>
<th>PearsonCorrelation</th>
<th>N</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption of Islamic Banking</td>
<td>1</td>
<td>142</td>
<td>.000</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.502**</td>
<td>142</td>
<td>.000</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

According to the table, result shows that there is a positive, but a moderate relationship between adoption to Islamic banking and responsiveness. The computed value of the Pearson correlation between the adoption to Islamic banking and responsiveness is 0.502 and sig. value is 0.000. \( r (142) = .502, p = .000 \). p value is less than alpha so it is statistically significant.

### 5.3 REGRESSION ANALYSIS

**H1:** Religious Motive has a significant influence on the adoption of Islamic Banking.

<table>
<thead>
<tr>
<th>Summary of Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Religious Motives

<table>
<thead>
<tr>
<th>ANOVA(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>1 Regression</td>
</tr>
<tr>
<td>Residual</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
COEFFICIENTS\textsuperscript{a}

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1. (Cibstabt) Religious Motives</td>
<td>2.305</td>
<td>.321</td>
</tr>
<tr>
<td></td>
<td>3.934</td>
<td>2.350</td>
</tr>
</tbody>
</table>

\textsuperscript{a} Dependent Variable: Adoption to Islamic Banking

The computed value of $R^2$ is 0.038. This computed value of $R^2$ shows that 3.8% of the variance in adoption to Islamic banking is accounted for by the religious motives. The computed value of $F$ is 5.524 at $p = 0.02$. The computed value of $t$ is more than two and a Beta coefficient is 0.195. This shows that there is a positive relationship between variables. $F (142) = 5.524$, $P = 0.02$. $p$ value is less than alpha, so $H_1$ is accepted. One can conclude that Religious Motives is a significant influential factor on adoption of Islamic Bank.

$H_2$: Awareness and financial teaching of Islam has a significant influence on the adoption of Islamic Banking

Summary of Model

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.404\textsuperscript{a}</td>
<td>.163</td>
<td>.157</td>
<td>.63587</td>
</tr>
</tbody>
</table>

\textsuperscript{a} Predictors: (Constant), Financial Teaching of Islam

ANOVA\textsuperscript{b}

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>f</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
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<td>1</td>
<td>11.051</td>
<td>27.332</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>56.607</td>
<td>140</td>
<td>.404</td>
<td></td>
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<tr>
<td></td>
<td>Total</td>
<td>67.659</td>
<td>141</td>
<td></td>
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</tr>
</tbody>
</table>

\textsuperscript{a} Predictors: (Constant), Financial Teaching of Islam
\textsuperscript{b} Dependent Variable: Adoption to Islamic Banking
**Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
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<tr>
<td>(Constant)</td>
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a. Dependent Variable: Adoption to Islamic Banking

The value of $R^2$ is 0.163. This value of $R^2$ shows that 16.3% of the variance in adoption to Islamic banking is accounted for by the financial teaching of Islam. The computed value of $F$ is 27.332 at $p = 0.000$. The computed value of $t$ is more than two and a beta coefficient is .404. This shows that there is a positive relationship between variables. $F (142) = 27.332$, $P = 0.000$. $p$ value is less than alpha so, $H_2$ is accepted. One can conclude that financial teaching of Islam is a significant influential factor on adoption of Islamic Bank.

**$H_3$: Reputation has a significant influence on the adoption of Islamic banking.**

<table>
<thead>
<tr>
<th>Model</th>
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</thead>
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<tr>
<td>1</td>
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<td>.172</td>
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<td>.63252</td>
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a. Predictors: (Constant), Reputation

**ANOVA**

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<th>f</th>
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</tr>
</thead>
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<tr>
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<td>11.647</td>
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<tr>
<td>Residual</td>
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<tr>
<td>Total</td>
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<td>141</td>
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<td></td>
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a. Predictors: (Constant), Reputation
b. Dependent Variable: Adoption to Islamic Banking
The value of $R^2$ is 0.172. This value of $R^2$ shows that 17.2% of the variance in adoption of Islamic banking is accounted for by reputation. The computed value of $F$ is 29.113 at $p = 0.000$. The computed value of $t$ is more than two and a beta coefficient is .415. This shows that there is a positive relationship between variables. $F (142) = 29.113$, $P = 0.000$. $p$ value is less than alpha, so H3 is accepted. One can conclude that reputation is a significant influencing factor in adoption of Islamic Bank.

**H4: Convenience has a significant influence on the adoption of Islamic banking**

### Summary Of Model

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<th>Adjusted $R$ Square</th>
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$^a$ Predictors: (Constant), Convenience

### ANOVA$^b$

<table>
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</thead>
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<tr>
<td>Regression</td>
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<td>.000$^b$</td>
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<tr>
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$^a$ Predictors: (Constant), Convenience

$^b$ Dependent Variable: Adoption to Islamic Banking
The value of $R^2$ is 0.095. This value of $R^2$ shows that 9.5% of the variance in adoption to Islamic banking is accounted for by convenience. The computed value of $F$ is 14.622 at $p = 0.000$. The computed value of $t$ is more than two and beta coefficient is .308. This shows that there is a positive relationship between variables. $F (142) = 14.622$, $P = 0.000$. p value is less than alpha so, $H_4$ is accepted. One can conclude that convenience is a significant influential factor on adoption of Islamic Bank.

**$H_5$: Responsiveness have a significant influence on the adoption of Islamic banking.**

**Summary Of Model**

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</thead>
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$a$. Predictors: (Constant), Responsiveness

**ANOVA$^b$**

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<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td>1</td>
<td>17.080</td>
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$a$. Predictors: (Constant), Responsiveness

$b$. Dependent Variable: Adoption to Islamic Banking
Factors Influencing the Adoption of Islamic Banking of Pakistan

### Coefficients*

<table>
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<th>Model</th>
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<th>Standardized Coefficients</th>
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</table>

a. Dependent Variable: Adoption to Islamic Banking

The value of $R^2$ is 0.252. This value of $R^2$ shows that 25.2% of the variance in adoption of Islamic banking is accounted for by convenience. The computed value of $F$ is 47.276 at $p = 0.000$. The computed value of $t$ is more than two. This shows that there is a positive relationship between variables. $F (142) = 47.276$, $P = 0.000$. The $p$ value is less than alpha so, H5 is accepted. Hence researcher concluded that convenience is a significant influential factor on adoption of Islamic.

Table 8

<table>
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<th>Variable</th>
<th>P value</th>
<th>Accept / Reject</th>
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<tr>
<td>H2</td>
<td>Financial Teaching of Islam</td>
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<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>Reputation</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4</td>
<td>Convenience</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H5</td>
<td>Responsiveness</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

The results of the study showed that financial teachings of Islam are the core for Islamic banking sector which is proven by hypothesis that customers feel more satisfaction for Islamic banking. Because religious motives are the backbone of the Islamic banking which can provide a great market share that convenient banking sector. The findings of this study, develop and contribute in enhancing the existing scope of previous research in several respects. For Islamic banking industry, it is necessary to be more active and intensive in order to broaden the knowledge of the respondent because knowledge has a positive and significant relationship with intention to use Islamic banking services. Surprisingly, customers still seem to perceive Islamic Banking as more complex and uncertain about it. The results of this study raise a number of the major implications for Islamic banks. Moreover, the Financial teaching of Islam, Reputation, are found to be the most important determinants according to the respondent’s perception. So Banks need to put its efforts to capitalize on these factors. Serving the customers according to their needs and demands will help them to increase their market share. It is obvious that there
is a general lack of awareness on Islamic banking. So there is a need of informative and effective advertising campaigns about Islamic Banking in order to reach to the Islamic banking customers. Advertisement through electronic/print media, internet and outdoor is more appropriate to attract Islamic banking customers. The banks must develop and implement a marketing campaign that promotes the products and services offered by Islamic banks and also its benefits together.

6. CONCLUSION AND DISCUSSIONS

The primary objective of this research has been to study Islamic Banking adoption criteria in the context of Pakistan, a developing Islamic Republic State. Islamic Banking has a sufficient potential to grow due to high Muslim population and their increasing financial needs. Current study formulated adoption criteria to Islamic Banking and its sequential importance perceived by sample population. The results inferred from the analysis permitted us to confirm the established hypotheses and to understand the association between different constructs. Now individually, we discuss these findings and their implications in this section. The objective of this study is to determine the factors that are influencing the adoption of Islamic banking in the context of Pakistan. Muslims are adopting an Islamic banking system due to financial need. The Islamic banking system is increasing in Pakistan and growing continuously. The Islamic banking system has an adequate energy to grow in the banking sector. This study expressed the factors that are influencing the adoption of Islamic banking in Pakistan. The results of this study indicate that all the hypothesis have been accepted. Results show that religious motives, financial teaching of Islam, reputation, convenience and responsiveness are the significant factors in the adoption of Islamic banking. The result also shows that all the variables have a positive relationship with adoption of Islamic banking. Finding of this study shows that responsiveness is the significant factor that influence the customer in the adoption of Islamic banking and customers’ ranked responsiveness at level one. The second factor that influences the customers most in the adoption of Islamic banking after the responsiveness is reputation. Customers ranked reputation at level two while selecting an Islamic bank. Financial teaching of Islam is also an important factor that influences the customers in the adoption of Islamic banking. The financial teaching of Islam is ranked at level third by customers in the adoption of Islamic banking. Financial teaching of Islam has significant impact on the adoption of Islamic banking. Convenience is also an important factor in the adoption of Islamic banking. Findings of the current study suggest that reputation is the second most important criteria for adoption to Islamic Banking. The results are supported by Taylor and Stanley (1999), Kennington et al (1996), who concluded the reputation as a second important factor relative to other estimators. In other words providing consistent quality services, reliability, concern for society and competitive financial products mutually develop well-reputed Islamic Bank, which consequently thrust Adoption to IB. Its more challenging for Islamic Banks in Pakistan to strengthen their Islamic and financial reputation and image, particularly in the current era of competition, where commercial banks are imposed by State Bank of Pakistan to establish Islamic windows. The result of the study shows that customers rank the convenience at level four while selecting an Islamic bank. Religious motives are ranked at level five in the adoption of Islamic banking by the customers. The result of this study confirms the previous studies on Islamic banking selection criteria by
customers, adoption of Islamic banking, factors influencing the adoption of Islamic banking and customer selection criteria of Islamic banking. In this study, all variables (religious motives, financial teaching of Islam, reputation, convenience, and responsiveness) have influence in the adoption of Islamic banking and all hypotheses have accepted.

**Managerial Implications:**

From the study it is governed that managers need it to helpful for conducting banking procedures very easily. Managers need to communicate the importance of Islamic banking to get the maximum results for the organization. By applying managerial skills Islamic banking can work in a better way and strengthen the economy of the country. Managers can better define the use of Islamic ways of financing, investments and cash flows to the customers for the growth of the economy. All the challenges of the Islamic banking can be minimized by using the Islamic teachings of sale, purchase and business.

**REFERENCES**


Factors Influencing the Adoption of Islamic Banking of Pakistan


Country Model

Qatar

Introduction

State of Qatar, an oil depending nation is a small peninsula in the east of Arabia, bordering the Persian Gulf and Saudi Arabia. The state occupies a strategic location in the central Persian Gulf near major petroleum deposits. Qatar is one of the wealthiest countries in the world in terms of GDP per capita and the lowest unemployment rate. Oil and natural gas extraction accounts for 85 percent of the total export earnings and more than 50 percent of GDP. Qatar’s economy has successfully absorbed the adverse shocks from the 2014–16 of decline in oil prices and the 2017 diplomatic rift in GCC and the GDP is projected to grow at 2.6 percent for the year 2019. It is important noting that Moody’s investors service upgraded the Qatari Banking sector outlook to stable from negative, which demonstrate the strong performance of the banks in Qatar despite ongoing regional geopolitical tension.

The state of Qatar acknowledged the importance of Islamic banking and finance in the very beginning of eighties, and established its first full-fledged Islamic bank Qatar Islamic Bank (QIB) in 1982. At present, Islamic banking industry (IBI) in the country consists of four full-fledged Islamic banks having an asset base of US$ 97.98 billion (2018). Along with these Islamic banks, three Islamic finance companies are operational in the country while in 2014, Qatar also announced to establish a deposit insurance framework having a Shariah complaint scheme.

Regulatory Environment

Islamic banking and finance made its first debut in Qatar in 1982 with the establishment of Qatar Islamic Bank (QIB) and only full-fledged banks were allowed to operate in the country till 2005 when conventional banks were permitted to offer shariah complaint products and services. However, in 2011 the Qatar Central Bank (QCB) prohibited the operations of Islamic windows by conventional banks. In 2013, Islamic banking was formally defined through legislation; the new Central Bank Law, Law No. 13 of 2012 (Qatar Central Bank Law) which came into effect in January 2013. For the first time, the scope of Shariah compliant banking was defined as well as the formation of a Shariah board at the company level was stipulated.

* Source: State Bank of Pakistan, Quarterly Islamic Banking Bulletin April-June 2019
In Qatar, Islamic banks operate under two regulatory regimes: the Qatar Central Bank (QCB) and Qatar Financial Centre Regulatory Authority (QFCRA). Islamic banks listed on Qatar stock exchange are subjected to the Qatar Financial Market Authority (QFMA). In 2015, the QFCRA issued new Islamic Banking Business Prudential Rules 2015 and also the revised version of the Conduct of Business Rules 2007. Meanwhile, some amendments including definition of business customer, re-classifying customer and the customer dispute resolution were introduced to these revised business rules in 2015.

Islamic Banking and Finance

Currently Islamic banking industry in Qatar consists of four banks; Qatar Islamic Bank (QIB), Masraf Al Rayan, Qatar international Islamic Bank and Barwa Bank. QIB, the largest Islamic bank in the country holds about 43.7 percent of the Islamic banking share in Qatar and 11.1 percent of the overall market. In addition to four Islamic banks, three Islamic finance companies are also operating under the supervision of QCB: Al Jazeera Finance, First Finance and Qatar Finance House.

Qatar Islamic banks operate in a highly competitive market in which they compete with seven conventional national players and seven foreign banks. In recent years, Islamic banks have grown more quickly than their conventional counterparts, as in 2017 Qatari Islamic banks recorded asset growth that exceeded that of the conventional banks.

According to data released by IFSB, Qatari Islamic banks are growing despite the Gulf crisis. Qatar’s Islamic banking assets have been growing at a double digit, except for 2016 when Islamic banking asset recorded 8.2 percent growth. Total deposits in Islamic banking industry reached US$ 58.79 billion in 2017, which accounted for 26.1 percent of the overall banking industry deposits.

Sukuk

Qatar, a prominent figure in global sukuk market is among the leading issuer of sukuk in the world. The QCB is the main force in driving the sukuk market in the country. Qatar issues sukuk annually with focus on developing local debt market. Before 2013, the QCB issued single issuances sukuk but later changed its approach to regular issuances of three and ten year tenors. Sukuk represented 18 percent of Qatar’s total Islamic finance assets in 2017, with total outstanding issuances amounting to US$ 21 billion. The government has been the backbone of the sukuk market in Qatar, representing 73 percent of issuances between 2013 and 2018. In 2018, QCB issued five fixed rate sukuk amounting to US$ 2.21 billion. Qatar is working actively on building regional partnerships to develop its sukuk market. Qatar Investment Authority is planning to invest in energy projects in the Philippines through sukuk.

Future Outlook

Islamic financial industry has gained a significant ground in Qatar and continues to play a major role in the future of its economy. The demand for Islamic finance is on a rising trend. In the presence of well-developed regulatory framework, growing economy
and advantage of having more than 67 percent Muslim population, it is expected that Islamic banking industry will grow substantially in Qatar in future.

**Sources of Information**

- Islamic finance news {www.islamicfinancenews.com}
- Qatar Central Bank Website {http://www.qcb.gov.qa/English/}
- Index Mundi {https://www.indexmundi.com/qatar/}
- Global Islamic Finance Report { http://www.gifr.net/gifr}
# Account Penetration in Selected OIC Countries (% of Adult Population)

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Source: World Bank Financial Inclusion Database Findex 2018
Book Review

Book Review for Islamic Banking, How Is It Different from Conventional Banking? By Professor Muhammad Ali Shaikh

By Camille Paldi

This book provides a hands down approach to explaining the difference between Islamic and Conventional Banking. In a clear, methodological, straightforward approach, the author delves into a practical exploration of the key differences between Islamic and conventional banking while simultaneously pointing out the opportunities Islamic Banking has to offer the world at this moment in time. In an innovative narrative, the author illuminates the Islamic and Conventional Banking framework, systems, operations, products, risks, financial reporting methods, and Shari’ah governance framework and answers key questions such as how a debt-ridden society transfers resources from the poor to the rich through interest financing.

The author points out that in the United States as of 2007, the top 1% of households owned 34.6% of all privately held wealth, and the next 19% had 50.5%, which means that just 20% of the people owned a remarkable 85% leaving only 15% of the wealth for the bottom 80% (wage and salary workers). The author purports that Islamic economics can cure this inequality by redistributing wealth, turning the average person into a business partner with the bank and financial institutions in Islamic finance and takaful (Islamic insurance) and an asset owner through the Islamic bond or sukuk. The author explains all of the different modes of Islamic finance and shows how each structure evades interest finance and redistributes wealth to the business partner of the bank (the average citizen). It is no longer a creditor/debtor relationship, however, the banking relationship becomes one of business partners or investor/fund manager where surplus and loss are shared on a profit- and- loss sharing (PLS) method. The author explains that in the Islamic economic system, financing through the sale of goods or the profit- and-loss sharing method in real business activities promotes the creation of real assets in the economy. The author says, ‘The Islamic system encourages supply and moderation in consumption and spending surplus on others, which promotes balance and distributive justice and ensures savings and investment.’

The author emphasizes the injustice of interest-based financing. The author says that, ‘In an interest-based loan, the financier’s return is ensured, while the return of the borrower depends on the actual results of the business. In case of loss, the borrower gets nothing, but still pays interest and in case of huge profits, he retains major part of the
proceed profit leaving the financier to take a fixed rate of return, which may be far less than what
he would have gotten on the basis of profit-sharing in a joint-venture. This is unfair to
both.’

The author points out that money is not a commodity as is so treated in the
conventional financial system. The author says that, ‘We have assumed that like
commodities, money can also be sold for a price higher than its face value or lent against
interest.’ The author says this is incorrect because: (1) Money has no intrinsic utility,
while a commodity has intrinsic utility; (b) Commodities have different qualities, while
money has no quality; (c) Money has no value except which is assigned to it. In case of
commodities, it is the actual worth of the goods depending on their type and quality.’
The author explains that ‘Therefore, money of the same denomination cannot be the
subject-matter of a sale, like other commodities. Its basic purpose is to act as a medium of
exchange and a measure of value.’ The author points out that conventional banks make
money by the pricing and time-value of money.

Furthermore, the author reveals that Interest-financing and the creation of money
by the banks causes a mismatch between the supply of money and the production of
goods and services, which fuels inflation. The money creation is far in excess of 90% of
the total money supply and therefore causes over 90% of our inflation.

The author explains that there are two permissible financing methods in Islamic
finance: fixed-income methods and investment and profit- and- loss sharing methods.
The author says that fixed-income methods include trade modes, leasing modes, and
diminishing ownership of assets or diminishing lease musharakah. The investment or
profit and loss sharing modes are based on musharakah and mudarabah. The author
explains in detail in the book each mode of Islamic finance often using real-world
examples of how each modes of Islamic finance operates in the Islamic financial system.
Next, the author explores Islamic financial contracts and how they are utilized in each
mode of finance. In terms of Islamic bank deposits, the author points out that the
relationship between bank and client is that of investor/manager or buyer/seller rather
than the conventional creditor/lender relationship.

In order to have a valid sale contract, there must be offer and acceptance, parties
capacity to contract, the contract should be instant and absolute i.e. not for a future date
and non-contingent, delivery must be certain, and the sale must be without any void
condition. The author explores each aspect of a valid sale contract and then goes onto to
describe sale contracts commonly used by Islamic banks including bai muajjal or credit
sale, murabahah, murabahah muajjal, musuwama, salam, and istisna’a contracts. Next,
the author discusses trade-based financing products including murabahah, musuwamah,
salam, and istisna’a contracts. This discussion is followed by an explanation of
financing based on Ijarah. The author then goes on to explain partnership-based
financing products including musharakah, mudarabah, and diminishing musharakah (for
home finance). The author also includes discussion on import financing, export
financing, financing through mudarabah funds, and profit- and- loss sharing methods and
fixed-income methods of finance. The author sheds light on the fact that Islamic banks
tend to avoid *musharakah* and *mudarabah* modes of finance due to high risk and expense for Islamic banks and that this should be changed.

The author then explores equity investments and capital markets. The author begins with an explanation of *Shari’ah* stock screening, a process, which is required to ensure the *Shari’ah* compliance of equity investments. The author then moves on to discuss Islamic capital markets and sukuk or Islamic bonds. The author states that, ‘*Sukuk* is one of the major emerging instruments, which is used as a financing and risk management tool. During the period 2001-2005, there were 18 sovereign *ijarah sukuk* issues amounting to USD 5.6 billion and 10 corporate *ijarah sukuk* issues amounting to USD 1.599 billion. *Ijarah sukuk* is the major one. Other sukuk structures include *musharakah*, *murabahah*, and *Istisna’a*.’

The author continues with an exploration of deposit takings by Islamic and conventional banks. The author says that ‘Islamic Banks raise deposits through a *mudarabah* contract whereby the relationship between the bank and the depositor is that of an investor and fund manager. These funds are used to provide financing to individuals and businesses using *Shari’ah* compliant methods such as *musharakah* or *mudarabah* (investment modes) or *murabahah*, *salam*, and *istikna’a* (trade modes) and *Ijarah* (leasing modes). The income so realized is not based on interest, but is either a trading profit or rent or an actual return on the investments made by the bank as manager of these funds. This income earned by the deposit pool is shared between the bank as manager of the funds and depositors who are treated as investors.’ In a conventional bank, the relationship between the bank and customer is that of creditor/lender. The income earned is based on interest. Thus, in Islamic banking, the depositors receive a rate based on actual profits rather than a fixed rate of interest on deposits as in conventional banking.

The author also emphasizes the need to create a unique system of financial reporting for Islamic banks due to the many differences with conventional banking. The author points out that International accounting standards are meant for interest-based transactions and cannot be used by Islamic banks. The author recommends adopting a financial reporting mechanism based on AAOIFI standards.

I recommend this book for students, academics, Islamic finance practitioners, and practitioners of conventional finance who want to obtain an understanding between the main differences between conventional and Islamic banking.
Note to contributors

Journal of Islamic Banking and Finance is an official publication of International Association of Islamic Banks Karachi, Pakistan. It is a refereed quarterly journal, as well as a pioneer in the field of Islamic banking and finance being published since 1984. It provides a forum for researchers, particularly in Islamic Banking and Finance, wishing to share their expertise with a vast intelligentsia in the form of articles, research and discussion papers and book reviews. Major areas of interest for the journal include: (i) Theoretical issues in banking and financial industry specially from Islamic perspective; (ii) Empirical studies about the Islamic banking and financial institutions; (iii) Survey studies on issues in Islamic banking and finance; (iv) Analytical studies of applied Islamic banking; (v) Comparative studies on Islamic and conventional banking systems; and (vi) Short communications and interviews investigating the perceptions of leading bankers and banking experts as well as policy makers.

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