FINTECH IN ISLAMIC FINANCE AND ITS SHARIAH PARAMETER

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1. Introduction

Islamic finance has grown considerably over the last four decades and has a global reach. It is considered one of the fastest-growing segments of the global financial industry. Indeed, the rapid growth of Islamic finance is expanding to western and other non-Muslim countries. It is now in the stage of global integration to be adopted as an international financial system.

One of the biggest challenges for Islamic finance in the next decade is on financial innovation and technology. In the digital world, traditional financial practice will be left behind. Costumers are expecting more innovations that would facilitate their needs and transactions at the most convenient way. Therefore, financial technology (Known as Fintech) is a new way of finance by providing innovative products that would improve existing practices and facilitate consumers' experiences in transactions in an efficient and effective way. Fintech offers product innovation by structuring financial products that are new or significantly improved and enhanced with respect to their characteristics or intended uses. In other words, fintech is simply defined as the application of technology within the financial industry in a more friendly and efficient manner. Recently, the term fintech has been popularised in the financial industry and the widespread adoption of fintech in the industry covers a wide range of activities including financing, payments, operation and risk management, data security and monetisation, and customer interface as well as other related areas. The main types of fintech services are peer-to-peer (P2P) lending, smart contract, mobile payments, investments including crowdfunding and to some extent investment advices (e.g. robo-advisors) (Al-Mubarak, 2017).

This paper aims to explore the phenomenon of financial innovation and technology in Islamic finance. To achieve this objective, four dimensions are taken into consideration, namely financial innovation in the digital world, Islamic finance and the challenges of the digital world, fintech and its Shariah compliance parameter, and the application of fintech in Islamic finance.

2. Financial Innovation in the Digital World

In line with human progress and technological advancement, financial practices have evolved from simple transactions into a complicated and sophisticated arrangement. Throughout the history of mankind, financial innovations have attempted to assist human beings in their financial arrangement in an efficient and effective way. Financial innovations involve all aspects from the design, development and implementation of innovative financial instruments and the formulation of creative solutions to problems in finance (Report of World Economic Forum, 2012).

Innovations in the history of financial market varied hugely in terms of the size and nature of their effect, which may be profound or relatively trivial. Some innovations are quite radical and bring significant impact in the way finance is practiced. A radical innovation is defined as an innovation that significantly disrupts the market into which it is born. This disruption has costs attached to it, but these are generally outweighed by the long-term benefits. Importantly, the benefits largely accrue to the innovator and the consumer of the product, and the costs accrue to established market suppliers (World Economic Forum Report, 2012:13).

In the current digital world, the account opening process of a bank, for instance, takes less than seven minutes from the time the customer walks into the branch. Likewise, payment solutions, customized alerts, and efficient account opening are among popular new technologies that we can see nowadays. Consequently, many banks and financial institutions have approved spending on digital initiatives such as channels, customer journeys, automation, and new technologies to avoid loss of up to 50% of their retail banking profit in a couple of years. The World Islamic Banking Competitiveness Report (WIBCR, 2016) observes that a range of USD 15 million to USD 50 million will be utilized for the next three years, meanwhile, larger banks are allocating more spending for digital initiatives.

According to McKinsey Global Institute's report, digital globalization has contributed to the growth of data flows up to 45 times that transmit information, ideas, and innovation. Therefore, cross-border communications and transactions could be done at lower cost while connecting customers and suppliers in any country. This is possible through the emergence of public internet platforms such as operating systems, social networks, digital media platforms, e-commerce websites and various online marketplaces.

In addition, digitization has driven almost 12% of the global goods trade through international e-commerce like Alibaba, Amazon, eBay, Flipkart, and Rakuten. Instantaneous exchanges of virtual goods such as e-books, apps, online games, MP3 music files and streaming services, software, and cloud computing services could be transmitted to the customers with the help of digitization (MGI, 2016).

Digital platforms could transform small and medium-sized enterprises (SMEs) into micro-multinationals and digital start-ups are born global. At the same time, individuals are participating in cross-border connections where the estimation of 914 million people have at least one international connection on social media, and 361 million people are cross-border e-commerce shoppers (MGI, 2016).

Likewise, introducing smart contract, which is defined as a programmable contract that automatically execute when pre-defined conditions are met, through the use of blockchain technology, could speed up the process, increase transparency thereby

reducing uncertainties in dispute resolution processes through litigation. According to Capgemini consulting report: the introduction of the smart contract would shorten the settlement cycles of syndicated loans, leading to an additional 5% to 6% growth in demand in the future and to additional income of between USD 2 billion and USD 7 billion annually. Besides, banking consumers could save from USD 480 to USD 960 per loan and banks would be able to reduce costs in the range of USD 3 billion to USD 11 billion annually by lowering processing costs in the origination process in the US and European markets. Similarly, in the insurance sector, the usage of smart contracts in the personal motor insurance industry could result in USD 21 billion annual cost savings and consumers could also expect lower premiums as insurers potentially pass on a portion of their annual savings to them.[1] It is clearly shown that, all these financial innovations can be considered as Maslahah (benefits) to the customers and to the whole financial industry.

3. Islamic Finance and the Challenges of Digital World

With regards to the Islamic finance sector where its total assets were USD 2.417 trillion at the end of 2017, its growth could be coupled with the emergence of crowdfunding platforms, blockchain technology and the push towards social impact investing. It is expected that the total of Islamic Finance assets could reach USD 3.5 trillion by 2021, especially in Awqaf and crowdfunding sectors (Thomson Reuters, 2016). Laldin et al. (2018) stated that one of the potential instrument in raising waqf funds and to provide a sustainable source of financing is to connect waqf with online platforms known as crowdfunding. Crowdfunding is considered a new source of funding for waqf entities apart from doing it traditionally (Suhaili and Palil, 2016). It has the potential to speed up the volume of waqf fundraising through tapping into the collective efforts of a large pool of individuals who share the same altruism motives (Mollick, 2014). In general, it is a very useful tool for start-ups that may have innovative money-making and job-creating ideas through new businesses and eventually help to create a better community.

In addition, crowdfunding platforms offer benefits for both entrepreneurs and investors. To explain, the entrepreneurs could save a lot of time, effort, and money as the fundraising campaign is done through pitches the product idea on the crowdfunding website. Meanwhile, the benefits of crowdfunding for the investors are the ability to evaluate the business soliciting funds through the pitches. This will lead to reducing the risk of losing huge amounts of money through investing a subtle amount, diversifying the portfolio of their investment and obtaining higher returns as well as a fair share in the stake of the business (Andaleeb & Mishra, 2016). However,

(1) https://www.capgemini.com/consulting-de/wp content/uploads/sites/32/2017/08/smart_contracts_paper_long_0.pdf

lack of proper laws and regulations for financing through crowdfunding could hinder its potential and growth (Department of Finance, Ireland, 2017; Engine Advocacy, 2015; Ying, 2015). For example, a lesson can be learned from the United Kingdom where the investors are entitled to a tax deduction (Andaleeb & Mishra, 2016).

Similarly, with emphasis on blockchain technology, that is a decentralized digital ledger, and the significance of smart contracts, Islamic banks may leverage on this for Islamic finance agreements and contracts (Oseni, 2017). A report by Thomson Reuters (2016) observes that the potentials for digital innovation in Islamic finance industry are the booming of sukuk for infrastructure financing by 23%, an increasing in SME growth initiatives and Shariah compliant pensions funds by 16% and 12% respectively, and the emerging fintech application and crowdfunding in Islamic finance industry by 12%. Looking at these potentials, Islamic finance industry players will certainly grab the market and allocate more funds to develop innovation in digital financial services.

In terms of mobile banking and payment systems, Islamic banks have the opportunity to offer Shariah-compliant Internet-based banking platforms. For example, Malaysia has launched an Investment Account Platform (IAP) which is envisaged to become a cross-border multicurrency channel linking into regional and global economies. The IAP is backed by Islamic banking institutions via the offering of Investment Account (IA) to the investors. Through this platform, Islamic banking institutions will facilitate matching of investments with the identified ventures or projects that are in need of funding[(2)]. The first venture listed under IAP is Perak Transit Berhad (Perak Transit), an integrated transportation terminal and public transportation services provider based in Ipoh, Perak. The investment will be in the form RM10 million Term Financing Facility for three years. The return expected to investors is 6.5% per annum. The proceeds raised from the facility will be utilized by Perak Transit and its group of companies for its working capital requirements (Sipalan, 2016; Bank Muamalat, 2016). The following figure illustrates the structure of Malaysian Investment Account Platform.

(2) https://iaplatform.com/

Figure 1: Malaysian Investment Account Platform

Another innovation worth noting is Awqaf New Zealand (NZ) which combines the element of Waqf into Sukuk. Awqaf New Zealand in collaboration with the International Shari'ah Research Academy for Islamic Finance (ISRA) and Securities Commission (SC) of Malaysia issued the first socially responsible Awqaf Sukuk worth USD 1 billion, which will be used to fund Awqaf farms in New Zealand and Canada. the objective of Awqaf New Zealand is to convert the unused (wasteful) parts of sacrificial animals such as skin to produce shoes, bags and etc. The income generated from the sale of these parts will benefit the beneficiaries of the endowments and will be used for charitable and social purposes all over the world. This is considered as an innovative project from economic and Shariah perspective which will lead to the development of Awqaf industry globally.

Despite the potential benefits that financial technologies can leverage on Islamic finance, the issue of knowledge dissemination is considered an important aspect. To elaborate, the Global Islamic Finance Education 2013 report produced by Yurizk highlighted that Asia hosts 43% of global Islamic Finance Education and Knowledge Service Providers (IFEKSP), with 22% for Europe, 19% for the Middle East and North Africa respectively. As a result, more efforts are needed to disseminate and to promote Islamic finance knowledge to the public. One of the efforts that is worth to mention here is the initiative Islamic Finance Knowledge Repository (I-FIKR) by the International Shariah Research Academy for Islamic Finance (ISRA). The I-FIKR is envisaged to be a one-stop hub for Islamic finance reference material and sources which includes papers, publications, fatwa, research, events and list of Islamic finance institutions. The portal was officially launched by the Malaysian Central Bank's Governor Tan Sri

Dr. Zeti Akhtar Aziz in 2013 and attempts to provide important sources of reference and guidance for Shariah and industry practitioners, policymakers, researchers and academicians, students and Islamic finance stakeholder at large. With a dynamic mechanism for subscribers to connect and interact with materials and information, ISRA aims to disseminate and to promote Islamic finance knowledge to the public at large, both locally and globally and hence could bring Islamic finance industry to the next level.(3)

Another challenge that may face the implementation of fintech in Islamic finance is to keep pace with the development that is taking place in the market. It is important for the Shariah scholars to understand the technical know-how of the sophisticated financial instrument and to apply the suitable Shariah principles in order to ensure the compliance of the products. In addition, innovation is very much sought in the Shariah sphere as mere imitation of the conventional products is not the way forward. Therefore, the challenge is for the Shariah advisors and market practitioners to work together in this era of financial technology to come up with innovation solutions that will serve the need of the entire mankind.

Another challenge worth noting is the implementation of digital strategies. Many Islamic banks would appear to be struggling to adapt new customer decision journeys and prototyping of new technologies. Addressing customer needs in an increasingly digital world means disrupting existing business models for a fresh customer experience. Therefore, any investment in this area has to be made wisely.

According to the World Islamic Banking Competitiveness Report (WIBCR, 2016) the future of retail banking in the GCC is a smartphone experience. The customer desire for a "bank in your pocket" is notably visible. However, mobile banking usage is very low, for instance, mobile banking usage in UAE stands at 34%, followed by 27% in Kuwait, 19% in Qatar and 15% in Saudi Arabia. The report revealed also that customers are generally not impressed with the mobile proposition on offer. Among the reasons mentioned for this low take-up is the lack of convenience and simplicity. Nevertheless, the report stated that three out of four customers surveyed felt comfortable to transition to a digital-first relationship and were willing to switch banks for a better digital experience (WIBCR, 2016).

4. Fintech and Shariah Compliance

Shariah compliance is the backbone of the operation of Islamic financial institutions (IFIs) as it gives legitimacy to their products and practices from the Shariah point of view. Compliance here means to act in accordance with the relevant laws, rules,

(3) http://ifikr.isra.my/home

regulations and to have proper supervision and a competent system of internal controls within an organization to mitigate the risk and to preserve its reputation. Inadequate consciousness of the whole process of Shariah compliance will expose the IFIs to Shariah non-compliance risk.

Fintech has been adopted in the Islamic finance industry as a new way of delivering core Islamic finance solutions. Islamic law holds a principle that the basic rule in business transactions (mu'amalah) is permissibility (ibahah), except when there is a clear text which prohibits it. The permissibility principle provides a flexible room for innovation and new practices in business and financial transactions. All innovations, in mu'amalah are considered permissible and are generally encouraged. Innovations only become impermissible if there is clear evidence that they are in conflict with the fixed (dawabit) rules of Shariah.

Therefore, Islamic finance should be proactive rather than reactive to financial innovations. In the past four decades, the Islamic finance industry has been more reactive by following the advance development of conventional finance practices and simply adopting such market practices with some modification. Though not inherently wrong, the replication approach to replicate the conventional products in a Shariah compliance model has been extensively done in structuring Shariah compliance products. The approach is called by Saeed (2004:114) as pragmatic whereby the concern is in innovating Shariah compliant product structure by changing the conventional product structure to follow the criteria and principles of the Shariah.

The replication of conventional financial products and structures is done by adjusting the interpretation of financial principles in Islamic law to accommodate and provide the same types of services and investment mechanisms as the dominant conventional financial system based on the needs of the society. In practice, the approach is done in three general steps, namely the negative screening of prohibited elements in the conventional structure, applying Islamic principles/contracts in different types of conventional finance, and adding new features based on Shariah contracts. In the replication approach, hiyal, makharij (legal artifice) and dhara'i (means or pretences) are necessary and in fact are inevitable to a successful adaptation of conventional finance products (Laldin and Furqani, 2016).

Shariah contracts utilized in Islamic finance should not be restricted to the replication approach to suit the features of conventional finance products. Innovation through fintech should be explored to emphasise the value proposition of Islamic finance such as how to use technology to ensure minimal risk in musharakah and mudarabah model of financing or how istisna'a and salam can be operated and optimized using fintech. In other words, fintech should open a new chapter in Islamic financial products and services whereby the industry can witness the application of various Shariah contracts using fintech solutions to facilitate the needs of society.

While we cannot ensure the elimination of hiyal, makharij and dhara'i in dealing with fintech, it is important to note that the emergence of fintech should trigger innovations among the Islamic finance industry players and promote creativity by providing new perspectives and practices in financial transactions. Shariah scholars and industry players in this regard must work together to produce innovative Shariah compliant products that fulfil the needs of the society and help in realizing the objectives of Shariah (maqaṣid al-Shariah).

5. The Implementation of Fintech in Islamic Finance

As mentioned earlier that Shariah principle with regards to a business transaction (mu'amalah) is governed by the notion that every transaction is permissible, except when there is a clear text which prohibits it. The permissible principle provides flexibility in innovation and new practices in business and financial transactions. Thus, all innovations in mu'amalat are considered permissible and are generally welcomed. Innovations in fintech become impermissible only if there is clear evidence from the primary or secondary source of Shariah that they are in conflict (against) the basic rules of the Shariah. Therefore, fintech application and practices, as in traditional Islamic finance, should follow the principles of the Shariah by avoiding the prohibited elements in the transactions such as interest (Riba), gambling (Maysir), uncertainty (Gharar), harms (Darar), cheating (Tadlis), etc. Likewise, the practice of transactions in fintech application should follow the rules of contract (Aqd) used in the transaction by observing the pillars (Arkan) and conditions (Shururt) in the contract. In addition, fintech application should aim at achieving the objectives of the Shariah (maqasid al-Shariah), namely to realize the benefits (Maslahah) and to avoid the harms and difficulties (Mafsadah and Mashaqqah) (Laldin, 2017).

Besides, fintech application should observe Islamic ethics such as transparent, fair and justice, and avoid cheating, fraud, misrepresentation and other actions that would create unhappiness of the users. These values would not only protect customers and the public at large, they would also promote smooth allocation of resources and fair dealings in a transaction that Islamic law aims to achieve.

In addition, a proper Shariah governance framework should be introduced to ensure the operation of fintech is in total compliance with Shariah. In other words, the issue of Shariah compliance in fintech operations and practices should be taken into consideration by the regulators or authorities to ensure that fintech will have a proper environment in which to operate. Currently, there are no specific regulations or laws governing fintech for Islamic finance. Nevertheless, Bank Negara Malaysia has come up with a Financial Technology Regulatory Sandbox Framework that covers Islamic

fintech and the requirements for Shariah compliance. The main objective of the regulatory framework is "to enable innovation of fintech to be deployed and tested in a live environment, within specified parameters and timeframes" (BNM, 2016). Hence, providing parameters and regulatory framework for fintech business models is crucial to ensure the financial stability of the system (Laldin, 2018).

Furthermore, to ensure the protection of the sanctity and validity of the contract, authorities and regulators are required to develop Shariah standards that would explicitly spell out the requirements of Shariah that are fundamental to fintech operations and practices. The aim of these standards is to foster transparency, consistency and mutuality in the application of fintech by Islamic financial institutions. This is clearly mentioned by Mohamed Izam Mohamed Yusof, Chief Executive Officer of Investment Account Platform (IAP), when he noted that:

> "Based on our own experience in developing a shared infrastructure such as IAP, a significant challenge lies in the level of standardization needed and incorporation of regulatory compliance required on the part of participating Islamic banks, to enhance ease of use by customers". (Dalila and Izma, 2017, p. 4).

6. Conclusion

Fintech as a new innovation in financial services is a welcome development in Islamic finance. It will reduce operational cost, enhance resilience of operational processes, access new customer segments and improve capital efficiency. Therefore, the emergence of fintech should be used by Islamic finance industry players as a new means for innovation by developing products and services that will benefit the society and promote economic development. The expectation is not merely in offering financial products that are Shariah compliant by using conventional structures, but also in the ability to offer financial products that are distinct coming up from Islamic teachings, worldview and principles.

The Shariah compliance of fintech-based financial contracts shall not vary from the Shariah compliance of any other financial contracts. Hence, fintech-based services need their own regulations and standards to oversee their activities and their own Shariah governance framework that maintains the confidence of Islamic banking stakeholders, fulfils the needs of society and realizes the maqasid al-Shariah.

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