Arab Regional Fintech Working Group

Islamic Fintech in the Arab Region: Imperatives, Challenges and the Way Forward

صندوق النقد العربي
ARAB MONETARY FUND

مجلس محافظي المصارف المركزية ومؤسسات النقد العربية
COUNCIL OF ARAB CENTRAL BANKS AND MONETARY AUTHORITIES GOVERNORS

No.
173
2021

Arab Regional Fintech Working Group

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Arab Monetary Fund

November 2021

Acknowledgement

This policy guide was produced under the mandate of the Arab Regional Fintech Working Group (WG). The WG promotes the exchange of knowledge and expertise, strengthening the capacity of the Arab regulators, as well as building a network of Arab and international experts from the public and private sectors to promote the fintech industry and foster innovation.

The "Islamic Fintech in the Arab Region: Imperatives, Challenges and the Way Forward" paper was prepared by Mr. Abideen Adeyemi Adewale from the Islamic Financial Services Board (IFSB) and Mr. Mohamed Roushdy from Fintech Bazaar in collaboration with Ms. Nouran Youssef from the Arab Monetary Fund (AMF).

The paper has benefited from valuable comments provided by the Arab Central Banks and Monetary Authorities members of the Arab Regional Fintech WG.

Moreover, authors extend appreciation to regional and global experts who had been interviewed for the purpose of drafting this paper, namely Mr. Abdul Haseeb Basit, Co-Founder and Principal at Elipses, Mr. Mohamed Kateeb, Group Chairman & CEO Path solution, Mr. Peter Tavener, Group CFO & COO Beehive, Mr. Hamid Rashid, founder Fnterra, and Mr. Umar Munshi, Co-Founder Ethis group of Fintech startups.

The opinions expressed in this policy paper are those of the authors from the Arab Regional Fintech WG members and do not necessarily reflect those of the entities they represent.

List of Abbreviations

AMF	Arab Monetary Fund
BNPL	Buy Now Pay Later
B2B	Business to Business
B2C	Business to Consumer
CGAP	Consultative Group to Assist the Poor
DeFI	Decentralised Finance
DIFC	Dubai International Finance Centre
eKYC	Electronic Know Your Customer
GCC	Gulf Cooperation Council
GSMA	Global Sysytem for Mobile Communications Association
IFSB	Islamic Financial Services Board
IFSI	Islamic Financial Services Industry
IAP	Investment Account Platform in Malaysia
IRTI	The Islamic Research and Training Institute (IRTI
MSMEs	Micro Small and Meduim Enterprises
P2P	Peer to Peer
SAMA	Saudi Central Bank
SMEs	Small and Meduim Enterprises
SDGs	Sustainable Development Goals

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1. Introduction

Both the global Islamic financial services industry (IFSI) and the global financial technology (Fintech) industry are burgeoning and continuously evolving.[1] The synergistic benefits between the two industries have resulted in what is called the 'Islamic Fintech' industry. It comprises various companies whose products and services involve an end-to-end consideration and application of financial technology in Islamic financial transactions based on the extant regulatory frameworks, and the foundational philosophy upon which the Islamic financial system is built – Sharīʿah-compliance.[2] .

In the IFSI today, operations and services are increasingly being digitalised to enhance operational efficiency. This is through the optimal combination of both front-office and back-office technology in a manner that ensures transparency, reduced-cost, and a speedy and reliable transactions to the users. Technology is now used for repeatable transactional tasks, predictive analytics, smart contract etc. The financial system now operates based on the repository, availability, and access to accurate yet comprehensive digitalised data about a customer, and which can be processed in real time based on algorithms to arrive at credit worthiness, insurance or investment preferences of customers.

The consequential movement restrictions and social distancing as measures to flatten the curve of the spread of COVID-19 has also added speed to the need for digital transformation process in the IFSI.[3] This has brought about significant benefits and opportunities in numerous areas including but not limited to leveraging Islamic social finance platforms, deepening financial inclusion, enhancing customer value and experience, and improving regulation and supervision among many others.

The Arab region, which includes the Gulf Cooperation Council (GCC) countries and the Middle East and North African (MENA) countries is predominantly Muslim thus making Islamic financial

[1] The global worth of Islamic finance was USD2.70 trillion as at 3Q 2020 (IFSB Stability Report 2021), while the Islamic Fintech on the OIC countries was estimated at USD 49 billion in 2020 and projected to reach USD 128 billion by 2025 (Global Islamic Fintech Report 2021).

[2] Prof Akram Laldin stated "it is important to note that, in general, Shariah principle with regards to a business transaction (Muamalat) is governed by the notion that every transaction is permissible, except when there is a clear text which prohibits it. .the practice of transactions in Islamic Fintech application should follow the rules of contract (Aqd) used in the transaction by observing the pillars (Rukn) and conditions (Shart) in the contract. In addition, Islamic Fintech application should aim at achieving the objectives of the Shariah (Maqāsid Al Shariah), namely, to realize the benefits (Maslahah) and to avoid the harms and difficulties (Mafsadah and Mashaqqah). Cited in: Irum Saba, Rehana Kouser, and Imran Sharif Choudhry (2019). Fintech and Islamic Finance: Challenges and Opportunities: *Review of Economics and Development* Studies 5(4), pp. 5. Accessed on May 21 2021 from: https://www.researchgate.net/publication/338342216_Fintech_and_Islamic_Finance-challenges_and_Opportunities

[3] Adewale, A. A. and Ismal, R. (2021). Digital Transformation in Islamic Banking. IFSB Working Paper No. WP-19/12/2020. https://www.ifsb.org/download.php?id=5925&lang=English&pg=/sec03.php

services naturally appealing on religious grounds to both existing and potential customers. The region accounts for about 65% of the global worth of the Islamic Financial Service Industry (IFSI).[4] However, rapidly changing structural dynamics and the adoption of technology also influence the competitiveness of Islamic financial service providers in the region today. As of October 2019, over 330 Fintech solutions were reported to be operating across 22 countries in the region,[5] which currently has two main hubs: the GCC hub with 58 Fintech companies mainly in the payments and lending sector, and the MENA (excluding GCC) hub comprising 12 Fintech companies mostly in the fund-raising sector.[6]

Islamic Fintech in the Arab region remains highly concentrated jurisdiction and sector-wise. These jurisdictions are mostly those that also have systemically significant Islamic banking sectors.[7] This concentrated prominence is also observed in terms of the segments that the Fintech in the Arab region focus on unlike their cohorts in the Southeast Asia or Europe regions. Notably, in the Arab region a high volume and a high momentum are observed in key segments like deposits and lending, and payments. Despite the relatively low volume in digital assets, Islamic social finance, insurance, and capital markets, post-COVID-19 realities hold great promises for a high momentum in these segments.

A lot of Islamic Fintech related activities are ongoing in the Arab region, there is a fast rate of evolution and proliferation of Islamic Fintech services and the high rate of adoption by the users, operators, supervisors and regulators in the region.[8] As such, the outlook seems very favourable given the strategic intents of various governments in the region to either transforming to; or sustaining their position as Islamic Fintech hubs.

The remainder of this chapter are as follows. The next immediate section provides a synopsis of the imperatives of Islamic Fintech in the Arab region. Thereafter, the next section highlights some common types of technologies adopted by Islamic Fintechs, as well as the Fintech hubs in the region. The final section highlights some key challenges and way forward to sustaining the momentum but also ensuring widespread prominence of the Islamic Fintech industry in the Arab region.

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[4] IFSB IFSI Financial Stability Report 2021 https://www.ifsb.org/download.php?id=6106&lang=English&pg=/sec03.php
[5] CGAP-EY_FintechRegionalReport_ArabWorld_2020.pdf (findevgateway.org)
[6] Global Islamic Fintech Report 2021. https://cdn.salaamgateway.com/special-coverage/islamic-Fintech-2021/Global-Islamic-Fintech-Report-2021-Executive-Summary.pdf
[7] Based on the IFSB threshold, which was also adopted by the IMF, systemic significance implies Islamic banking accounts for at least 15% of the domestic banking asset worth.
[8] Based on the tracking of 241 Islamic Fintech firms across 64 countries covered in the Global Islamic Fintech Index 2020, these are basically the GCC countries and Egypt, as well as a few instances in Jordan, Lebanon, and Morocco. https://cdn.salaamgateway.com/special-coverage/islamic-Fintech-2021/Global-Islamic-Fintech-Report-2021-Executive-Summary.pdf

2. Imperatives of Islamic Fintech to the Arab Region and Beyond

The value proposition of Islamic finance is anchored on the core essential principles of the Sharīʿah to remove hardship, promote justice, and protect public interest. This aligns very well with the various international development agenda, as well as technological capabilities offered today. A few of these universal agenda which could be technologically-driven have peculiar positive implications for the Arab region. These include but not limited to: Islamic social finance, financial inclusion, customer centricity, regulatory and supervisory efficiency etc.

2.1 Islamic Social Finance

Islam is theologically communitarian and as such, the underlying philosophy of Islamic finance emphasizes both the 'mechanics and spirit' of financing. In this regard, the crucial role of Islamic social finance cannot be overemphasized. Prior to, but especially at the outbreak of COVID-19, technological advancement has been very useful to addressing issues bothering on collection, disbursement, and administration of Islamic social finance platforms in a manner that ensures the requisite transparency and efficiency.

The latest Global Islamic Fintech Report indicate that the Islamic social finance category is one of the least active verticals in the Arab region. This is notwithstanding the fact that the IRTI's Islamic social finance report 2020 noted the sector's enormous potentials in the Arab region via institutions like zakāh, sadaqah and awqāf.[9] IRTI further noted that double-digit growth in social funds mobilization was recorded by countries that took proactive steps to reform the Islamic social finance sector, whose relative importance has since been brought to the fore by the outbreak of the COVID-19 pandemic. In fact, the United Nations (UN) noted that the Islamic social finance platforms' annual funds mobilization worth USD 300 billion in zakāh, sadaqah and awqāf are critical towards achieving some of the Sustainable Development Goals (SDGs). According to H.E, Dr. Rola Dashti[10]

> *As we seek to overcome financial constraints, funding shortfalls and financing inequalities, we believe that Islamic social financing, itself built on the principles of fairness and justice, can open pathways to stimulate economic activity and promote social welfare, financial inclusion and shared prosperity.*

[9] The Report covers five Arab countries from the Northwest of Africa. https://irti.org/product/islamic-social-finance-report-2020/

[10] H.E. Dr. Rola Dashti is the Executive Secretary of the UN Economic and Social Commission for Western Asia (ESCWA) made the comments at the launch of the International Dialogue on the Role of Islamic Social Financing in Achieving the SDGs. Islamic social financing initiative aims to help economic recovery, pandemic response | | UN News

IRTI has noted the lack of initiatives to strengthen and mainstream this important sector of the Islamic financial services industry. Efforts in this regard are beginning to gain traction among stakeholders due to the benefits of integrating technology with the various distributive mechanisms in Islam. For instance, the application of blockchain technology in Islamic social finance would significantly help in building greater trust and transparency which are essential for changing community mindset to align with one of the broader objectives of Sharīʿah – to remove hardship. There exist opportunities, therefore, for Islamic fintechs to provide such initiatives which offers both social benefits to the donors and beneficiaries, and economic benefits to the Islamic social Fintech entrepreneurs and investors.

2.2 Financial Inclusion

According to Datuk Syed Zaid Albar:[11]

> *Islamic products and services for financial inclusion hold the promise for a shared and better future. Therefore, increased digitisation will certainly reduce costs and enhance speed, convenience and appeal. In this regard, the capital market provides entrepreneurs and MSMEs both conventional and Shariah-compliant avenues to access alternative sources of financing. Equity crowdfunding and peer-to-peer financing platforms as well as venture capital and private equity are available to meet their needs at different stages of their businesses.*

Without prejudice to a plethora of Fintech-related efforts, including regulatory sandboxes and innovation hubs in the Arab region, financial inclusion levels are still comparatively low. According to CGAP, there are 140 million financially excluded adults and 13 million companies that lack financing in the region.[12] Among the 149 Fintech solutions identified in a CGAP report, only 7% target youth, women, and refugees, while 5% target low-income individuals.[13] As such, there is huge opportunities for the Islamic Fintechs in the Arab region to fill the void via deployment of cutting-edge technology and innovation. Specifically, excluding the GCC countries, the Arab region accounts for one of the lowest levels of financial inclusion in the world. While 59% of male adults do not have access to an account, 63% of Micro, Small, and Medium Enterprises (MSMEs) do not also have access to finance. There is also less than two percent penetration of the insurance services in the region.

[11] Datuk Syed Zaid Albar, Chairman, Securities Commission, Malaysia. The excerpt is from the keynote address delivered during the Securities Malaysia, World Bank Group, and International Organisation of Securities Commission (IOSCO) Conference on Islamic Finance: A Catalyst for Financial Inclusion, held from 29 to 30 April 2019 at the Securities Commission, Kuala Lumpur, Malaysia.
[12] See Nadine Chehade (2019) Mapping Fintech Innovations in the Arab World. https://www.cgap.org/blog/mapping-Fintech-innovations-arab-world#:~:text=As%20of%20October%202019%2C%20CGAP,%2C%20and%20Palestine%20(0.3%25).
[13] CGAP-EY_FintechRegionalReport_ArabWorld_2020.pdf (findevgateway.org)

The CGAP report also found that in the Arab region, only 19% of the Fintech solutions target MSMEs. This unmet financing needs presents opportunities in terms of disruption by Islamic fintechs. On the asset side, Islamic fintechs could further have huge impact on the MSMEs balance sheet in terms of invoice financing and supply-chain financing for receivables in a simpler, transparent, and secured way. On the equity and liabilities side, fintechs could further have impact on the MSMEs balance sheet via e-commerce finance, trade finance, peer to peer (P2P) financing, and equity crowd-funding etc.

2.3 Enhanced Customer Value, Experience and Convenience

Customer centricity is the new normal and Islamic Fintechs in the Arab region have exciting potentials to deepening customer value and experience. The Arab region now experiences increased customer centricity due to changing customer demographic structure and expectations. According to CGAP (citing GSMA, 2020), access to mobile & smartphones in the Arab region is high: 65% of the region's population has a mobile subscription, with 2 in 3 opting for a smartphone. Enhanced operational efficiency and simplification of financial processes have positive implication for customer satisfaction and economic bottom line.

Changing customer demand particularly from increasing number of millennials that have grown up in a digitally connected world is another key factor. The fact that these millennials do not have the same loyalty to traditional financial services providers is a key factor driving the prominence and adoption of Fintech in the Arab region. Changing consumer expectations has brought about value given that customers now have more access to hitherto restricted assets, more control on their choices and more visibility in product development. Notable shift in channel seems manifest in the emphasis on distribution dominance over place dominance.

Furthermore, Islamic Fintech now use technology to increase operational efficiency in areas like customer onboarding/ eKYC, financing, trade finance, capital markets and cross border remittances where it shows promising results. This implies that Islamic Fintech and its various sub-categories have exciting potentials to deepening customer value and experience in the Arab region.

2.4 Improved Regulation and Supervision

While promoting technological innovation in the financial services industry is highly desirable, regulations are also important for ensuring there is no infringement on financial market integrity and stability, financial inclusion and consumer protection. Some jurisdictions have either rolled out action plans or regulations for fintechs relating to cashless payments, electronic money and electronic banking, digital banking, cyber-security, and crypto-assets. Other related areas include electronic or pre-paid cards, crowdfunding, cloud computing, regulatory sandboxes, open banking, and third-party outsourcing etc. In addition, regulators are ensuring that they enhance the transparency, consistency and standardization of financial regulatory processes, in a way that promotes proper interpretation of regulatory standards and at a lower cost. The relative indispensability of this for financial stability cannot be overemphasized in terms of attracting both domestic and foreign investments into the sector.[14]

3. Islamic Fintech Modes

Based on the classification in the Islamic Finance News (IFN) Fintech Landscape 2018, the Islamic Fintech can be categorized into nine. These include blockchain and cryptocurrency, trading and investments, crowdfunding, remittances and forex, peer-to-peer finance, insurtech, digital banking, data and analytics, personal finance, and banking software. In this chapter, Islamic Fintech is classified in relation to product or service type and the recipients of the product or service wether as a consumer or business (B2B) or (B2C). The following are the most common products or services offered through Islamic Fintech in the Arab region.

3.1 Accounts and Payments

This is one the most common entry segments for many Islamic fintechs given that the aspect of Sharīʿah requirement is very minimal and mainly restricts payments for non-halal activities. Most of the notable developments here relate to offering interest free accounts (current account) with debit card from major card providers like Visa and Master cards and facilitating local and cross border transfer through a seamless and intuitive apps. This is considered as a good strategy in customer acquisition and products offer.

[14] For instance, in Saudi Arabia, in August 2020, SAMA issued an update to the Payment Services Provider Regulations (PSPR) which applies concepts implemented by the European Union’s Payment Services Directive (PSD2), thus making it easy for international PSPs that are already familiar with the PSD2 to launch operation in Saudi Arabia.

Most players in this area are hybrid, which means they use traditional payments gateway but apply filtering for Islamic Fintech apps for Sharīʿah non-compliant merchants. Notably, in this space in the UAE, is a recent announcement of a fully Islamic Digital Bank by Zurich Capital Funds Group named RIZQ/BARAKA. It will, like two other Islamic Neobanks in the UK namely, Niyah and RIZQ offer accounts and debit cards in association with Visa and MasterCard. While most of the developments in this area are by new start-ups and young entrepreneurs, the incumbent banks have also started penetrating this area. For instance, "Insha" Bank which belongs to Al Baraka group, Bahrain was launched in Germany, and NOMO bank which belongs to Boubyan bank, Kuwait was also launched in the United Kingdom (UK). These types of fintechs are a great catalyst for financial inclusion in most of the Muslim world in general and the Arab region in particular due to low rate of financial inclusion.

3.2 Deposits and Savings

This generally includes funds mobilised through either savings or time deposits. In Islamic finance, the contracts involved are more complex compared to the current accounts used for payments apps in the conventional finance space. The former requires that fund deposited is invested then profit-sharing model is applied. The Islamic Fintech activities are very few in this area perhaps given that it requires collaboration beyond many of the Fintech start-ups. Investment Account Platform (IAP) in Malaysia is a good example of this Fintech innovation. The IAP involves an investment platform created by consortium of Malaysian banks, which allows individual and institutional investors to open investment accounts and the platform matches the investments with ventures or SME looking for funds (see figure 1).

Figure 1. Mechanics of Investment Accounts Platform (IAP)

Source: https://iaplatform.com/showIapInfo

Another form of savings scheme which though have been practiced among individuals for many years but have recently found its way into Islamic Fintech is the Cooperative Savings Scheme. This is also referred to as Money Circle or Rotating Savings and Credit Association (ROSCA). It involves a group of people, who contribute fixed periodic (usually monthly) amount of money into a pool, and each group member receives the pooled amount periodically (usually monthly) on agreed order which in Arabic is called "جمعية" or "دورية". Notable examples in Egypt are "el Gameya" and Moneyfellows that raised USD 4 million Series A funding. Recently in Saudi Arabia, Hakbah, which operates under Saudi Central Bank (SAMA) Sandbox following its graduation from UAE Dubai International Finance Centre (DIFC) Fintech Hive accelerator program in 2019 also raised USD 1.2 million seed funding.

3.3 Wealth Management, Investments (Robo Advisor)

A robo-advisory service involves using digital platform to profile the customer risk and reward appetite, select the right Sharīʿah- Compliant equity to trade in. It is one of the simple and high impact Fintech types for individuals who do not have the expertise of online equity trading. As per statistics from statista.com, assets under Robo Advisors segment will reach USD 1.4 billion by end of 2021, and reach USD 2.8 billion by 2025 with a compound annual growth rate (CAGR) of 20 %. This area has a very good acceptance from the Islamic consumers, as such conventional Robo Advisors have also started offering such product. Notably, the biggest valued Islamic Fintech to date is Wahed Invest - a Robo advisor Fintech platform operating across three jurisdictions US, UK and Malaysia. In the Arab world, Sarwa in the UAE, a conventional Robo advisor platform started offering Sharīʿah-compliant products recently.

3.4 Financing

This occupies a bigger share in Islamic Fintech and witnessed a good level of innovation. It has multiple modes briefly discussed below:

a) **Fund Raising:** This is through Peer to Peer (P2P) lending or crowdfunding and is arguably the most prominent in Islamic Fintech. The concept of crowdfunding or P2P lending aligns with the concept of Islamic finance whereby some individuals have wealth and looking forward to maximize it, while other individuals or businesses have a funding need. Hence both complement each other in a Sharīʿah-compliant manner either through debt or equity finance. This model brings both investment and financing benefits and the

Fintech platform gets its returns through fee from both parties hence upscaling of the platform requires large number of transactions.

It is important to mention that the evolution of crowdfunding in Islamic Fintech started for a good cause and charitable purpose through launchgood.com which is one of the prominent global Islamic crowdfunding charity platforms. It was started in 2013 and have raised USD 197 million till date. Following this success, the model had been developed towards a more business focus and targeted at helping people in need of affordable housing in Indonesia through Ethis Crowd - the first Real Estate crowdfunding platform launched in 2015. Similarly, another real estate crowdfunding, Yielders UK was launched in 2016.

Other notable crowdfunding successes using the same concept, but for helping SME finance is Beehive, which was launched in UAE in 2014 as a conventional platform. It later included Islamic workflow based on the GCC region's customer demands for Islamic Fintech solution. Beehive later moved into Saudi Arabia in 2020 through partnership with a local bank. On the other hand, Equity crowdfunding that is also Sharīʿah-compliant by nature have been started much earlier since 2012 through players like Eureaca in UAE/UK and Zoomal in Lebanon.

b) **Alternative finance:** While crowdfunding was used initially as a direct way to finance SME expansions or certain demands, new fintechs were launched recently in the region for invoice financing. Some of these Fintechs have been focusing on Government transactions since it has a lower risk. Others finance mostly invoices based on their own criteria. Most of these start-ups in the Arab world are in Saudi Arabia and operating under SAMA Sandbox.

Another alternative finance model that started and have grown rapidly during the COVID-19 pandemic due to the increase in ecommerce transactions is Buy Now Pay Later (BNPL). In this case, an alternative or embedded finance option for e-commerce consumers is provided whereby they can buy certain goods online at certain limit then pay over few instalments (up to 4 times) with 0% finance. The consumers do not pay any interest for paying in instalments, only late payment fees are applicable. The financing happens between the merchant selling goods and BNPL platform who pays the merchant the prices for the goods immediately at discounted rate when the customer makes the purchase.

The most notable Islamic Fintech start-up in this area is Tamara from Saudi Arabia that recently raised USD 100 million series A funding, the highest seed fund in the region and highest for Islamic Fintech start-up.[15] Recent innovation around alternative and embedded finance is quite progressive and it is expected that great developments for Islamic Fintech around this area will be witnessed in the time ahead.

3.5 Digital Assets

There are ongoing debates on the permissibility or otherwise of crypto currencies or treating cryptocurrency as a currency or an asset among Sharīʿah Scholars. Building on the opinion of Sharīʿah scholars who allowed cryptocurrencies some developments have been happening in a few jurisdictions. Sharīʿah certified cryptocurrency exchanges were launched in jurisdictions which have regulations for cryptocurrency exchanges such as Bahrain. Examples of these start-ups are Rain, and Fassets in Bahrain, and Bitoasis in the UAE.

The market capitalization of cryptocurrencies is about to USD 2 trillion. The increased adoption of cryptocurrencies in the jurisdictions that allow it brought about some new products to utilize the huge liquidity it offers apart from payments which bitcoin was mainly focusing on. A **Decentralized Finance (DeFi)** have been developed over the past few years to allow using cryptocurrencies mainly Ethereum in financing based on smart contracts. This has also attracted some start-ups in this field to use DeFi for Sharīʿah -based financing and seems a very interesting space that needs to be watched by both Islamic finance and Fintech companies.

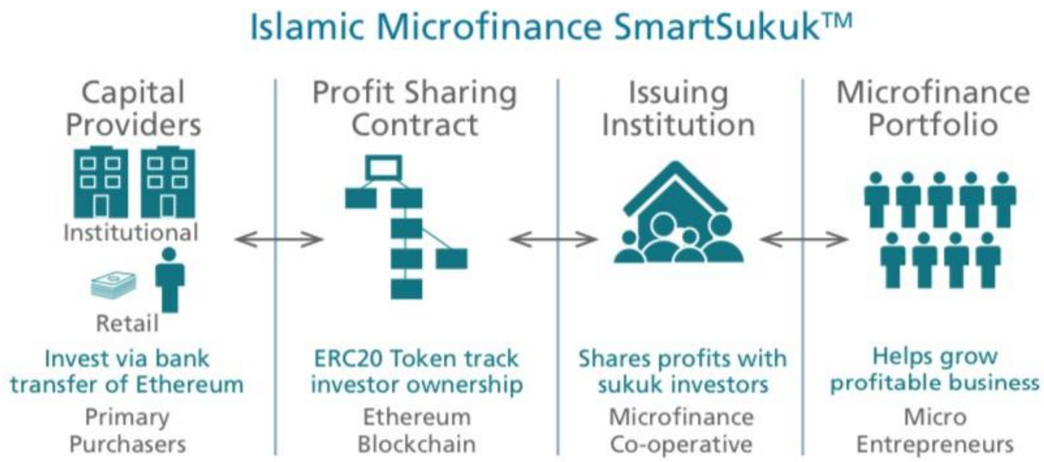
The value that digital assets bring to the financial services industry through its underlying blockchain technology cannot be ignored. A good number of Islamic Fintech start-ups are in this area especially because the blockchain principles of immutability, security, distributed nature and transparency very much align with the Islamic finance foundational principles.

The development in this area is still quite slow since it needs an ecosystem of partnership to be created to be able to get the benefits of the smart contract via blockchain technology. It is

[15] The previous highest record was for Waheed invest for USD 25 Million in Q1 2021.

worthy to note that some start-ups are in the final stage to launch trade finance smart contracts. A notable development around capital markets was achieved by Wethaq Capital Markets, a new Fintech based in UAE that issued the First Sukuk pilot utilizing R3 Corda Blockchain network under the supervision of Dubai Financial Services authority (DFSA). Another notable example in this space although not from the Arab region is Blossom Finance in Indonesia that has implemented Smart Sukuk for Micro Finance over Ethereum ERC20 smart contract.

Figure 2: Blossom Finance Islamic Microfinance SmartSukuk in Indonesia



Source: Islamic Finance, A catalyst for Financial Inclusion – World Bank Group

3.6 Social Finance

This is one of the most untapped area in Islamic finance in general and Islamic Fintech in particular. As per the World Bank, the value of Waqf worldwide ranges from USD 100 billion to 1 trillion. While what we have discussed so far is related to the common financial services areas which could be mirrored from conventional finance, the Islamic social finance mechanisms such as zakāh, sadaqah and awqāf are unique to Islamic Fintech.

Some notable challenges impeding the optimising of the potentials of the Islamic social finance sector includes but not limited to: lack of process transparency, poor management of Waqf assets and related data, inefficient collection and distribution practices, and lack of awareness and education. Financial Technology would play a major role in the development of this sector. For example, a recent announcement of the collaborations between United Nations and Islamic Development Bank (IDB) in using "**Islamic social financing to support efforts to recover and**

rebuild from COVID-19 pandemic" shows the importance of Islamic Social Finance in supporting humanity and achieving UN Sustainable Developments Goals SDG's.

The use of fourth industrial revolution (IR4) such as Blockchain, Artificial Intelligence, mobility and cloud computing through Islamic Social Fintech (ISF) is a key for developing this critical and important sector. Waqf and sadaqah have drawn modest attention from Fintech start-ups utilizing crowdfunding, sukuk and blockchain models. The following are types of Waqf which have been digitized so far by Fintech players:

a) **Direct Cash Waqf**, which refers to endowments made by donors in the form of monetary value to be channelled directly to develop Waqf property (Mohsin, 2014), examples of this types are donations to build a mosque, school or hospitals

b) **Indirect Cash Waqf**, which refers to cash donations that are accumulated and invested before distribution to the beneficiaries (Mohsin, 2014). In this model, donated cash will be deposited in an account where all funds will be invested in a Sharīʿah-based instruments similar what we have discussed in the investment part earlier in this paper. The revenue from the invested funds will be distributed to Waqf projects similar to the direct cash Waqf.

c) **Waqf Sukuk**, which is a more recent innovation in fund-raising for waqf development (Mohsin, 2019). Sukuk refer to investment certificates of equal value that represent ownership of tangible assets or services (Shukri et al., 2019). Sukuk holders either own the underlying asset or the securitised cash flows of the underlying project (Abdul Aziz et al., 2019). Sukuk issuers, in turn, raise sufficient funds for mosque redevelopment projects or other waqf developments. The Zamzam Tower project in Makkah and mixed used residential complex in Singapore (Shukri et al., 2019) are good examples of funding waqf properties by issuing Sukuk (Mohsin, 2019).

A recent development at global level include GiveZakat App launched in 2020 by the United Nations High Commissioner for Refugees (UNHCR). The mobile **app** allows doners to donate both Zakāh and Saddaqah, calculate Zakāh, select location of their Zakāh and track their donations.

Figure 3: Give Zakat Mobile app view

Source: Give Zakat Mobile App

Other notable examples include WaqfChain which is a Cash Waqf solution over Blockchain launched by Finterra, and Global Saddaqa which was also launched by Ethis for various charity purposes all over the world. Launch good which is a crowdfunding platform also plays a good role too. Other examples in the Arab region include Yallagive in the UAE which run crowdfunding across numerous categories. Similar initiatives are in the development phase in Morocco while the crowdfunding law is currently being approved.

Disruptive technologies like blockchain plays a very important role and some of the newly launched products are based on it thus ensuring transparency for donors which is very important concern. If tapped properly, it will create more inflow of liquidity in the Islamic social finance sector, as well as asset tokenization which blockchain provides would bring billions of dollars of assets into the ecosystem and would be invested to bring better returns.

4. Islamic Fintech Hubs

According to the latest Global Islamic Fintech Report 2021, a total of 241 Islamic Fintech companies operates globally with the following regional distributions.

Table 1. Distribution of Islamic Fintech companies by Regions and Sectors

Region	Number of companies	st sector
South East Asia	62	Fund raising
GCC	58	Payments / Lending
Europe (UK)	51	Deposits / Lending
North America	18	Wealth Management
South/Central Asia	17	Payments
MENA (Except GCC)	12	Fund raising
Sub-Saharan - Africa	7	Alternative Finance / Deposit and lending

Source: Global Islamic Fintech Report 2021

By looking at the distribution of the Islamic Fintech start-ups and activities happening around the globe, there are three main hubs for Islamic Fintechs globally. These are:

1. Asia (Malaysia and Indonesia)
2. Middle East (GCC)
3. Western countries (UK)

Figure 4. Global Fintech Hubs

The three centres have established a good regulatory framework in Fintech. Specifically, while UK is leading globally in Fintech and hosts the greatest number of Neobanks in Europe, it has a big number of Muslims who seek Islamic finance products. A dedicated Islamic Fintech platform was set up by group of Islamic finance and Islamic Fintech professionals to promote and support the industry. In the GCC region, Central Banks as well as Fintech centres were established to support both the conventional and Islamic Fintech ecosystem.

Table 2. Fintech Centres in the GCC

Fintech Centre	City	Regulator	Country
Hub71	Abu Dhabi	ADGM	UAE
Fintech Hive	Dubai	DFSA	UAE
Bahrain Fintech Bay	Manama	Central Bank of Bahrain	Bahrain
Fintech Saudi	Riyadh	SAMA	Saudi
Qatar Fintech Hub	Qatar	CBQ	Qatar

Source: Global Islamic Fintech Report 2021

The third hub, Malaysia has advanced level of Islamic finance market, regulatory framework, universities and Islamic research centres such as International Centre for Education in Islamic Finance (INCEIF), and International Sharīʿah Research Academy (ISRA). This hub also have other supporting platforms like the Fintech Alliance, Malaysian Collaborative Network Platform for disruptive Innovation (I-Connect) which play a role in promoting Islamic Fintech towards Malaysia’s status as a hub having a complete Ecosystem for Islamic Fintech. Another notable growing region is the Commonwealth of Independent States (CIS) countries where Islamic finance have been growing and some Neo Banks have been established such as Tayyab bank which started in Dubai and was launched recently in Kazakhstan.

5. Challenges

Other than the Sharīʿah-compliance dimension that are peculiar to Islamic Fintechs, other challenges are general to all the fintechs in the Arab region. These include but not limited to funding constraints especially since the outbreak of COVID-19, competition from conventional cohorts, regulatory issues, and human resource challenges to mention but a few.

a) *Sharīʿah non-compliance risk*: Notwithstanding arguments that technology is 'Sharīʿah-neutral',[16] the consideration for Islamic finance specificities with the Sharīʿah as the fulcrum is at the core of the concept of Islamic Fintech.[17] To reflect the importance, at least 76% of the Islamic Fintechs covered in the Global Islamic Fintech Report 2020 have either obtained, planning to obtain, or expecting to obtain Sharīʿah certification,[18] and another 56% considered such certification as being necessary to be considered as Islamic Fintech. The fact that another 44% do not consider Sharīʿah certification nor view it as necessary to be considered an Islamic Fintech therefore, begs the question: to what extent is Sharīʿah consideration imperative in digital products and financial apps development in response to perceived 'Sharīʿah neutrality' of financial apps?

The fact that Islamic finance is essentially contract-driven makes the application of, for instance, blockchain technology for smart contract and Artificial Intelligence adopted for Islamic investment platforms very beneficial. However, given that Sharīʿah-based expertise are scarce and related thoughts are still developing in these areas, including for crypto-assets, susceptibility to Sharīʿah non-compliance risk remains a challenge.[19] Some Islamic fintechs perhaps based on their preference for an operating model relies on several 'as-a-service' relationship with vendors who may not have the requisite Sharīʿah governance mechanism in place.

Other related Sharīʿah non-compliance concerns were highlighted in details[20] especially as it relates to the use of digital wallets and ambiguity as to what underlying contracts such

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[16] The notion of SharīʿahSharīʿahSharīʿah-neutrality is hinged on the assumption that whatever is not forbidden is permissible.
[17] As stated in the World Bank-IsDB Global Report on Islamic Finance 2016, about 9 percent of the population across 35 selected OIC Muslim-majority member countries voluntarily exclude themselves from financial services on account of religious reasons. https://openknowledge.worldbank.org/handle/10986/25738
[18] Specifically, 40 percent of Islamic Fintechs are already Sharīʿah certified, while another 4% and 32% are either in the process of obtaining Sharīʿah certification or intend to seek certification in the future, respectively. https://ceif.iba.edu.pk/pdf/IslamicFintechReport19.pdf
[19] Mufti Faraz Adam (2021), Sharīʿah Compliance Considerations in Islamic Fintech. *Global Islamic Fintech Report 2021*. https://cdn.salaamgateway.com/special-coverage/islamic-Fintech-2021/Global-Islamic-Fintech-Report-2021-Executive-Summary.pdf
[20] Adewale, A. A. and Ismal, R. (2021). Digital Transformation in Islamic Banking. IFSB Working Paper No. WP-19/12/2020. https://www.ifsb.org/download.php?id=5925&lang=English&pg=/sec03.php

Apps are based on. There is also a possibility of a breach of the sequence and number of Sharīʿah parameters in a digital contract, tagging error in the *Aqd*[21] which may lead to inadvertent trading in a Sharīʿah non-compliant shares, or bugs in the selling price capping. This could lead to a profit overcharge due to error in profit/charge computation, and the issue of khiyar (option) in the application of smart contract.

b) Regulatory issues: Managing regulatory risk and compliance could also be challenging, time-consuming, and costly. In some jurisdictions, there exists a lack of regulatory support in terms sandboxes, technical standards, rulebooks, frameworks and other related policy documents needed to mitigate regulatory uncertainty facing Fintech companies in many countries in the region. This may make the fintechs highly susceptible to violating regulatory compliance and as such attracting fines and penalties.

In addition, without prejudice to the laudable efforts of some countries within the region in this regard, such efforts are also mainly focused and applicable in the domestic market therefore limiting the cross-boarder scalability of the fintechs to other untapped markets within the region.[22] For instance, the cost of acquiring different licenses for same Fintech activity in different jurisdictions within the region may be too prohibitive thus impeding the international growth of the Islamic Fintech. In some countries also, in addition to inadequate coverage of the myriads of Fintech activities, the regulatory oversight on technology, anti-money laundering, cybercrime, and financial stability assessment for example are fragmented and lacks adequate coordination among regulatory authorities therefore aggravating regulatory uncertainties.

c) Competition: In the ever-evolving Fintech world, both competition and competitors are changing very fast. In order to enhance their competitiveness and contestability, the Islamic Fintech in the Arab region are therefore expected to in addition to ensuring continuous compliance with the Sharīʿah requirements, and also keep tab on trends in innovation and

[21] An agreement between two willing parties to initiate, adjust or terminate a given transaction in a manner binding upon both parties.
[22] At the moment, no there is no universally accepted regulatory body for Islamic Fintech, although AAOIFI is presently drafting voluntary Sharia'h standards for some Islamic Fintech activities like crowdfunding and cryptocurrency.

disruption. Finding a fine balance between the preferences of patrons in a region with an untapped but religious-conscious market presents a peculiar challenge of aspiring to upgrade to latest innovation without losing sight of other non-technology considerations.

d) Funding: The outbreak of COVID-19 and the consequential need for physical distancing to limit human intervention in financial transactions have both strengthened and quickened the relative indispensability of the Fintechs. However, the pandemic has also brought about a significant dip in venture capital investments in Fintechs, causing many of them to be faced with the challenge of coping with abrupt pressure to maintain operational resilience amid the uncertainty in the COVID-19 economic path and duration which may further impede their growth trajectory.[23]

The Global Islamic Fintech Report based on a survey of 100 respondents indicated that 56% of the Islamic Fintechs respondents expects to raise equity funding worth USD 5 million on the average in 2021. While this was reported as a sign of confidence in the growth potentials of the industry, it also indicated funding constraints is a front-burner issue. As noted, despite the global Fintech market receiving USD 30.4 billion in investment up to 3Q 2020, only a minute proportion was channelled to Fintechs in the Arab region in general and Islamic Fintechs in particular.[24]

e) Human resource and domain specialist: That either Islamic finance and financial technology considered in isolation still faces issues of lack of requisite human capital needed means their combination even requires more. Availability of specialised human capital and domain experts is at the core of the digital transformation process and one of the key determinants of location of Islamic Fintechs head office. The peculiarity of Islamic Fintech activities would therefore, require that to bridge this skills gap, existing talent pool would need to be retrained and reskilled while effort are made to attract new talents that

[23] Uwaje, N (2020), Presentation made at the Arab Monetary Fund (AMF) online meeting on "Fintech Innovation, Regulations and Collaboration: Fintech Resilience during and post COVID-19", held on 7 May 2020.
[24] Dalal Aassouli and Thaddeus Malesa (2021). Building a World Class Islamic Fintech Hub. *Global Islamic Fintech Report 2021*. https://cdn.salaamgateway.com/special-coverage/islamic-Fintech-2021/Global-Islamic-Fintech-Report-2021-Executive-Summary.pdf

have the talent and passion for technology blended with basic appreciation of knowledge of Islamic finance.

As noted, this process may be very complex and herculean given that attracting and recruiting the right talents in areas like big data and analytics, machine learning, artificial intelligence and program coding may involve looking beyond the Islamic financial services industry, or even beyond a particular jurisdiction in the Arab region.[25] In addition, most of these potential talents are likely to be millennials, whose likely consistently changing expectations and preferences, regarding working conditions, remuneration, location and opportunities for further development heightens cost of staff retention.

[25] Adewale, A. A. and Ismal, R. (2021). Digital Transformation in Islamic Banking. IFSB Working Paper No. WP-19/12/2020. https://www.ifsb.org/download.php?id=5925&lang=English&pg=/sec03.php

Figure 5. Challenges facing Islamic Fintech in the Arab Region

Source: Authors' illustration.

6. Some Recommendations and Way Forward

Very commendable efforts relating to leveraging on the enormous potentials of Islamic Fintech are already taking place albeit relatively concentrated in a few, but generally across various countries in the Arab region. Yet, there remains important roles to be played by various stakeholders including international organisations and standard setting bodies, regulatory and supervisory authorities, Islamic financial institutions, academic and research centres, etc. There are also important areas that are either peculiar to the Islamic Fintech industry like Islamic social finance, and others that are universal but needed further attention in the Arab region, for instance, financial inclusion and SMEs financing. To drive the sector, therefore, a few suggestions on the way forward are offered.

a) **The various international organisations and standard setting bodies have a crucial role to play especially as it relates to issue of regulatory uncertainty and Sharīʿah neutrality**. As noted, perhaps the relative dearth of Islamic Fintech standards could be due to the fact that the process involved in regulations drafting is slower compared to the fast pace of innovation in the Fintech space. While the former is principles-based most activities relating to the latter are algorithm-based.[26] Therefore, promoting the collaboration and harmonization between regulators in the same Fintech hub for instance, the GCC and across different hubs to speed up the adoption of Islamic Fintech solutions and allow Islamic fintechs to scale beyond small and limited regulatory borders is imperative. Furthermore, such harmonisation may have to extended to the requirements for deciding the Sharīʿah-neutrality of an Islamic Fintech transaction, products, or services.

b) **The Arab Monetary Fund (AMF) to play a crucial role in facilitating regulatory harmonization**. It is commendable that the AMF has created a Fintech working group and launched a Fintech Index[27], issued a Fintech glossary, in addition to regulatory guidelines and frameworks. Against the backdrop of the specificities of Islamic Fintech, these laudable efforts can be further enhanced by continuously providing opportunities and platforms that address peculiar Islamic Fintech regulatory and prudential matters in relation to universal application of Fintech in general and Islamic Fintech in particular in the Arab region.

c) **The AMF and other international organisations should intensify international collaboration in order to observe and share best practices and case studies as a form of general principles across their member jurisdictions.** In addition, a specific Islamic Fintech regulatory guidance on conduct requirements and operational matters relating to risk, data management, product and process compliance with shariah, etc. may be necessary to create justification for its distinct identity from the general Fintech. At the moment, no universally accepted regulatory body exist for Islamic Fintech. For a start, it is gladdening that AAOIFI is drafting a voluntary standard in some areas relating to Islamic Fintech. The IFSB also has a dedicated segment to digital finance in its issued Technical Notes on Financial Inclusion touching on regulatory and supervisory oversight requirements in IFSB member jurisdictions regarding adoption of technological innovation for financial inclusion via the IFSI.

[26] Ibid.
[27] Arab Monetary Fund issued the Fintech Index for the Arab Region "FinxAr" in April 2020. https://www.amf.org.ae/ar/report/index-financial-technologies-arab-countries.

d) **Adequate funding remains a critical success factor for the Islamic Fintech industry in the region**. It is pertinent to identify and unlock sources of funding for both early stage Fintechs through Islamic crowdfunding, angel financing, and late-stage start-up etc. In this regard, both the government support through tax incentives and other financial support schemes are important. Moreover, the fact that 10 out of the 15 global systemically significant Islamic banking jurisdictions are from the Arab region holds promises of funding capacity to the Islamic Fintechs in the region either in terms of collaboration, cooperation or acquisition in line with the Islamic banking digitalization momentum in the region. As such, incentivizing Fintech innovators to address the gap areas through licensing, initial funding, mentoring and collaboration with incumbent are also important. The GCC Fintech centres listed in Table 2 earlier are notable examples in this regard.

e) **Talent development and availability is another crucial for the success of the Islamic Fintech industry in the Arab region**. This is so, given the imminent transformation of the digital financial services workforce. As such, there has to be a deliberate collaboration among the critical stakeholders including the government, regulators, and academic institutions to fill the skills gap as matter of national priorities. Most countries in the GCC region have already included this in their National Vision programmes and others may take a cue towards providing the requisite specialize skills set and domain experts that will drive the region's Fintech industry in general and Islamic Fintech in particular.

f) **A collaboration approach is required among ecosystem partners including Fintech innovators, incumbents, regulators, governments and funds providers to create an Islamic Fintech acceleration program to address emerging gap areas**. A similar initiative in Malaysia is "FIKRA" Islamic Fintech Accelerator between Securities Commission of Malaysia and United Nations Capital Development Fund (UNCDF) to promote Islamic Fintech solutions for Capital Markets. In addition, it is important to strengthen regulatory sandboxes and to provide Fintech hubs for both local and domestic incubators and accelerators, and ensure that they are provided live environments to test new Islamic Fintech solutions.

g) **Creating educational and awareness programs about Islamic Finance and fintechs and how they differ from conventional finance.** This is also important to attenuate voluntary financial exclusion prevalent in the region. Islamic Fintechs need to have a proposition to serve the mass community not only Shariah concerned customers. As such, they need to have offerings that are at least comparable if not better than other conventional peers.

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