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LEVERAGING ISLAMIC FINTECH

TO IMPROVE FINANCIAL INCLUSION



WORLD BANK GROUP
Inclusive Growth & Sustainable Finance
Hub in Malaysia

LEVERAGING
ISLAMIC
FINTECH
TO IMPROVE FINANCIAL
INCLUSION

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Glossary of Terms

AAOIFI	Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) is a Bahrain based not-for-profit organization established to maintain and promote <i>Shari'a</i> standards for Islamic financial institutions.	IMF	International Monetary Fund (IMF) is an organization of 189 countries, working to foster global monetary cooperation, facilitate international trade and reduce poverty globally.
AI	Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think and behave like humans.	IoT	Internet of Things (IoT) are network of devices connected through sensors, software, and other electronic devices enables collection and exchange of data.
AML	Anti-Money Laundering	ISO	International Organization for Standardization (ISO) is an international standard-setting body composed of representatives from various national standards organizations.
API	Application Program Interface (API) are a set of routines, protocols, and tools for building software applications.	KYC	Know Your Customer (KYC) is a process by which banks verify the identity and monitor the nature of customer activities.
B2B	Business-to-Business (B2B) is the marketing, selling, and distribution of products and services by one business to another.	MAMA	Mobile Alliance for Maternal Action (MAMA) Bangladesh is a public-private collaborative initiative for improving maternal and child health through mobile technology.
CAGR	Compound Annual Growth Rate	MEASA	Middle East Africa and South Asia region
CFT	Combating the Financing of Terrorism	MENA	Middle East and North Africa
DIFC	Dubai International Financial Centre (DIFC) special economic zone in Dubai that is among the top ten global financial centers, and the leading financial hub in the MEASA region.	MiFID II	Markets in Financial Instruments Directive II (MiFID II), extended scope of MiFID, is a legislative framework introduced by the European Union (EU) to regulate financial markets in the bloc and improve financial security for investors.
EU	European Union (EU) is a political and economic union of 28 member states located in the Europe.	MSME	Micro, small, and medium enterprises
FCA	Financial Conduct Authority is a financial regulatory body in the UK that oversees operations of the financial service providers to maintain the integrity of the financial markets.	OECD	Organization for Economic Co-operation and Development (OECD) is an intergovernmental economic organization with 36 member countries.
Fintech	Financial Technology (Fintech) is an emerging concept that uses technology to disrupt the financial services, operations, business models, and customer engagement.	OIC	Organization of Islamic Cooperation (OIC) is the second largest inter-governmental organization, after the UN, with 57 member states across four continents.
GCC	Gulf Cooperation Council (GCC) is a regional intergovernmental political and economic union consisting of all Arab states of Persian Gulf (except Iraq).	P2P Finance	Peer-to-peer (P2P) lending/financing enables individuals to obtain loans directly from other individuals, eliminating financial institution (middleman).
GDP	Gross Domestic Product (GDP) is the monetary value of all finished goods and services made within a country during a specific period of time (often annually).	PSD2	EU's revised Payment Services Directive (PSD2) aims to standardize the regulations for the banks and payment service providers throughout the European Union (EU) and European Economic Area (EEA).
GDPR	The General Data Protection Regulation (GDPR) is a European Union (EU) regulation on data protection and privacy for all citizens of the region, effecting business operations all around the globe.	Regtech	Regulatory technology (Regtech) a term used for the application of technology in managing regulatory processes within the financial industry.
HNWI	High-net-worth individuals (HNWI) is a term given to persons that acquire liquid assets above a certain figure, where the amount differs from one financial institution to the other.	SDG	Sustainable Development Goals (SDG) are 17 interconnected goals of sustainability and prosperity set by the United Nations (UN) to be accomplished by 2030.
ICO	Initial Coin Offering (ICO) is the cryptocurrency industry's equivalent to an Initial Public Offering (IPO).	SME	Small and Medium Enterprises
IFI	International Financial Institutions (IFI) are financial organizations established by more than one country, and hence influenced by international law.	UNDP	United Nations Development Programme (UNDP) is one of the UN agencies working to eradicate poverty and reduce inequalities across nations.
IFRS	International Financial Reporting Standards (IFRS) are international accounting standards established by the International Accounting Standards Board (IASB).	USSD	Unstructured Supplementary Service Data (USSD) is a Global System for Mobile (GSM) communication technology that allows sending text messages between a mobile phone and an application program over the network.
IFSB	Islamic Financial Services Board (IFSB) is an international standard-setting organization promoting and enhancing stability of Islamic financial services industry.		

Executive Summary



Islamic finance is a fast-booming segment of global finance. Serving a core population of 1.8 billion Muslims world-wide and a wider global ethical finance audience, its role is growing in global significance especially as it relates to global social financing needs. The global fintech revolution is having a similar impact for Islamic finance through the evolution of a nascent Islamic fintech ecosystem. The purpose of this report is to evaluate the global developments in the area of fintech solutions by Islamic financial institutions (IFIs) and its impact on financial inclusion within its core markets. The core audience of this Report are financial services institution leadership, and government policymakers, especially across the core markets of Islamic finance.

Within this century, technology and automation have always been a key part of the global financial services industry. Bank mainframe computer networks, ATMs, digital stock exchanges are examples of the earlier financial services technologies. The advent of the recent 'fintech' revolution, however, is resulting in a disruptive change of the financial services industry led by a new breed of technology enablers. This disruption is reshaping financial services business models, operational models and customer experiences opening up new avenues of serving the world's evolving financial needs. Islamic fintech opportunity operates within these developing global fintech trends.

This Report covers the overall fintech landscape centered around nine driving fintech technologies, that are delivering key end-customer financial services and back-office operational support/efficiencies.

Islamic fintech also leverages these technologies in addressing core propositions of the global Islamic finance market comprised of Islamic banking, Islamic capital markets, Takaful (Islamic insurance), and other IFIs. According to

ICD-Refinitiv, total global Islamic finance assets were estimated at USD 2.5 trillion in 2018 and forecasted to grow to USD 3.5 trillion in 2024. However, the reach of Islamic finance within its core markets still has much room to grow with wider global market reference. Account ownership in OIC member (mostly Muslim majority) 57 countries in 2018 stood at 41%, which is significantly lower than high income countries (92%). In addition, reason for not having an account being "religious" is 5% higher in case of OIC member countries, indicating a strong role for Islamic finance/fintech in addressing this gap.

A key driver of Islamic fintech opportunity identified is the young global Muslim population that comprises more than half of the global population of under 34-year-olds. This young demographic is highly tech savvy with source markets having high mobile and internet penetration relative to global average.

Another key area of opportunity is the role of Islamic fintech in galvanizing the multi-billion-dollar Islamic social finance pool from Zakat (obligatory charity), Sadaqah (voluntary charity), and Waqf (Islamic endowments). Zakat can potentially contribute USD 200 billion to USD 1 trillion globally towards poverty alleviation according to UNDP in 2018.

This Report identifies three key areas of opportunity that Islamic fintech can address. Its potential in helping leap-frog Islamic financial services reach and impact; in addressing significant financial inclusion gaps within core markets; delivering Islamic social financing to support global Sustainable Development Goals (SDGs) and needs. However, there are challenges that are identified related to regulations, investments, payment gateway regulations, amongst other to overcome.

CHAPTER 1

Report Purpose and Methodology



Report Purpose

The purpose of this report is to evaluate the global developments in the area of fintech solutions by IFIs and its impact on financial inclusion within its core markets.

The specific objectives of this report are to:

- Summarize current trends and developments on the use of latest financial digital technologies in the design and delivery of Islamic financial services
- Evaluate the potential of digital technology to make IFIs more competitive
- Assess the extent to which these innovations can expand access to Islamic financial services and enhance overall financial inclusion
- Identify the potential risks and appropriate mitigation measures
- Identify policy, regulatory and institutional challenges that need to be addressed in order to maximize the use of digital technology in Islamic finance

The core audience of this report are financial services institution leadership and government policymakers, especially across the core markets of Islamic Finance.

Methodology

The methodology of producing this report is based on extensive desk research, authors' market know-how, and original interviews with 4 Islamic Fintech CEOs (or representatives). The Report also covers select Case Studies. Except for the face-to-face interview with Blossom Finance, all interviews were done through email.

List of Islamic Fintechs being interviewed:

- Blossom Finance (Indonesia)
- Wahed Invest (USA)
- Finocracy (Bahrain)
- LaunchGood (USA)

CHAPTER 2

Islamic Finance and Fintech



Global Fintech Market and Trends

To better scope, we start with a clear definition of fintech and assess its evolution and trajectory. Within this century, technology and automation have always been a key part of the global financial services industry. Bank mainframe computer networks, ATMs, and digital stock exchanges are examples of the earlier financial services technologies. The advent of the recent 'fintech' revolution, however, is resulting in a disruptive change of the financial services industry led by a new breed of technology enablers. This disruption is reshaping financial services business models, operational models, and customer experiences opening up new avenues of serving the world's evolving financial needs. Fintech is defined by DinarStandard, a US based advisory firm, as follows:

*"4th Industrial Revolution driven technologies exponentially enhancing and/or disrupting 20th century financial services, operations, business models, and customer engagement."*¹

The term "Fourth Industrial Revolution" was coined by Klaus Schwab, the founder and executive chairman of the World Economic Forum. "It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres, collectively referred to as cyber-physical systems."² A variety of new technologies including robotics, artificial intelligence (AI), nanotechnology, quantum computing, biotechnology, and the Internet of Things (IoT) are shaping this revolution.

Fintech's impact today could be categorized as either having disrupted the current financial services offering or having innovated new services. Disruption examples include offering the same service as existing financial institutions or incumbents, yet with more convenience, lower fees, better pricing, or improved features, while innovations in new services are those solutions that were not offered previously but have been enabled with the improvement in technology. Examples of innovation include Peer-to-Peer (P2P) financing and tokenized assets using Blockchain.

Fintech services adoption today has shifted upward from 16% in 2015 into 64% in 2019, with 96% of customers aware of at least one fintech service.³

A thriving fintech ecosystem is driving this fast-growing adoption. According to EY, "the fintech ecosystem is made up of consumers, financial institutions, fintech startups, investors, regulators and educational institutions."⁴ Within the core fintech financial services providers, startups that were challenging many incumbent financial institutions are now also being challenged by the incumbent financial institutions. Incumbents are leveraging their vast existing infrastructure, regulatory experience, and reach to experiment with more resources and get their fintech solutions adapted faster.

Players from outside the financial services industry including retail companies, telecommunications, technology and social media, and power and utilities are also becoming competitive participants within this ecosystem. These companies offer innovative financial services to their existing customers, bundling fintech as complementary services. Fintech startup challengers, incumbent financial services providers, and these non-financial services players have enabled a fintech ecosystem that is fast displacing traditional financial institution alliances.

1 DinarStandard. (2018). *Islamic Fintech Report 2018 Current Landscape. Global Fintech Framework*, pg 9. DinarStandard.

2 Schwab, Klaus. "The Fourth Industrial Revolution: What It Means and How to Respond." World Economic Forum. January 14, 2016. Accessed March 20, 2018. <https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>

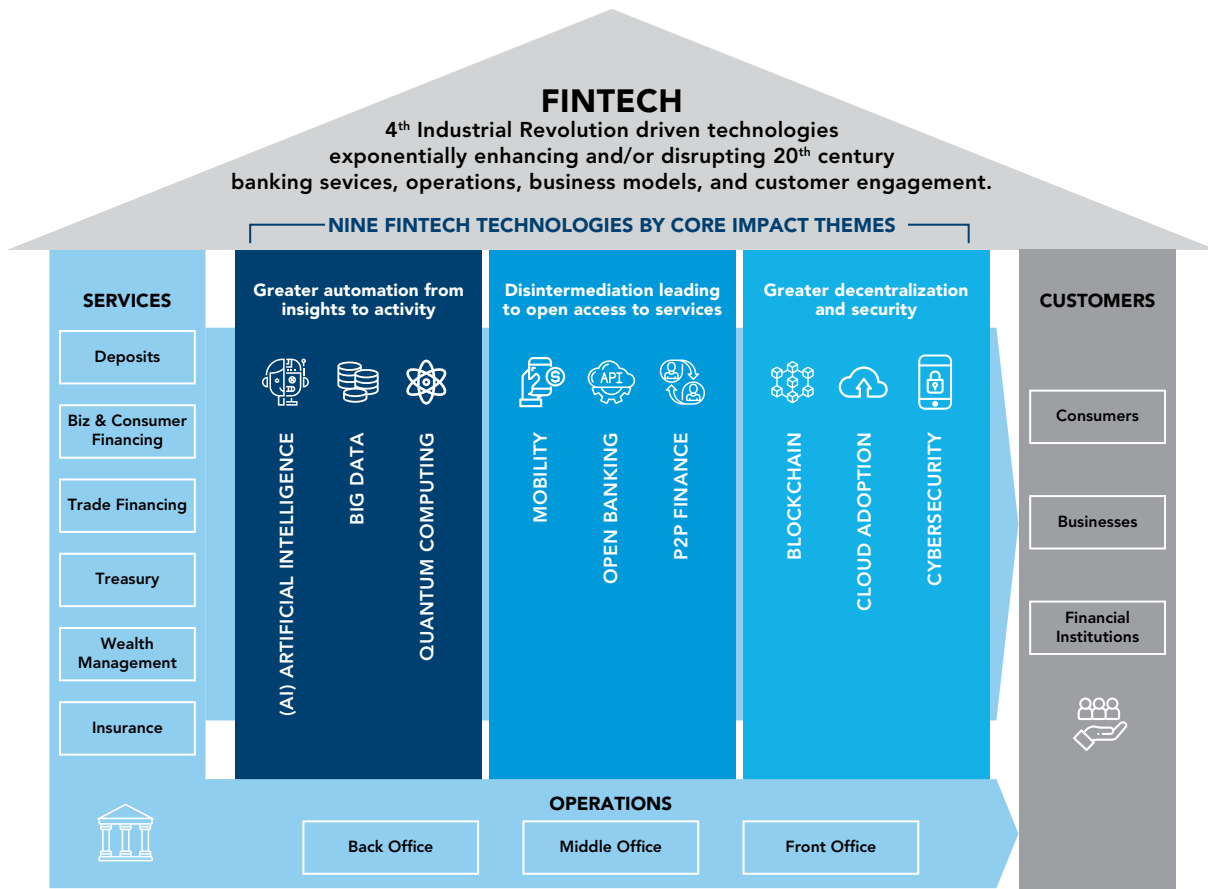
3 EY. (2019). *Global FinTech Adoption Index 2019*. EY.

4 EY. (2019). *Global FinTech Adoption Index 2019*. Pg 5 EY

Global fintech framework

Building on the definition presented earlier, the below referenced framework⁵ illustrates an overall fintech landscape centered around nine driving fintech technologies that are delivering key end-customer financial services and back-office operational support/efficiencies.

Figure 1. Global fintech framework



Source: Islamic Fintech Report 2018, DinarStandard Copyright 2018. Reproduced with permission.

5 DinarStandard. (2018). *Islamic Fintech Report 2018 Current Landscape. Global Fintech Framework*, pg 9. DinarStandard.

Below is a summary overview of the 9 core fintech technologies grouped into three categories, along with examples of service providers.

Table 1. Summary overview of 9 core fintech technologies

9 Core Fintech Technologies	Description	Fintech Challenger Examples	Incumbent Examples
Greater automation from insights to activity			
Artificial Intelligence	Machine learning is a technology where human users teach robots to help with daily activities, e.g. teaching the robots to detect several activities indicating money laundering or scam accounts.	Lemonade , a New York-based insurance startup, has automated the claims process, removing the cumbersome task of filling claim forms, by making a transaction bot takeover all the claim cycles. ⁶	Sun Life created a virtual assistant, Ella, to send reminders to users regarding their insurance or pension plans. ⁷
Big Data Analytics	Big data analysis is a process of reading and analyzing data which has been written and stored in the server (internet) consisting of every click for all online transactions.	Hexanika is a data management and reporting solution for financial institutions. Their software uses an algorithm that can source and ingest data in multiple formats to normalize datasets. It aims to cut regulatory costs and avoid non-compliance.	Standard Chartered has developed its big data analytics, resulting in an enhanced user experience. ⁸
Quantum Computing	Applies principles from quantum theory to develop computers with significantly more processing power. Solves complex problems much more effectively than conventional computers.	Deutsche Bank Securities partnered with D-Wave Systems to develop “Quantum for Quants”.	QuintessenceLabs has created a set of data technology products and solutions based on quantum computing technology to enable secure data transfer and storage.
Disintermediation leading to open access to services			
Mobile Payment	Mobility-enabled payment technology that helps bank account holders (or fintech account holders) to open, access, and transact using their personal account anywhere and anytime as long as they are connected to the server.	N26 is a licensed startup bank based in Germany that has gained 2.3 million retail customers in 4 years. Products include Google Pay and connected debit card by Mastercard. ⁹	BTPN Bank in Indonesia has issued “Jenius” to open accounts and make deposits and payments.

6 Hudson, C. (2018, November 29). *Ten Applications of AI to Fintech*. Retrieved June 23, 2019, from <https://towardsdatascience.com/ten-applications-of-ai-to-fintech-22d626c2fdac>
7 Sun Life Assurance Company of Canada. (2017, September 12). *Sun Life Announcement*.
8 Kumar, S. (2019). *Banking on innovation: Demystifying Big Data in banking*. Retrieved June 23, 2019, from <http://www.bbc.com/storyworks/banking-on-innovation/bigdata>
9 CBInsights. (2019). *Global Fintech Report Q1 2019*. NY: CB Insights.

9 Core Fintech Technologies	Description	Fintech Challenger Examples	Incumbent Examples
Open Banking	Technology enables banking data to sync with another third-party app to meet a customer's need to monitor their cash flow.	Enfuce is developing a connectivity layer that enables third parties to communicate with banks for data as well as payments. ¹⁰	Customers of Lloyds Bank, Halifax and Bank of Scotland apps have the ability to view their bank accounts from these banks through an app. ¹¹
P2P Finance	Web-based technology performs the intermediary.	ThinCats Australia aims to link investors to debtors throughout the country and offers financing between 2 and 3 years, with no concealed fees or repayment charges.	Barclays acquired RainFin in South Africa to tap into P2P financing.
Greater decentralization and security			
Distributed Ledger (Blockchain)	Consists of all data, unremovable, about every activity under one platform. The data chain is named "ledger", and the ledger is distributed to an enormous server globally for cross-verification and decentralization.	Symbiont is a blockchain company developing products in smart contracts and distributed ledgers for capital markets.	Barclays and Citi work with IBM to create LedgerConnect , a proof of concept for distributed ledger technology.
Cloud Adoption	Storage system inside a server. User uses tools (website or application) to retrieve and upload data to the cloud system.	Stripe , valued at a massive USD 20 billion, enables small businesses to recognize payments online without payment fraud.	ICICI Bank in India uses Microsoft Azure to work with some applications without having physical servers on its premises.
Cybersecurity	Technology build to protect all collected and transacted data and privacy of all users and stakeholders.	ComplyAdvantage supports financial institutions to comply with current regulations in Anti-Money Laundering (AML), counter-terrorism financing (CFT), corruption, and bribery.	Monetary Authority of Singapore has offered USD 21.88 million in funds to help local financial institutions improve cybersecurity operations.

10 Enfuce. (n.d.). *Enfuce Open Banking Platform*. Retrieved June 23, 2019, from <https://enfuce.com/services/open-banking/>

11 Fintech Futures. (2019, June 18). *BankingTech Lloyds first to launch open banking app for credit cards and savings*.

We identified 9 major fintech trends in 2019:

1. Fintech growth attracting big investments

Fintech investment has soared across regions with the Americas garnering USD 54.5 billion in 2018 (USD 29 billion in 2017), with deals primarily booked by US fintech companies of up to USD 52.5 billion. Europe attracted USD34.2 billion experiencing an almost two-fold increase from USD 12.2 billion in 2017, followed by Asia with USD 22.7 billion in fintech investment.¹² In each region, the top 5 fintech companies absorbed more than 50% of total deal value, indicating fairly concentrated investments and a high level of investor confidence in well-established fintech companies.

Table 2. Select fintech major investments

	Investee	Investor	Investment
Challengers Bank	Digital Bank N26	Tencent and Allianz	USD 160 million
Big Tech Players	iZettle	PayPal	USD 2.2 billion
Open Banking	Data Republic	Led by Innov8 and Singapore Airlines	USD 22 million
Regtech	Refinitiv	Blackstone partnered with GIC and CPPIB	USD 17 billion
Blockchain	SEBA Crypto	Black River Asset Management, Summer Capital, and others	USD 103 million
Insurtech	Oscar Health Insurance	Alphabet, Founders Fund, and others	USD 375 million

Source: (KPMG, 2019) 'The Pulse of Fintech 2018'; KPMG, February 2019

2. Consolidation with incumbent to innovate banking tech

Financial institutions' incumbents are fast leading the developments across fintech solutions. In the US, Goldman Sachs has shown that resilient business models and proven marketing strategies can surpass the speed of small but nimble fintech companies. The investment bank has grown its US consumer financing into a USD 1 billion franchise in less than a year, in a business segment that was hitherto alien to them. Concurrently, other investment banks have remained focused on their core businesses and provide robo-advisory services. Together with their well-known brand and loyal customer base, these new ventures have grown at an accelerated pace. The incumbents' large customer database and robust compliance systems are highly attractive to fintech companies that have reached saturation in their business models. Hence, challengers trying to penetrate business segments beyond their current region and expanding their product suites, require collaboration with incumbents to expedite their growth.¹³

Big technology companies are also introducing their ecosystem to their customers, which will lead to more consolidation with incumbents.¹⁴ A prominent example of this occurred in China where Bank of China partnered with Tencent – a large, internet-based technology company – to build a fintech laboratory. In addition, China Construction Bank has signed an agreement with Alibaba and Ant Financial to enhance the digital experience for their customers.

¹² KPMG. (2019). *The Pulse of Fintech 2018*. KPMG.

¹³ KPMG. (2019). *The Pulse of Fintech 2018*. KPMG.

¹⁴ McKinsey and Company. (2018). *Synergy and disruption: Ten trends shaping fintech*. McKinsey and Company. & KPMG. (2019). *The Pulse of Fintech 2018*. KPMG.

3. Further innovation in services and consolidation in the payments sector

The payments sector is now focused towards more effective technology and the centralization of bank account information. Implementation of the Revised Payment Services Directive (also known as PSD2) started in 2018 covering EU countries, with the UK, Belgium, Luxembourg, and Italy expected to adopt the regulation in 2019. The aim is to develop secure communications and a robust customer authentication system. This initiative is being followed in Asia by various countries. Singapore is streamlining its regulatory framework for payments by promulgating the Payment Services Act to expand regulation into fintech companies offering payment services.¹⁵

4. Open banking adoption will play an increasing role in financial services

Trends in banking focus on customers' experiences, sharing resources, data importance, and partnerships with fintech or big tech companies. This has led to open banking or open data where standardized Application Programming Interfaces (APIs) enable one banking platform to communicate with another. This trend continues to gain in importance and is becoming pivotal in defining the partnership between incumbent banks and fintech companies. Many initiatives and investments have been made in open banking such as the USD 22 million invested in Data Republic, an Australian fintech company.

Open banking which involves data sharing, authentication, and management, is expected to catalyze partnerships between incumbents and challengers and incentivize established challengers to partner with big technology companies.¹⁶ Alternatively, in today's age where a seamless user experience has become the norm, and can no longer provide a competitive advantage¹⁷, sole reliance on open banking may not be sufficient. Capgemini proposes a shared marketplace where incumbents and challengers can share data and co-operate to provide an enhanced customer experience which they term 'Open-X'.¹⁸ Rather than having one bank provide a suite of services, a fintech company with one service offering can have partners that provide other financial services, and collectively give their customers access to all services.

5. Increased investment in Distributed Ledger (Blockchain) tech solutions

Incumbents and challengers are focusing on addressing technical issues on distributed ledgers or blockchain technology such as scalability, privacy, anonymity, and data segregation. However, companies are simultaneously creating products to benefit from the technology in optimizing financial services¹⁹, with noticeable movement globally to utilize blockchain for effective usage.²⁰

6. Insurtech to experience substantial growth

Significant and frequent investments have enabled insurtech to become a developed sector. Insurtech providers and insurance companies are collaborating to offer services beyond claims management and bundled insurance services.²¹ Asia has a competitive advantage in insurtech with growth being facilitated by relatively loose regulation and a large customer base, in comparison with the US and Europe.²²

15 Linklaters. (2018). *Global Fintech Year in Review 2018 Year to Come 2019*. London: Linklaters.

16 KPMG. (2019). *The Pulse of Fintech 2018*. KPMG.

17 McKinsey and Company. (2018). *Synergy and disruption: Ten trends shaping fintech*. McKinsey and Company.

18 Capgemini and Efm. (2019). *World Fintech Report 2019*. Capgemini.

19 Ibid 17.

20 Ibid 16.

21 CBInsights. (2019). *Global Fintech Report Q1 2019*. NY: CB Insights.

22 KPMG. (2019). *The Pulse of Fintech 2018*. KPMG.

7. Digital banking and capital markets to replace the current system

Conventional banks and corporates will progressively venture into advanced banking, presenting smart, independent computerized banks that work autonomously and without dependency on their current system.²³ Currently, maintaining a system to meet regulations has been one of the big expenses in banking. This has affected the resources available for further innovation and advancement. Digitization of all banking and treasury functions enables significant reduction in expenses for system maintenance and can open new vistas of revenue generation to offset the loss of income from conventional products or services. In order to progress and remain competitive, banks will need to replace their traditional systems, and start adopting data analytics, cloud computing, AI, and blockchain technologies.²⁴

8. More stringent regulations for financial institutions will boost Regtech growth

Regtech has become globally significant due to increasing regulation and in 2018 a slew of regulatory requirements such as MiFID II, PSD2, GDPR, new IFRS standards, and EU benchmarks²⁵ substantially increased compliance costs. While audit, risk, and regulatory compliance software is becoming increasingly important, technology-based solutions for CFT that utilize AI and APIs have also attracted investment along with biometric authentication programs to enable identity protection. Funding for such technologies in 2018 totaled USD 686 million, and USD 337 million in Q1 2019, with a slight increase in the number of deals.²⁶

Eventually, Singapore, Hong Kong (SAR), and India are predicted to be the centers for regtech in the Asia region, propelled by substantial digital investments, rapid expansion, and infrastructure that facilitates technological development.

9. Technology regulation increase to prevent financial crime

As the impact of increased investment and initiatives in fintech takes root, governments in many countries are putting in place measures to prevent the technology being misused for data theft, money laundering, terrorism, and cybercrime. In Australia and Japan, governments have proposed reforms to tackle open banking and digital currency. Belgium, Italy, and Hong Kong have adopted a cautious approach to crypto assets and ICOs, while China has banned such offerings. The US, France, Germany, Luxembourg, and UAE are actively regulating blockchain and crypto assets, while the UK and Singapore have increased regulation of blockchain, crypto assets, robo-advisory, payments, cybersecurity, and AI.

²³ Ibid.

²⁴ gfma and pwc. (2019). *Technology and Innovation in Global Capital Markets: Current trends in technology and innovation and their impact on the 'Investment Bank of the Future'*. Global Financial Markets Association. & Clifford Chance. (2019). *Fintech in 2019: Five Trends to Watch - Thought Leadership*. London: Clifford Chance.

²⁵ Ibid 23.

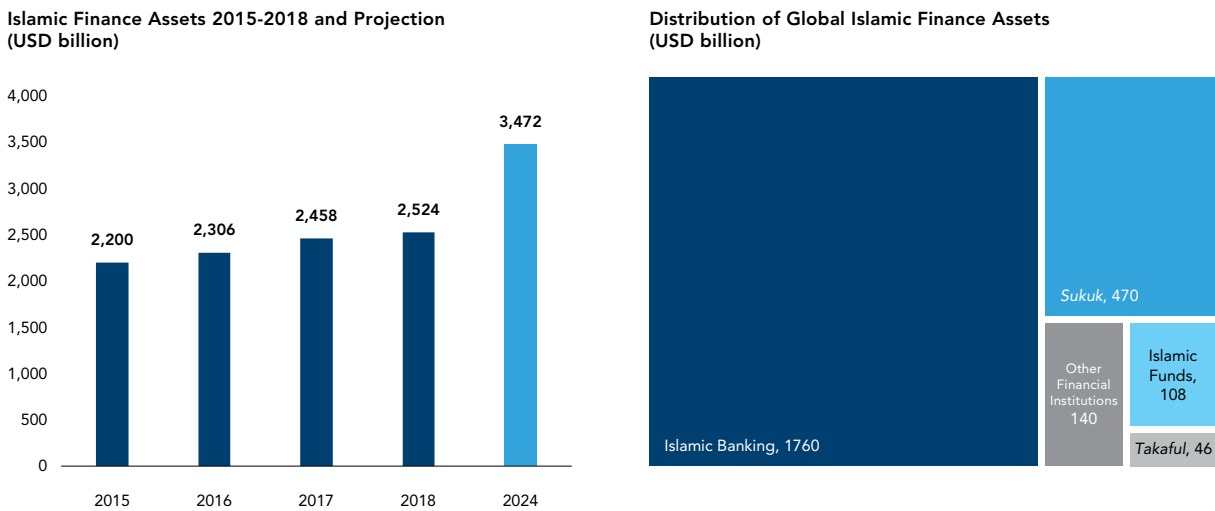
²⁶ CBInsights. (2019). *Global Fintech Report Q1 2019*. NY: CB Insights.

Islamic Finance and Fintech

Islamic finance is a USD 2.5 trillion business

Shari'a-compliant finance or Islamic finance comprises Islamic banking, Islamic capital markets, Takaful, and other IFIs. According to ICD-Refinitiv in 2018, 1,447 Shari'a-compliant financial institutions were operating businesses in 72 countries with Islamic finance assets expected to increase from USD 2.5 trillion in 2018 into forecasted number of USD 3.5 trillion in 2024. Islamic banking is still the largest Islamic finance segment with a share of 70% or USD 1.72 trillion in 2017, followed by Sukuk at USD 470 billion (18%), other financial institutions at USD 140 billion (6%), Islamic funds at USD 108 billion (4%), and Takaful at USD 46 billion (2%).²⁷

Figure 2. Global Islamic finance assets projection and distribution



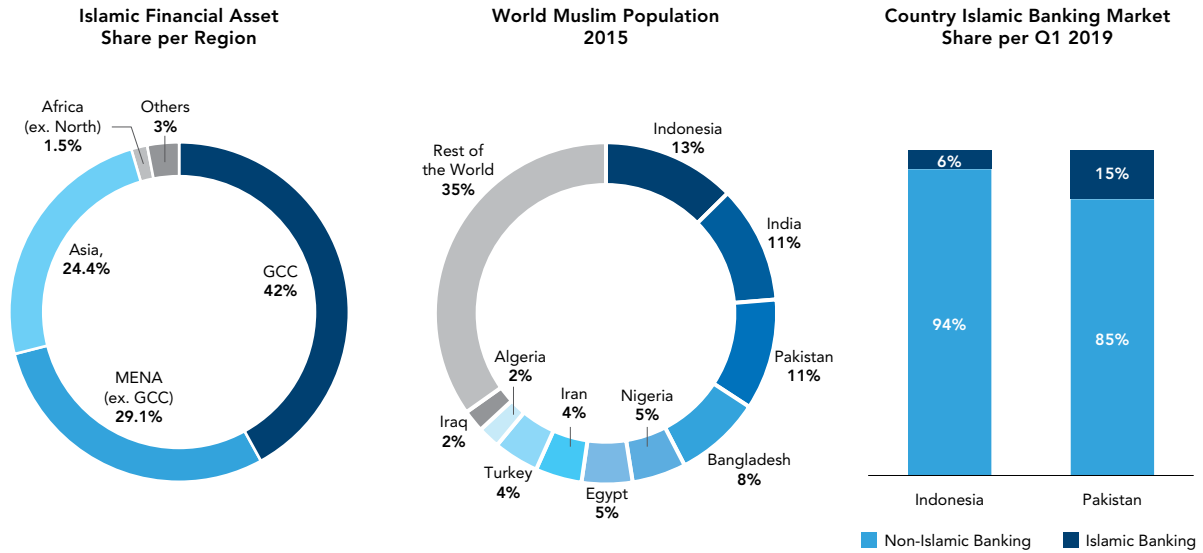
Geographically the Islamic finance market is concentrated in Asia, the GCC²⁸, and MENA regions

Most Islamic finance assets reside in Asia, the GCC, and MENA regions contributing 95.5% of global Islamic finance assets in 2017 according to IFSB, with Islamic banking making the largest contribution to the aggregate global asset base.²⁹ However, Islamic banking globally has low market penetration and comprises a minority of total banking assets in most countries within the region.

In Asia, the two largest Muslim countries of Pakistan and Indonesia have Islamic banking assets of 15%³⁰ and 5.8%³¹ of total banking assets, respectively. This is despite Muslims in Pakistan and Indonesia comprising 96% and 87% of the total population, respectively. Therefore, significant opportunities exist in gaining more market share, given the right strategy.

27 ICD-Refinitiv. (2019). *Islamic Finance Development Report 2019*. ICD-Refinitiv.
 28 Gulf Cooperation Council (GCC) is a regional intergovernmental political and economic union consisting of all Arab states of the Persian Gulf (except Iraq) which include: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates.
 29 IFSB. (2018). *Islamic Financial Services Industry Stability Report 2018*. Islamic Financial Services Board.
 30 As of 1st Quarter 2019 (State Bank of Pakistan, 2019)
 31 As of 1st Quarter 2019 (Indonesia Financial Services Authority (OJK), 2019) and (Indonesia Financial Services Authority (OJK), 2019)

Figure 3. Islamic finance asset share per region



Source: (World Bank, 2017), (Pew Research Center, 2015), (Indonesia Financial Services Authority (OJK), 2019), (State Bank of Pakistan, 2019), World Bank Analysis

Funds originating from Muslim countries do not necessarily contribute to Islamic finance assets

Funds originating from Muslim countries primarily flow to financial institutions in OECD countries, with estimates of sovereign wealth funds from these countries invested in the OECD amounting to USD 3 trillion.³² In contrast, the Islamic capital markets comprising outstanding *sukuk* and wealth management funds have aggregate assets of USD 671 billion.

Within Islamic countries, the numbers of unbanked are still high

Having access to financial services is a key metric of prosperity and quality of life for people worldwide which covers access to deposit banking, ease of payment, access to credit, savings, and investments.

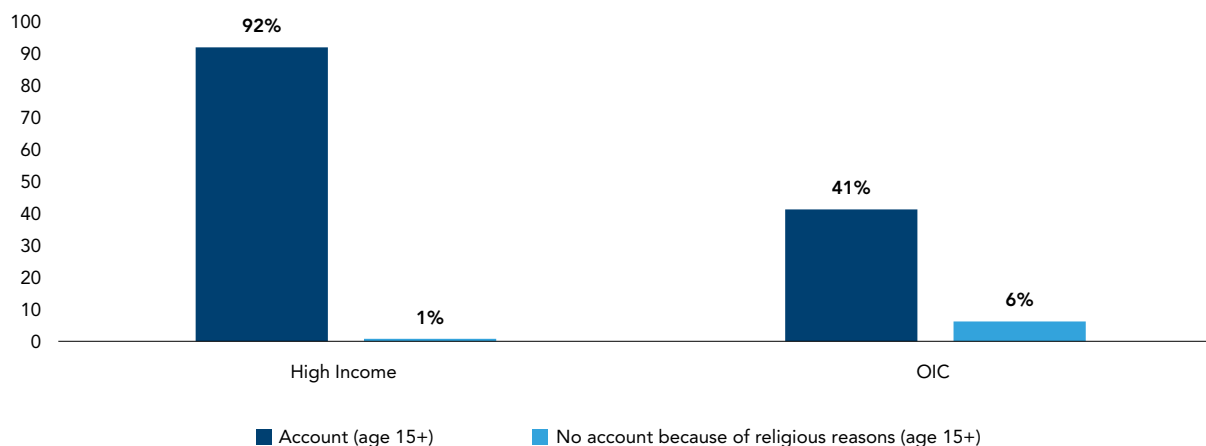
Adults not participating in the financial system or remaining unbanked remain high in many OIC countries. As shown in Figure 4, account ownership in OIC member countries (41%) is significantly lower than high income countries (92%). In addition, the reason for not having an account being “religious” is 5% higher in the case of OIC member countries, indicating a strong role for Islamic finance/fintech in addressing this gap. Bank account ownership in select OIC countries, however, is quite dispersed with Egypt at 23% and the UAE at 88%. Interestingly, adults who voluntarily abstain from banking due to religious reasons, reaches as high as 12% in Iraq for instance. Other reasons for opting out of the banking system include sharing bank accounts among family members and a lack of trust in the financial system.³³

³² World Bank. (2017).

³³ World Bank. (2017). *Mobilizing Islamic Finance for Infrastructure Public-Private Partnerships*. Washington DC: International Bank for Reconstruction and Development / The World Bank.

Figure 4. Comparing financial inclusion in high income and OIC countries

Financial Inclusion: High Income versus OIC Countries (%)



Source: The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution. World Bank: Washington, DC. Author analysis. OIC countries data of 30 member countries out of 57 as available from source.

The main reasons why adults are unable to open bank accounts include³⁴:

- Lack of money
- Lack of proper documentation
- Distance to nearest financial institution

Nevertheless, most aspects of financial services, access to deposit banking, ease of payment, access to credit, savings, and investments can all be addressed by fintech solutions offered by IFIs.

Muslim population is young, while digitally savvy

The global Muslim population is growing and comprises more than half of the global population of under 34-year-olds.³⁵ A digitally savvy population represents the future customers of financial services, and this is a main change driver in the industry.³⁶ This digitally literate population responds well to all fintech and enables young entrepreneurs to create challengers that provide digital solutions to meet the young population's needs.³⁷

Islamic fintech expected to increase Islamic finance market share through 6 financial services

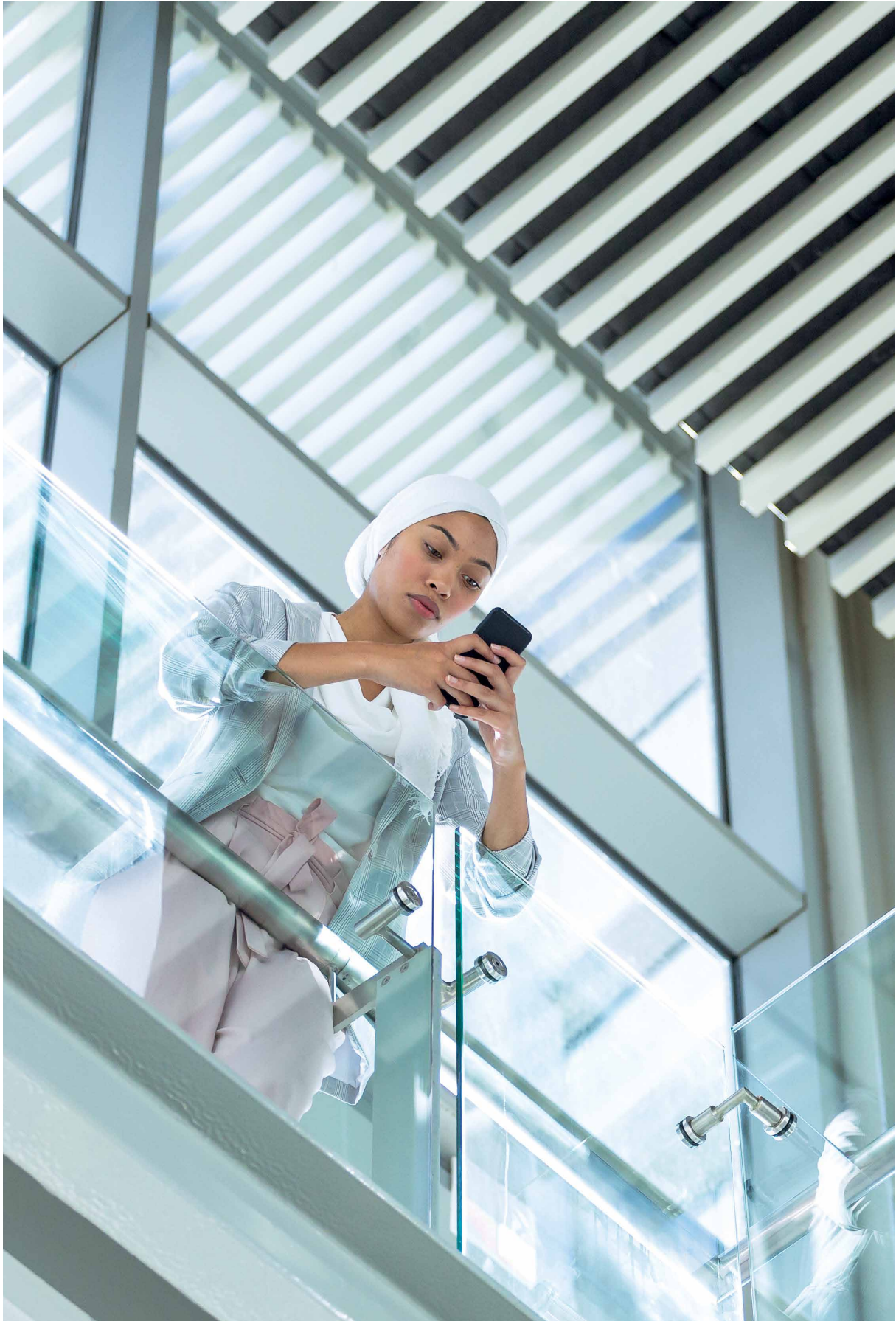
Islamic financial assets can be further fragmented into 6 different financial services categories which include funding, trade finance, financing treasury, wealth management, and *Takaful*. Leveraging disruption and innovation within these service groups is crucial in increasing market share dominated by non-IFIs with extensive customer reach, large customer databases, and robust security compliance.

³⁴ World Bank. (2017). *Mobilizing Islamic Finance for Infrastructure Public-Private Partnerships*. Washington DC: International Bank for Reconstruction and Development / The World Bank.

³⁵ ThomsonReuters/DinarStandard (2018). *State of the Global Islamic Economy Report 2018/19*.

³⁶ DinarStandard. (2018). *Islamic Fintech Report 2018 Current Landscape*. DinarStandard.

³⁷ Red Money. (2018). *Islamic Finance News Fintech Huddle Report 2019*. IFN.



Building on the earlier definition of fintech, DinarStandard has defined Islamic fintech as, “fintech technologies exponentially enhancing and disrupting 20th century Islamic financial services, operations, business models, and customer engagement.” The innovation or disruption can be categorized within the six financial services identified with examples showcased in Table 3 below.

Table 3. Islamic fintech examples per type of financial service

Financial Services	Islamic Financial Services	Islamic Fintech Examples
Funding	<p><i>Includes:</i></p> <ul style="list-style-type: none"> • Custody-based deposits (can also be based on <i>Qard</i>) • Investment accounts • <i>Shari'a</i>-compliant payment, collection, and liquidity management 	<ul style="list-style-type: none"> • PayHalal (Souqa Fintech Sdn Bhd, Malaysia) • AmalPay (Malaysia) • Investment Accounts Platform (IAP – Malaysia)
Trade Finance	<p><i>Includes:</i></p> <ul style="list-style-type: none"> • <i>Murabaha</i> working capital • <i>Murabaha/Wakala/Mudaraba</i>/Letter of Credit 	<ul style="list-style-type: none"> • Waqfe – Bahrain (Digital banking platform provider)
Financing	<p><i>Includes:</i></p> <ul style="list-style-type: none"> • <i>Murabahah/Mudaraba/Musharaka/Salam/Istisn'a/Ijara</i> Financing • Islamic Microfinance 	<ul style="list-style-type: none"> • Ethis Crowd – Singapore, Indonesia, Malaysia, Australia • Blossom Finance
Capital Market	<p><i>Includes:</i></p> <ul style="list-style-type: none"> • Islamic Bank Treasury • <i>Sukuk</i> (Islamic Bonds) 	<ul style="list-style-type: none"> • Adab Solution (Crypto exchange)
Wealth Management	<p><i>Includes:</i></p> <ul style="list-style-type: none"> • <i>Shari'a</i>-compliant wealth management for retail and HNWIs 	<ul style="list-style-type: none"> • Wahed – US (Robo-advisory investment platform) • HelloGold (blockchain-based gold investment)
Insurance	<p><i>Includes:</i></p> <ul style="list-style-type: none"> • <i>Takaful</i> • <i>Re-Takaful</i> 	<ul style="list-style-type: none"> • Uplift Mutuals • Insure Halal

Large potential also offered by Islamic social finance

Islamic principles require every Muslim to help the less fortunate members of society through a variety of charitable means, with the major ones being *Zakat* (obligatory charity), *Sadaqah* (voluntary charity), and *Waqf* (Islamic endowments).

Every individual and business is required to share their wealth with the less fortunate through *Zakat* donations and are encouraged to also contribute voluntarily through *Sadaqah*. Furthermore, *Shari'a* *Waqf*, is defined as an Islamic religious endowment i.e. a voluntary and irrevocable dedication of one’s wealth or a portion of it – in cash or kind (such as a house or a garden), and its disbursement for *Shari'a*-compliant projects (such as mosques, religious schools, and other social projects³⁸).

38 General Authority of Islamic Affairs and Endowments, UAE 2019. <https://www.awqaf.gov.ae/en/definitionofwaqf> extracted Dec 1, 2019

Table 4. Islamic social finances

	Islamic Social Finance		
	Compulsory	Voluntary	
	<i>Zakat</i>	<i>Waqf</i>	<i>Sadaqah</i>
How is wealth to be shared with others?	Compulsory for Muslims owning excess wealth exceeding certain thresholds and owned over defined periods of time.	Voluntary giving to a trust, for communal benefit or anyone specified in the trust deed.	Voluntary acts of good deeds to help others.
When do the donations occur?	Excess wealth is annually defined as per numerical benchmarks.	Donations can be made anytime and for any amount. Principal must be maintained for perpetuity.	Donations can be made anytime and for any amount. No requirement to maintain principal.
Who is the beneficiary?	Must be given to anyone defined in 8 categories: needy, poor, slave, debtor, revert (people who embrace Islam), striving for the sake of <i>Allah</i> , traveler in the path of <i>Allah</i> , <i>zakat</i> collectors.	<i>Waqf</i> can be made in favor of charitable institutions such as <i>waqf</i> for a mosque. It can also be made in favor of relatives, where the <i>waqf</i> goes to the poor or other charitable purposes when none of them are alive. The beneficiary purpose cannot involve any impermissible activities according to <i>Shari'a</i> . ³⁹	<i>Sadaqah</i> can be given to anyone for charitable purposes as long as it does not involve any impermissible activities according to <i>Shari'a</i> .
What is being shared?	Cash and in-kind contributions, but the value must follow a certain formula.	Assets with perpetual benefit.	Anything, as long as it is beneficial to the beneficiary.
How large is the social impact?	Studies suggest proper collection and distribution of <i>Zakat</i> from domestic sources could eliminate extreme poverty (those who live below USD 1.25 per day) in 20 out of 39 OIC member countries. ⁴⁰	Examples from countries with some of the largest Muslim populations include Indonesia that has potential <i>Waqf</i> assets of USD 60 billion and India where <i>Waqf</i> properties have an estimated market value of USD 24 billion. ⁴¹	Combination of <i>Zakat</i> and <i>Awqaf</i> (plural of <i>Waqf</i>).

Therefore, as Islamic finance adheres to Shari'a, businesses must be concerned with both profitability and making positive social contributions through Zakat, Sadaqah, and Waqf. *Zakat* can potentially contribute USD 200 billion to USD 1 trillion globally towards poverty alleviation according to UNDP in 2018⁴², and *Waqf* assets in only Indonesia and India are estimated to have an economic value of USD 84 billion (see table 4). This latent potential of Islamic social finance, if tapped successfully, can help bridge the USD 2.5 trillion annual gap in the UN's SDGs.

39 GlobalSadaqah.com 2019. <https://www.globalsadaqah.com/blog/waqf-4pillars-conditions/> Extracted Dec 1, 2019

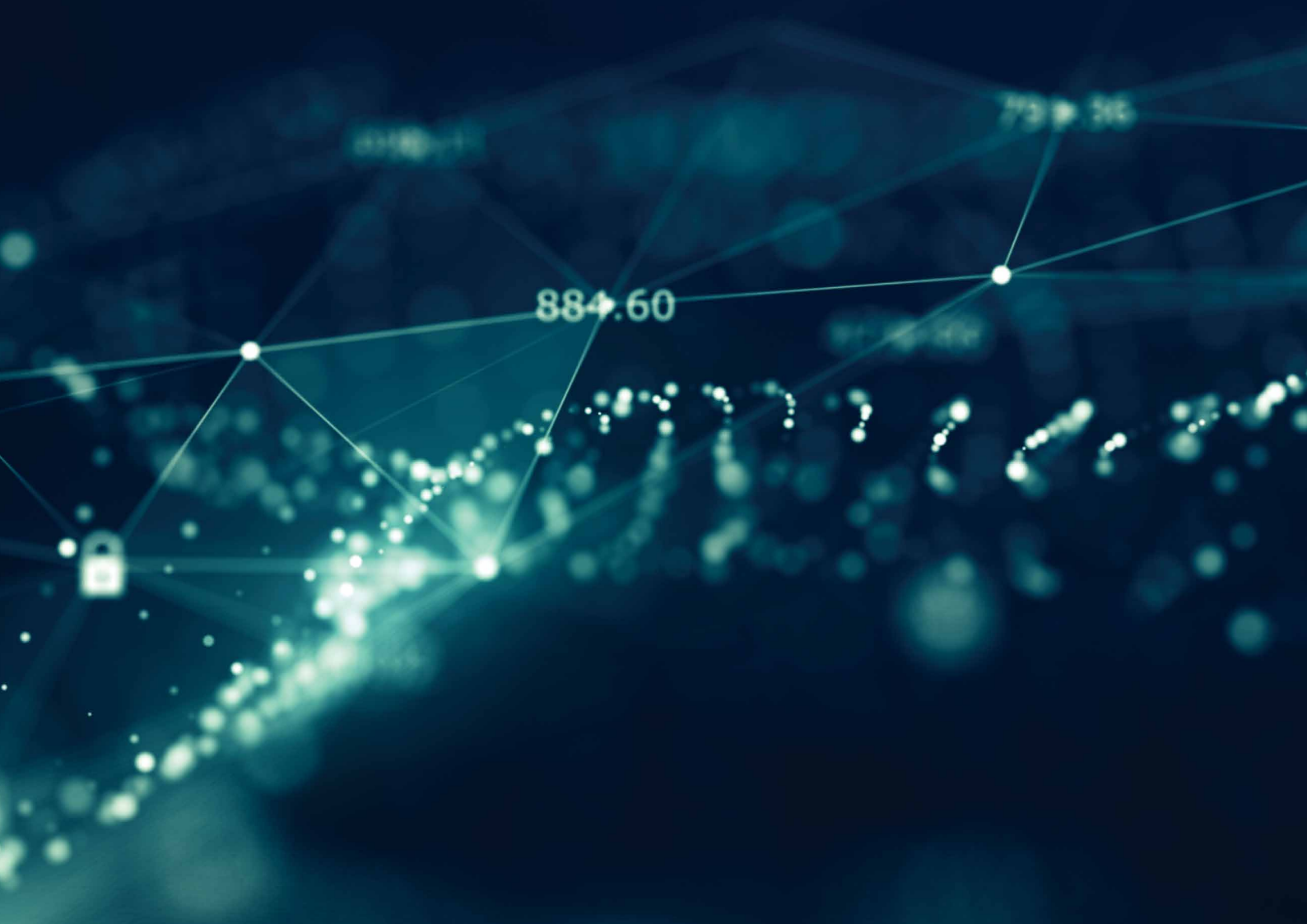
40 World Bank Group and IRTI. (2016). *Islamic Finance: A Catalyst for Shared Prosperity?* Islamic Development Bank.

41 Ibid.

42 Rehman, A. A., & Pickup, F. (2018, September 7). *Zakat for the SDGs*. Retrieved Jul 8, 2019, from <https://www.undp.org/content/undp/en/home/blog/2018/zakat-for-the-sdgs.html>

CHAPTER 3

Developments and Gaps in Islamic Fintech



Introduction

Incumbents in Islamic finance are now experiencing difficulties due to many fintech challengers that are disrupting the industry. Embracing new technology has become a necessity to survive rather than a source of competitive advantage. Islamic finance can utilize fintech to tap into new markets, offering new products and services, improved compliance to regulation, enhanced customer accessibility, and significant reductions in cost. Muslim-majority country governments have also started implementing policies to support this development, while simultaneously formulating regulation to prevent any potential fraud or cybercrime.

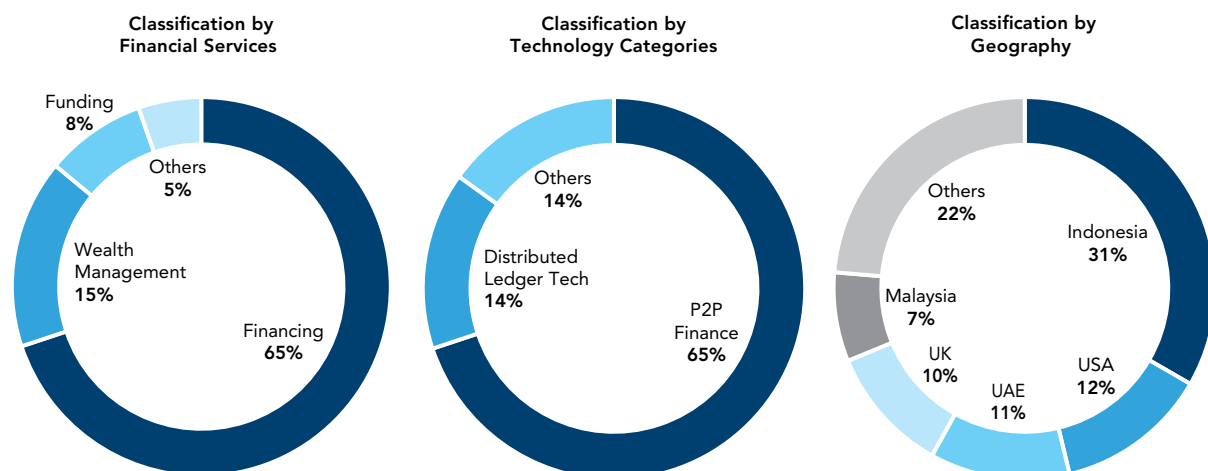
The global Muslim population has an average age of 24 years, with a higher growth rate than any other religion, and is expected to comprise 26.4% of the world's population by 2030. Pakistan and Indonesia will have the two largest Muslim populations by 2030 with 258 million and 238 million, respectively.⁴³ Islamic fintech can be the solution to reach this immense market and reap its full potential.

Islamic Fintech Landscape

According to DinarStandard, there are currently 93 Islamic fintech companies predominantly in financing services, followed by wealth management and funding. P2P finance is provided by 65 companies, followed by distributed ledger tech with 14 companies. It is not surprising that P2P platforms are the most common Islamic fintech platforms, given that it captures the essence of Islamic finance as it directly connects the capital provider with the users of capital, using the power of technology.

Indonesia is leading with the most companies offering Islamic fintech (31 companies), followed by the US, UAE (driven by the DIFC), UK, and Malaysia⁴⁴ with 12 companies or less. Two of the top 5 jurisdictions for Islamic fintech are not major jurisdictions for Islamic finance, implying that proficiency in fintech's development

Figure 5. Classification of Islamic fintech by financial services, technology and geography



Source: (DinarStandard, 2018)

43 Pew Research Center. (2011, January 27). *The Future of the Global Muslim Population*. Retrieved June 24, 2019, from <https://www.pewforum.org/2011/01/27/the-future-of-the-global-muslim-population/>

44 DinarStandard. (2018). *Islamic Fintech Report 2018 Current Landscape*. DinarStandard.

requires a sound technological base supported by a culture of innovation, rather than dedicated expertise in Islamic finance. Islamic fintech growth is being driven by increasing government and regulatory support, younger, technology-minded customers, innovation attractiveness, and the availability of startup incubators and accelerators that are often state-sponsored.

Governments are realizing the potential benefit of Islamic fintech and actively supporting its development. Countries are building centers for startups to interact and collaborate, providing early-stage funds and connecting fintech companies with investors, all within a hospitable regulatory and policy environment.

Table 5. Select sample of OIC governments or regulators facilitating Islamic fintech

Organization	Country	Facility provided
National Islamic Finance Committee (KNKS)	Indonesia	A federal government entity, The National Shari’a Finance Committee (KNKS) is an institution that functions as a catalyst for the development of Islamic finance and wider Islamic Economy on a national and international scale. It was setup to drive the execution of the Indonesian Shari’a Economic Master Plan issued in May 2019. ⁴⁵
Bank Negara	Malaysia	Investments Accounts Platform (IAP) established by Bank Negara is the first Islamic P2P initiative established by a central bank.
Malaysia Digital Economy Corporation	Malaysia	Connecting a network of investors with halal business owners and providing halal certifications. Owned by the Malaysian government. ⁴⁶
Dubai International Financial Center	UAE	Accelerate the financial technology sector in MEASA through DIFC Fintech Hive programme that supports fintech, regtech, insurtech, and Islamic fintech startups. Provides access to a USD 100 million fund and network of financial institutions.
Bahrain Fintech Bay	Bahrain	Provides opportunities for fintech companies to co-operate and develop their technologies. IFIs operating in Bahrain and throughout the GCC are partners with the Bahrain Fintech Bay. ⁴⁷
Other	UK, Turkey, Abu Dhabi	UK Islamic Fintech panel to promote Islamic fintech sector. UK-Turkey Islamic Fintech Working Group to consider opportunities in Islamic Fintech sector. Abu Dhabi General Market’s New Fintech Ecosystem. ⁴⁸

Challengers are fast embracing the preferences of their young customers with support from accelerators and incubators. The new generation’s preference for innovation and easy accessibility has been embraced by Islamic fintech startups rather than incumbent financial institutions. An important part of the fintech ecosystem has been the incubators for early-stage startups and accelerators that connect startups with investors. Both incubators and accelerators enable startups to develop their technologies and business models while enabling these companies to identify potential equity partners. These international networks are anchored by various organizations such as the Islamic Fintech Alliance in Singapore as part of Asia Pacific, DIFC Fintech Hive in UAE, and AlBaraka Bank in Turkey⁴⁹ play a leading part in MENA, while in the US, Affinis Labs is a typical example.

45 National Islamic Finance Committee (KNKS). (2019). *Strengthening the Digital Economy*. Retrieved Jul 2019, from KNKS: <https://www.knks.go.id/home>
46 DinarStandard. (2018). *Islamic Fintech Report 2018 Current Landscape*. DinarStandard.
47 Ibid.
48 TheCityUK and Borsa Istanbul. (2019). *UK-Turkey Islamic Fintech Working Group*. London: TheCityUK
49 DinarStandard. (2018). *Islamic Fintech Report 2018 Current Landscape*. DinarStandard.



Gaps to be Addressed

Despite rapid growth, support from governments, and a vibrant ecosystem, there are still key areas that require attention for Islamic fintech to maintain its sustainability. Below are key areas of Islamic fintech growth gaps:⁵⁰

Islamic finance should apply AI and big data analytics in more areas of business

Machine-learning capabilities could reduce operating costs in banks by improving productivity in both front and back-office functions and reducing operational errors. Big data analytics could help identify customers eligible for certain services or accelerate the KYC process, considerably reducing customer onboarding times. There are numerous other possibilities for the effective adoption of these technologies which would increase the competitiveness of Islamic banks in comparison to their conventional peers.

Distributed ledger tech could boost Islamic trade financing and reduce the incidence of Shari'a non-compliance

Islamic trade finance was estimated at USD 186 billion in 2016 and comprises 1.5% of global trade finance which was valued at USD 12.3 trillion. The relatively small representation of Islamic finance in global trade has occurred even though trade between OIC countries amounted to USD 250 billion, and total imports across these countries were USD 1.8 trillion in 2016.⁵¹

The inability of Islamic trade finance to capture a larger market share could be attributed to a dearth of Shari'a-compliant trade finance products. Whilst available products have been criticized by Islamic scholars as being too close to usury-based conventional trade finance.⁵²

Blockchain presents one possible alternative by enabling smart contracts to improve existing formats for letters of credit. This would reduce fees for importers and lessen documentation requirements.⁵³ Blockchain can also be used to reduce Shari'a non-compliance through smart contracts. Compliance of contracts through blockchain for Islamic financing, Islamic derivatives, liquidity management, *Murabaha*, *Musharaka*, reduction of *gharar*, *tawarruq* and custody as example areas.

Wealth management can be simplified using AI

AI can be utilized to determine optimal investments or portfolios for particular clients based upon their preferences. Robo-advisory eliminates the need for expensive financial advisors, as even novice investors can provide the requisite information, which will enable AI to decide the most suitable allocation of funds. Shari'a-compliant criteria can also be made part of the AI's algorithm to ensure perpetual compliance. These innovations could potentially attract customers previously reluctant to invest due to product complexity or skepticism in relation to Shari'a compliance.

50 DinarStandard. (2018). *Islamic Fintech Report 2018 Current Landscape*. DinarStandard.

51 Ibid

52 Gundogdu, A. (2016), "Exploring novel Islamic finance methods in support of OIC exports", *Journal of Islamic Accounting and Business Research*, Vol. 7 No. 2, pp. 78-92. (Gundogdu, 2016)

53 DinarStandard. (2018). *Islamic Fintech Report 2018 Current Landscape*. DinarStandard.

Takaful needs traction and innovation to capture the Muslim insurance market

Studies have shown that the unbanked also desire protection on wealth and health, but cannot obtain appropriate products due to increased costs and other reasons that classify them as unbanked in the first place. Furthermore, Muslim populations that could reach nearly 3 billion by 2060⁵⁴, require *Shari'a*-compliant protection against loss of wealth or health.

Case Studies

Three case studies are presented here as examples of market-leading Islamic fintech companies, covering their founding principles, value proposition, traction to date, and roadmap for the future.

Case Study 1

HelloGold – Award-winning wealth management Islamic fintech

<p>Founding Principles</p>	<p>HelloGold is a gold purchasing platform based on blockchain technology, which was established in 2017. It was the first mobile application that provided its users the opportunity to purchase gold <i>Shari'a</i>-compliantly. HelloGold has received various awards such as 'Best Islamic Wealth Management Fintech Company' by World Islamic Fintech Awards 2018 in Bahrain, and 'Prominent in Wealth, Asset & Investment Management of the Year' by Malaysia Fintech Awards 2018. Physical quantities of gold back the application and are stored in Dubai or Singapore, while any fractional trading is considered as part of the gold bullion.</p>
<p>Value Proposition</p>	<p>HelloGold is certified by Amanie Advisors as a <i>Shari'a</i>-compliant asset-backed investment. The target customer base is the 60% of Malaysians that are practicing Muslims⁵⁵, as well as Malaysian households that have at least RM76 savings from disposable income⁵⁶ (low income). While 98% of Malaysians were using smartphones in 2018⁵⁷, the availability of a <i>Shari'a</i>-compliant investment via smartphone, with a minimum investment of RM 1⁵⁸ has proved attractive.</p>
<p>Traction to Date</p>	<p>Since its launch in 2017, HelloGold has over 150,000 downloads and about 80,000 customers, with an estimated RM6.5 million in transaction value. It has also launched in Thailand.</p>
<p>Roadmap for the Future</p>	<p>Plans to launch the product in Indonesia and Middle East in 2019. A partnership with Baobab in Africa has been finalized which will enable expansion to 9 African countries. The aim is to not be limited to the gold investment business, but to eventually become a virtual bank, regulations permitting.⁵⁹</p>

54 Pew Research Center. (2011, January 27). *The Future of the Global Muslim Population*.

55 HelloGold. (2019). *Gold: The Better Way to Save*. Retrieved June 27, 2019, from <https://www.hellogold.com/about-us/>

56 Khazanah Research Institute. (2018). *The State of Households 2018 Different Realities*. Kuala Lumpur: Khazanah Research Institute.

57 Malaysian Communications and Multimedia Commission. (2017). *Handphone Users Survey 2017: Statistical Brief Number Twenty-Two*. Cyberjaya: Malaysian Communications and Multimedia Commission.

58 Ibid 55.

59 Malik, D. (2019, May 10). *HelloGold making gold savings accessible to all*. Retrieved June 27, 2019, from <https://www.hellogold.com/hellogold-making-gold-savings-accessible-to-all/>

Case Study 2

Wahed Invest – The world’s first Shari’a-compliant robo-advisory platform

<p>Founding Principles</p>	<p>Wahed’s mission is to make halal investing accessible and efficient.</p> <p>The objective was to create an easily accessible product with transparent pricing and no hidden fees. The product also aims to achieve seamless onboarding with no lock-in period and transacted through an intuitive interface.</p> <p>Investor education was another primary focus for Wahed. Educating users on investing was a priority as most of Wahed’s users are first-time investors.⁶⁰</p>
<p>Value Proposition</p>	<p>Although the global Islamic finance industry is maturing, the US is still a developing market. A market study⁶¹ examining the financial requirements of American Muslims in 2014-15 detected a growing need for Islamic financial products. This study also discovered that, since Islamic finance facilities are complicated and hard to comprehend, 58% of participants are calling for consistency in ideas and agreements for Islamic finances.</p> <p>Wahed offers <i>Shari’a</i>-compliant investments with reduced transaction charges. Accessibility is enhanced by enabling global access to the investment platform through a fully ‘native’ global mobile experience with licensed activity in multiple jurisdictions.⁶²</p>
<p>Traction to Date</p>	<p>Wahed launched their robo-advisory investment services in the US in 2017 and expanded to the UK in 2018. In May 2019, the services are not only available in the UK and US but also to residents in over 130 countries.</p> <p>The company has secured USD 8 million from CueBall Capital and BECO Capital, based on a valuation of USD 100 million as per its second quarter 2018 financial results.⁶³</p>
<p>Roadmap for the Future</p>	<p>The product offering is being localized for each key market while more investment tools are being added to increase investment flexibility. It is expected that such additional functionality will further incentivize savings. Wahed is also developing its own investment products and creating vehicles that could operate much more efficiently than traditional mutual funds.</p> <p>The end goal for the company is to become the one-stop shop for <i>Shari’a</i>-compliant wealth management.</p>

60 Information gathered from Interview with Wahed.

61 DinarStandard/AMCC 2014/15. American Muslim. Market Study 2014/15. The Muslim Green.

62 DinarStandard. (2018). *Islamic Fintech Report 2018 Current Landscape*. DinarStandard.

63 Wahed. (2019, May 9). *Wahed Goes Global*. Retrieved June 30, 2019, from <https://journal.wahedinvest.com/wahed-goes-global/>

Case Study 3

Beehive – MENA’s first regulated P2P lending platform

<p>Founding Principles</p>	<p>Based in Dubai, Beehive is MENA region’s first regulated P2P lending platform. It states as its purpose to facilitate financing for small and medium sized businesses to fuel their growth. P2P lending is a form of crowdfunding that refers to investors providing finance to businesses without the use of a conventional intermediary, such as a bank. Beehive operates an Islamic Window and is regulated by the Dubai Financial Services Authority.</p>
<p>Value Proposition</p>	<p>Beehive is a “digitally-native” proposition, i.e. it exclusively leverages its online platform to directly connect creditworthy businesses looking for funding with investors looking to support their growth. For investors, Beehive provides an online platform to find and invest in creditworthy businesses, with as little as AED100, with stated net returns of 10% ARR avg. and monthly payments. Financing for businesses is available from AED 100,000 and is available on repayment terms from 6 to 36 months. All “Beehive <i>Shari’a</i> Compliant” finance requests are processed through UAE’s “DMCC Tradeflow” Commodity <i>Murabaha</i> platform operated by the DMCC. Finance requests that do not comply with the principles of <i>Shari’a</i> are processed as a conventional finance structure and are not accessible to investors who have indicated they would only like to invest in <i>Shari’a</i>-compliant opportunities.</p>
<p>Traction to Date</p>	<p>Since its launch, Beehive has facilitated funding close to USD 100 million to more than 450 business funding requests and currently has over 10,000 international retail and institutional investors. Beehive has attracted strong investment with a recent round in March 2019 of USD 4 million as part of its Series B round from Riyadh Taqnia Fund (RTF). The round took the total investment raised so far by Beehive to USD 15.5 million.⁶⁴</p>
<p>Roadmap for the Future</p>	<p>With its recent investments, the company plans to expand further across GCC and South East Asia. Adel Al-Ateeq, Deputy CEO, Riyadh Capital, one of the lead investors in Beehive, has been quoted in media stating, “Beehive has proven itself as a leading fintech pioneer in the region, using innovative digital solutions to improve SME financing accessibility. We’re keen to support their future growth plans which include expansion into Saudi Arabia, bringing new funding options to Saudi businesses.”⁶⁵</p>

64 MENABytes 2019, *Dubai-based P2P SME lending platform Beehive raises \$4 million to expand to Bahrain & Saudi*, <https://www.menabytes.com/bee-hive-4-million/>

65 Ibid.

CHAPTER 4

Islamic Fintech and Financial Inclusion



Introduction

Financial inclusion is measured by the access to financial services by all sectors of society at an affordable cost.⁶⁶ Financial services encompass bank accounts, affordable credit, insurance, payments and trade transactions. Research by Kim, Yu, and Hassan has shown that financial inclusion has a direct relationship with economic growth, in which higher financial inclusion will boost economic growth in OIC countries.⁶⁷ By delivering financial services efficiently to all parts of society, financial inclusion enables people to manage their financial needs, reduces poverty and supports wider growth of economy.⁶⁸ Financial inclusion is a key pillar of development policy in countries worldwide as an inclusive financial system, and is critical in reducing extreme poverty, boosting shared prosperity, and promoting sustainable inclusive economic growth and development.⁶⁹

Financial inclusion is at the forefront of the SDGs that were part of the Agenda for Sustainable Development adopted by UN member states in 2015. The SDGs provide a framework to eliminate poverty, achieve zero hunger, provide universal quality education, and other targets within social, economic, and environment areas.⁷⁰

Fintech's Role in Global Financial Inclusion

Unbanked population dominated by developing countries, especially Muslim populated

Out of the world's population of 7.6 billion, the World Bank estimates that there are 1.7 billion unbanked retail customers and more than 200 million potential micro, small, and medium enterprises (MSME). According to the Global Findex Report, bank account ownership is significantly higher in high-income economies at 94%, in comparison to 37% in developing countries.⁷¹ Subsequently, nearly 75% of the world's unbanked population lives in developing economies, with the highest found in Asia, where India accounts for 20.8%, followed by China at 11.6%⁷², Indonesia at 5.6%, Pakistan at 5.2%, and Bangladesh at 3.7%. Countries in Africa and Latin Americas trail closely with Nigeria at 2.7%, Mexico at 2.6%, and Brazil at 2.4%⁷³. The unbanked population is dominated by Muslim populated countries that comprise almost 50% of the world's unbanked population.⁷⁴ The potential revenue in tapping this unbanked retail and MSME market is estimated to be USD 200 billion.⁷⁵

66 Buckley, Ross P. and Arner, Douglas W. and Zetsche, Dirk Andreas, Sustainability, FinTech and Financial Inclusion (May 22, 2019). European Banking Institute Working Paper Series 2019/41. Available at SSRN: <https://ssrn.com/abstract=3387359> or <http://dx.doi.org/10.2139/ssrn.3387359>

67 Dai-Won Kim, Jung-Suk Yu, M. Kabir Hassan, Financial inclusion and economic growth in OIC countries (January 2018). Research in International Business and Finance. Elsevier.

68 Ibid.

69 Alfred Ouma, Shem & Maureen Odongo, Teresa & Were, Maureen. (2017). *Mobile financial services and financial inclusion: Is it a boon for savings mobilization?*. Review of Development Finance.

70 United Nation Sustainable Development Growth. <https://www.un.org/sustainabledevelopment/economic-growth/>

71 World Bank. (2017). *Global Findex Report*. World Bank.

72 Despite being the second largest economy in the world, its income per capita classifies it as a developing country.

73 Ibid.

74 Pew Research Center. (2011, January 27). *The Future of the Global Muslim Population*.

75 Ibid.

Fintech and government innovation in policy are enablers to increase financial inclusion

Fintech and innovation in government policy is expected to facilitate access to the unbanked population. Each category of fintech should contribute differently in increasing financial inclusion growth, affecting mobile payments to rural areas, employing digital verification to facilitate customer identification, and utilizing crypto assets to reduce transaction costs. In parallel, local governments can develop credit protection programs, introduce requirements to ensure cybersecurity, and invest in digital modes of education. In addition, governments can also create incentives for financial institutions to target the unbanked and support the creation of a financial ecosystem with multiple access points. Finally, in the absence of credit histories, innovative credit assessment methodologies need to be devised to cater to the unbanked.⁷⁶

In the past few years, most new bank accounts have been opened through fintech

According to the World Bank, between 2011-2017, 1.2 billion people opened bank accounts conventionally at the physical location of the financial institution and through fintech. The majority of this progress can be attributed to fintech, with three outstanding examples originating from Kenya, China, and India:

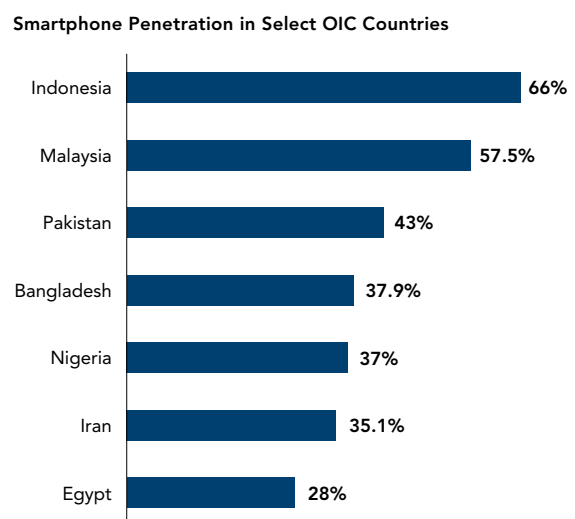
1. Kenya has developed mobile money to enable the unbanked to open savings accounts, utilize mobile payments, and transfer money.
2. China has experienced a substantial reduction in poverty due to digitization of the financial system.
3. India had reached 79% banked population in 2017 by providing a platform for a digitized economy and financial ecosystem.⁷⁷

Mobile payments have become instrumental in driving financial inclusion

In comparison with other types of fintech, mobile payment has made the most significant contribution towards financial inclusion. Fortunately, an estimated two-thirds of the 1.7 billion unbanked own a mobile phone (either an ordinary phone or a smartphone) enabling them to participate in mobile payments.

Furthermore, most of the potential Islamic fintech countries are in the top 50 countries of global mobile phone penetration, presenting further opportunity for fintech to access the unbanked. Figure 6 illustrates smartphone penetration for a select sample of OIC countries, with Indonesia exhibiting the highest penetration with 66%, followed by Malaysia at 57.5%, and Pakistan at 43% in 2018. Even though the numbers are encouraging, there remains a large discrepancy with developed countries that average 96% penetration.

Figure 6: Smartphone penetration in select OIC countries



Source: Newzoo's Global Mobile Market Report (September 2018), Pew Research Center Global Technology Use 2018-2019 (2018).

⁷⁶ Ibid.

⁷⁷ World Bank. (2017). *Global Findex Report*. World Bank.

Kenya has proven that having access to mobile financial services leads to increase savings

M-PESA is the mobile money transfer and financing service founded in 2007 in Kenya (and some other countries in Africa). M-PESA is accepted nearly everywhere, and transactions can be made with any mobile phone.

Other areas of African fintech are also seeing lots of activity – deals to African fintech companies rose from 44% to 63% year-on-year, and disclosed funding was up more than 3 times, from USD 80 million to USD 260 million.⁷⁸ The empirical results based on Kenya provide evidence regarding the impact of mobile financial services on savings.

Users of mobile financial services are more likely to save than those who do not. Besides enhancing the likelihood of saving, the amounts saved are also increased. Both forms of mobile savings are bound to be promoted, i.e. basic mobile phone savings stored in the phone, and bank integrated mobile phone savings. Consequently, deepening and expanding the scope of mobile financial savings is essential for promoting and mobilizing savings particularly for the poor and low-income earners who have limited access to the formal banking system. The accessibility, convenience, affordability, and safety associated with mobile financial services is a major catalyst in the expansion and growth of mobile financial services.⁷⁹

Achieving the SDGs will require closing the USD 2.5 trillion annual funding gap

According to UNDP, realizing its SDGs requires aggregate investments of USD 5-7 trillion annually until 2030.⁸⁰ Developing countries face an annual funding gap of about USD 2.5 trillion in meeting their SDGs.⁸¹ As per the IMF, the above-mentioned annual funding gap represents 15% of developing countries' GDP⁸² and underlines the additional investment required in health, education, and basic infrastructure (roads, electricity, water pipes, and sanitation services). OECD DAC in 2016 reported that the highest amount raised from official development aid in any one year is USD 142.6 billion, which is less than 10% of the annual spend required to cover the funding gap. Development agenda stated that to achieve the SDGs, governments will have to provide at least 50% of the total funding required in order to successfully achieve the goals.⁸³

Fintech growth could add USD 3.7 trillion to developing countries GDP globally, enough to close the annual funding gap

Fintech can help billions of people by increasing growth and adding an estimated USD 3.7 trillion to the GDP of developing countries by 2025, as reported by the McKinsey Global Institute.⁸⁴ In order to achieve this, some SDGs can be commercialized, combining profitability with social impact and incentivizing fintech providers to take the lead in increasing financial inclusion. Furthermore, financially inclusive activities can help fulfill several SDGs related to financial independence and close the inequality gap, as suggested by the following fintech utilization case studies.

78 <https://app.cbinsights.com/research/africa-fintech-market-map-expert-intelligence>

79 Alfred Ouma, Shem & Maureen Odongo, Teresa & Were, Maureen. (2017). Mobile financial services and financial inclusion: Is it a boon for savings mobilization? Review of Development Finance.

80 UNDP, United Nation Development Program, <https://www.undp.org/content/undp/en/home/blog/2017/7/13/What-kind-of-blender-do-we-need-to-finance-the-SDGs-/>, accessed July 4th 2019.




81 Idem.

82 United Nation, <https://www.un.org/press/en/2019/sgsm19546.doc.htm>, accessed July 4th 2019.

83 Ibid.

84 McKinsey Global Institute. (2016). *How digital finance could boost growth in emerging economies*. McKinsey.

Table 6. Financial inclusion through fintech resolved SDG challenges





SDG	Major Challenges	Country Fintech Utilization Case Studies
 <p>1 NO POVERTY</p> <p>No Poverty</p>	<ul style="list-style-type: none"> • Illness stops family's breadwinner from working • Government's aid program increases fraud and theft, and benefits the wrong beneficiaries • Absence of a bank account means limited savings and no credit history 	<p>Brazil Bolsa Familia reduced poverty by 12-18% by distributing benefits through an electronic payment card.⁸⁵</p> <p>India India Stack is a technology developed to connect the government, businesses, developers, and startups through open APIs. This enables them to collaborate and work towards creating a paperless and cashless culture. India Stack has facilitated the creation of a unique identification system named 'Aadhaar'. This creates a unique digital ID for each beneficiary which has allowed the government to deliver accurate payments for unemployment benefits and subsidies. Digital verification using iris, face or fingerprint scans, ensure the benefits reach the right person anywhere within the country. As per July 2019, India Stack has authenticated 2.98 billion <i>Aadhaar</i>, performed 150 million e-KYC, and connected to 339 million bank accounts.⁸⁶</p>
 <p>2 ZERO HUNGER</p> <p>Zero Hunger</p>	<ul style="list-style-type: none"> • Agricultural risks are difficult to manage by farmers • Cash based payments offer low return for farmers • Government aid for the under-nourished does not reach certain locations or communities 	<p>Jordan Fintech is used by humanitarian and financial aid donors for Syrian conflict victims by digitally registering the refugees with EyePay, an application released by the company irisguard. EyePay operates using blockchain technology, Ethereum, to support financial inclusion of Syrian refugees in Jordan by processing supermarket and ATM transactions in real-time. The registration uses the refugee's iris as their digital identity to help them manage their cash.</p> <p>In 2008, irisguard was the first company to install an iris-enabled cash machine in Cairo Amman Bank's ATM in Jordan. This allows both refugees and other banking customers to use only their iris to access cash without the traditional card and PIN number. Currently, irisguard's technology has distributed over USD half a billion, integrating individuals and families into the financial system and reducing poverty.⁸⁷ More than 2.3 million Syrian refugees in the region are registered in the system so far.⁸⁸</p>
 <p>3 GOOD HEALTH AND WELL-BEING</p> <p>Good Health and Wellbeing</p>	<ul style="list-style-type: none"> • Expensive healthcare access for many households • Limited number of medical facilities and personnel in rural areas 	<p>Bangladesh MAMA uses mobile payments to incentivize health agents to register pregnant mothers with mHealth, a digital platform, to receive vital health information.</p> <p>Kenya TM Tiba has facilitated health payment, savings, and financing for one million people since 2016.</p>





85 Better than Cash Alliance. (2018). *Igniting SDG Progress Through Digital Financial Inclusion*. UNSGSA

86 India Stack Official Website, <https://indiastack.org/>, July 4th 2019.

87 <https://www.irisguard.com/node/16>

88 <https://reliefweb.int/report/jordan/ifc-irisguard-support-financial-inclusion-and-syrian-refugees-jordan>

SDG	Major Challenges	Country Fintech Utilization Case Studies
 <p>Quality Education</p>	<ul style="list-style-type: none"> • Cash payment means teachers must lose teaching time due to collection • Cost of education has excluded low-income households from obtaining quality education 	<p>Kenya M-PESA is the mobile money transferring and financing service founded in 2007 in Kenya (and some other countries in Africa). M-PESA is accepted nearly everywhere, and transactions can be made with any mobile phone. Payment to teachers can be received without expending time for cash payment collection.</p> <p>Uganda Flexible mobile wallet loans enable households to pay for education.</p>
 <p>Gender Equality</p>	<ul style="list-style-type: none"> • Women are more likely to be excluded from policymakers and financial institutions' agenda due to lack of data 	<p>Dominican Republic A revised credit-scoring model that uses data analytics has changed the status of female low-income earners from rejected to creditworthy.</p>
 <p>Clean Water and Sanitation</p>	<ul style="list-style-type: none"> • Water suppliers experiencing difficulties in serving rural areas due to slow and insecure payment collections 	<p>Ghana SafeWater Network using smart meters for billing and digital payment for collections have enabled more payments to be collected. This has allowed clean water to be provided to a wider area.</p>
 <p>Affordable and Clean Energy</p>	<ul style="list-style-type: none"> • 1 out of 4 rural households does not have access to electricity 	<p>Kenya M-Kopa provides 'pay-as-you-go' solar powered electricity to reach rural areas. Payment is made using mobile payment.</p>
 <p>Decent Work and Economic Growth</p>	<ul style="list-style-type: none"> • Majority of payments made by SMEs are in cash, leading to higher costs 	<p>Indonesia Go-Jek distributed digital payments to its drivers and partner SMEs, with amounts reaching USD 700 million annually, providing decent incomes to its drivers and SME partners, while also contributing to economic growth.</p>

SDG	Major Challenges	Country Fintech Utilization Case Studies
 <p>Industry, Innovation, and Infrastructure</p>	<ul style="list-style-type: none"> SMEs have limited access to financing due to lack of credit history 	<p>Africa</p> <p>Kopo has channeled USD 4 million within 3 years to SMEs. Rather than use documents or credit history, Kopo uses transaction history to assess credit scoring.</p>
 <p>Sustainable Cities and Communities</p>	<ul style="list-style-type: none"> Almost one-third of developing countries' urban population lives in inadequate conditions 	<p>Indonesia</p> <p>Kitabisa.com started in 2013 in Jakarta as a crowd-endowment platform that involves mass funding for social or humanitarian causes. In 2019, Kitabisa.com had over 2.5 million registered accounts named '<i>Orang Baik</i>' ('good people' – a term used for those who help others through Kitabisa.com). The platform has distributed more than USD 54 million through nearly 28,000 posted campaigns. Now, kitabisa.com also distributes Islamic endowment funds like <i>Zakat</i> to enable the poor in improving their living conditions. The app is web-based and accessible through mobile phones and desktop computers. Although it helps social connectivity in certain ways, its impact on e-KYC and digital identity requires further study.⁸⁹</p>
 <p>Climate Action</p>	<ul style="list-style-type: none"> Annual economic loss of USD 250 – 300 billion caused by natural disasters due to climate change 	<p>China</p> <p>Ant Financial provides environmentally friendly data to its users. Greater 'green' awareness contributed to a reduction in carbon emissions by 150,000 tonnes.</p>
 <p>Peace, Justice and Strong Institutions</p>	<ul style="list-style-type: none"> Cash payment causing high transaction costs to the government, and increasing potential leakages in government expenditure 	<p>Mexico</p> <p>Government expenditure has decreased by USD 1.27 billion annually by digitizing and adopting central payment.⁹⁰</p>

89 Homepage www.kitabisa.com, accessed July 1st 2019.

90 Better than Cash Alliance. (2018). *Igniting SDG Progress Through Digital Financial Inclusion*. UNSGSA.

Islamic Fintech and Islamic Social Finance

Islamic fintech caters to both voluntary and involuntary unbanked populations in OIC countries

While many challenges of the SDGs could be resolved through fintech and financial inclusion, there remains a significant proportion of people that voluntarily exclude themselves from financial services due to religious and other reasons. People that avoid bank accounts due to religious reasons in OIC countries can be provided usury-free financial transactions based on risk-sharing. The latter concept requires that the transaction risk is borne by both entrepreneurs and IFIs, encouraging a partnership-based approach that develops robust businesses and eventually leads to an increase in the wealth of related individuals and SMEs.

Furthermore, as highlighted in Chapter 3, the Islamic principle of charitable contribution through *Zakat, Sadaqah, and Waqf* distributes income to the unbanked and poor, enabling them to access financial services.⁹¹

Financial inclusion as a result of *Shari'a*-compliant financial services and the inherent Islamic social finance could enable various related SDGs to be achieved.

Table 7. Islamic fintech and financial exclusion

Reasons for being unbanked	Involuntarily unbanked?	Islamic fintech potentially able to resolve?
Lack of money	✓	✓
Lack of proper documentation	✓	✓
Distance to nearest financial institution	✓	✓
Other family member already has a bank account		✓
Lack of trust in the financial system		✓
Religious reasons		✓

Islamic microfinance is an instrument to effectively alleviate poverty in OIC countries

Microfinance involves short-term financing with tenures of less than 12 months. The amount would typically be less than USD 500 and have a relatively high interest rate or required return due to the perceived higher risk. Furthermore, there are minimal document requirements and the targeted customer base is one that is usually ignored by banks, such as individuals who want to start micro businesses, as well as micro entrepreneurs looking for funding to grow into a small business. Unfortunately, in OIC member countries, religious reasons are a potential impediment to the use of microfinance.

91 MIFC. (2014). *Global Financial Inclusion Islamic Finance Meets the Challenge*. Bank Negara Malaysia.

Islamic microfinance that is Shari'a-compliant can be utilized to increase financial inclusion. The principal contracts on which this can be used include *Qard-ul-Hasan* which would be akin to charity; *Murabaha* which would require buying and selling a commodity at a mark-up or profit; profit and risk sharing models such as *Mudaraba* or *Musharaka* where the investor would be exposed to the credit and market risks of the transaction along with the entrepreneur; *Salam* that would provide funding for the acquisition of a commodity through its forward sale; *Istisna'a* which would provide funding for manufacturing, or *Waqf*. Globally, Islamic microfinance has grown from 500,000 customers in 2007 to 1.3 million in 2013.⁹² Islamic microfinance remains focused in Bangladesh, Afghanistan and Indonesia where 80% of origination has occurred with opportunities for growth in the Levant and North Africa, where 20-40% of potential customers (particularly in Jordan, Syria and Algeria) have cited religious reasons for abstaining from availing microfinance.⁹³ Likewise, Islamic microfinance in Asia is anticipated to grow along with increased demand for *Shari'a*-compliant financing.

Fintech to support Zakat, Sadaqah and Waqf in boosting financial inclusion

People falling below the poverty line (i.e. those who live on less than USD 1.9 per day as defined by the UN) will not have enough money to save, which prevents them from opening a bank account. Islamic finance can pull the disadvantaged into a social safety net through *Zakat*, *Sadaqah*, and *Waqf* to ensure that these people are able to fulfil their daily needs. The aim is to lift people from poverty to become self-sustaining where they are able to save and invest, and finally become the contributors of *Zakat*, *Sadaqah*, and *Waqf*.

One of the challenges in social funding is the collection and channeling of collected funds as cash is prone to fraud and embezzlement. The best alternative is to direct the payment of charitable donations or government aid through bank accounts or mobile payment which may also be supported by blockchain technology. This will reduce the incidence of fraud, while improving financial inclusion.

Fintech can provide integrated solutions to the entire Zakat value chain encompassing the collection, distribution, and intermediation of funds to the improved identification of beneficiaries. Technology can also facilitate bringing more donors to the network. Indonesia provides an effective example where the National Zakat Board (BAZNAS) launched Sobatku to enable collections and payments through a smartphone app. Online marketplace Bukalapak also developed an integrated gateway ('BukaZakat') for endowment, philanthropy, and *Zakat* payment. Additionally, several *Zakat* related agencies have partnered with fintech specializing in payments to provide channels for collections and payments.⁹⁴

The adoption of fintech in Islamic social finance potentially increases financial inclusion as it necessitates the opening of bank accounts to access the funds. However, most beneficiaries usually conduct one transaction per period to withdraw the entire funds which are then spent to meet their daily needs. Islamic finance can be utilized to make these beneficiaries of donations self-sustaining, and eventually contribute towards lifting others out of poverty.

⁹² Karim, N., Tarazi, M., & Reille, X. (2008). *Islamic Microfinance: An Emerging Market Niche*. CGAP.

⁹³ Ibid.

⁹⁴ In Indonesia, Dompot Dhuafa has partnered with payment fintech OVO, Baznas with DANA, and Lazismu with GoPay.

Fintech enabling Islamic finance to increase financial inclusion and contributing to fulfilling SDGs

Islamic finance needs to leverage fintech to improve credit scoring, reaching more secluded locations, cutting costs for both financier and borrower, channeling funds to the right segment, and improving compliance regulation. Blossom Finance issuing small-sized, blockchain-based smart sukuk is one example of fintech-based Islamic finance. Other opportunities to leverage fintech for Islamic finance are provided in the table below.

Table 8. Opportunities to leverage fintech for Islamic finance

Islamic finance technology enablers	Islamic finance opportunities to increase financial inclusion
<p>AI and Data Analytics</p>	<p>Data analytics can be utilized to assess creditworthiness despite very limited credit histories in developing countries. Data points could be collected from different sources such as internet online activities, social media interaction, application usage behavior, call activities, phone camera, and location tagging.</p> <p>AI could then analyze the data using predictive analytic algorithms to decide on creditworthiness, amount of financing, and repayment maturity.</p>
<p>Mobile Payment, P2P Finance, and Open Banking</p>	<p>Payments using apps in smartphones or USSD in ordinary feature phones are able to reach even the most isolated areas, provided they have phone or internet connectivity. Complemented by P2P financing, everyone in the community could fund viable individual or SME candidates.</p> <p>Open banking supports the end-user experience by enabling customers of mobile payments and P2P financing companies to access data concerning their financial institutions directly without opening banking apps or accessing the bank’s website. Transferring money or making payments can be directly performed through the app without using any bank-based platform. The potential impact in improving the financial system’s accessibility to remotely located populations can be immense.</p>
<p>Distributed Ledgers</p>	<p>Every financing transaction can be recorded on a blockchain ledger for verification, and security purposes. This also creates a record of all transactions and improves predictive capabilities in relation to repayments. Ultimately this enables risk to be better priced in terms of the financing provided and its related fees. Timely repayments will increase credit scores which in turn will result in lower return requirements and processing fees.</p>
<p>Cloud</p>	<p>Cloud technology will enable financial institutions or fintech companies offering Islamic finance to run their operations using cloud-based software managed by third parties without the need to have on-site servers. This will enable startups to immediately commence operations without incurring the cost of creating a technology platform.</p>
<p>Cybersecurity</p>	<p>Fintech advancement requires robust cybersecurity technology to manage the risk of cybercrime such as data breaches, identity theft, fraudulent transactions, and server crashes. Cybersecurity also supports Islamic finance providers to comply with regulations relating to sanctions, AML, CFT, bribery, and corruption.</p>

Case Studies

Case Study 1

Blossom Finance – Shari’a-compliant microfinancing business to issue the first blockchain-based sukuk

Founding Principles	Established in the US, Blossom Finance offers bitcoin-based <i>riba</i> -free microfinance to the US Muslim community. Blossom Finance has moved to Indonesia to be within close proximity to access potentially one of the largest Muslim markets.
Value Proposition	Obtain funding from global investors and invest in small businesses and expect a profit margin of 6-8%%, with 20:80 profit sharing with the investor. Blossom Finance does not invest in businesses that run margin trading or alcohol, and the investment is based on the profit-sharing concept of “ <i>Musharaka</i> ”. Microfinance institutions are rigorously evaluated by Blossom Finance, and only high-scoring institutions are eligible to raise funds through Smart <i>Sukuk</i> . The invested funds are invested in a pool of creditworthy small businesses, and no funds are invested directly by Blossom Finance. ⁹⁵
Traction to Date	The company moved to Indonesia in 2015 after considering that 80%of the population aged 15 and above does not have a bank account, while the majority are Muslim. It has issued Smart <i>Sukuk</i> , which is a small-sized, asset-backed Islamic bond to help Islamic microfinance co-operatives in Indonesia (known locally as ‘ <i>Baitul Mal Wat Tamwil</i> ’ or BMT) channel funding to small businesses or micro entrepreneurs. The transactions utilize Ethereum blockchain technology which eliminates the need for conventional banks to make payment, reducing costs, increasing transparency and enhancing the security of the transaction. ⁹⁶
Roadmap for the Future	Socializing <i>sukuk</i> as a funding vehicle for Indonesian BMT nationwide. Then expand the Smart <i>Sukuk</i> funding mechanism across Asian retail banks, unit-linked equity schemes, multi-finance, and stand-alone development banks globally. Leveraging blockchain technology to “tokenize” real assets and sell the assets on a web-based platform to cross-border retail customers. Target is to become a USD 100 billion company.

Case Study 2

LaunchGood – Crowdfunding platform for Muslims

Founding Principles	Beliefs Muslims value should be shared with the world, and LaunchGood provides an ecosystem for those values to flourish and manifest.
Value Proposition	Crowdfunding platform providing ecosystem and network for Muslims. It raised a small amount of funds from large numbers of individuals or organizations and seeks to improve access to finance for individuals and SMEs which previously have little or no credit history. In addition to providing a crowdfunding platform for Muslims, LaunchGood also administers dedicated coaching, offline donations, and flexibility in changing campaigns.
Traction to Date	LaunchGood went live in October 2013 and since then has raised more than USD 93 million in crowdfunding for over 8,360 projects across 133 countries by October 2019.
Roadmap for the Future	Over the next 5 years, LaunchGood aims to expand with more digital platforms – introducing a social media network, hiring platform, etc. – in addition to a global collection of co-working spaces, physical communities and events that bring people together

95 Freischlad, N. (2015, April 29). *Blossom offers Islamic micro-financing in Indonesia using Bitcoin*. Retrieved June 30, 2019, from <https://www.techinasia.com/blossom-offers-islamic-microfinancing-indonesia-bitcoin>

96 Blossom Finance. (2018, May 7). *Islamic Finance Upgraded: Smarter Sukuk Using Blockchain*. Retrieved June 2019, 30, from <https://blossomfinance.com/press/islamic-finance-upgraded-smarter-sukuk-using-blockchain>

Case Study 3

Tez – Endowment-based fund where donors can select microentrepreneurs of their choice

Founding Principles	According to the World Bank, more than 50% of Pakistan’s population is unbanked. Many use a range of casual financial instruments, but these can be unreliable, costly, and inefficient. Any small variation in income could affect their capacity to fulfill daily basic needs such as foodstuff and clothing. Tez seeks to incorporate these unbanked masses into mainstream finance by leveraging current smartphone penetration. ⁹⁷
Value Proposition	Offering a smartphone app as a single platform to deliver seamless financial services that include microfinancing, health and life insurance, and investment.
Traction to Date	Has won the SDG award and received seed funding of USD 1.1 million from Omidyar Network. Currently financing through a partner bank, but preparing to provide financing directly without intermediaries.

Case Study 4

Angsur – providing microfinance to students, and supporting social needs

Founding Principles	<p>More than half the population in Indonesia is unbanked⁹⁸ creating a target market of more than 100 million Muslims. Most banking services are concentrated in Java and Bali, the most populous regions, while there is little financial infrastructure in other parts of the country.</p> <p>Angsur aims to tap the unbanked population by providing <i>Shari’a</i>-compliant financing to undergraduate students without the requirement of providing collateral.</p>
Value Proposition	Rather than only analyzing the credit history of a particular student, Angsur gathers social media data and assesses creditworthiness based on digital presence. Their assessment is based on the substantial data available from the digital activity of this demographic group. <i>Murabaha</i> contract is adopted to provide the financing, where Angsur principally buys the intended goods, and sells these to the students at a mark-up or profit. The sale price can be paid in installments of 1 to 12 months according to the borrower’s preferences, with usually more than 10% advance payment. Education on the Angsur microfinance benefit is performed by other students called Angsur Student Partners.
Traction to Date	Angsur also contributes socially by donating 2.5% of their sales to the pool in less developed areas. Providing <i>Sadaqah</i> in this manner is popular among Angsur’s beneficiaries. ⁹⁹

97 Tez Financial Service. (2018, Oct 19). *Tez Financial Services Gets \$1.1 Million in Seed Funding Led by Omidyar Network*. Retrieved Jul 9, 2019, from <https://www.tezfinancialservices.pk/press/>

98 Firmansyah, Hafiz Budi and Ramdani, Ahmad Luky, *The Role of Islamic Financial Technology (FinTech) Start-Up in Improving Financial Inclusion in Indonesia Case: Angsur* (May 27, 2018). 3rd International Conference of Integrated Intellectual Community (ICONIC) 2018. Available at SSRN: <https://ssrn.com/abstract=3194546> or <http://dx.doi.org/10.2139/ssrn.3194546>

99 Ibid.

CHAPTER 5

Roadmap and Considerations



Introduction

Modern Islamic finance started in the 1960s from offering primarily retail banking and has since grown significantly. With the development of fintech companies, key stakeholders in Islamic finance must collaborate to remain competitive and fulfill their social and business responsibilities. Islamic finance and Islamic social finance could serve their respective customers by leveraging technology, and eventually achieving the related SDGs. However, there are challenges related to regulations, investments, and payment gateway regulations amongst others to overcome.

The Potential Opportunities

The earlier chapters have highlighted the current landscape of Islamic fintech globally and gaps vis-a-vis global fintech developments. The earlier chapters have also highlighted how Islamic finance, while fast-growing, is still limited in its coverage within its core audiences having a bigger gap in terms of financial inclusion compared to developed markets. Following is a synthesis of the findings so far that translate to the following three key opportunity areas that Islamic fintech can address:

1. Leap-frog Islamic financial services reach and impact

Islamic fintech has the ability to extend the reach of Islamic finance within its core markets and beyond. The following would be the key Islamic fintech solution areas of opportunity:

- **Catering to the digital-demographic:** Expansion for IFIs should focus on building-out digital-only banking and capital markets rather than more 'brick and mortar' branches to leverage the young tech-savvy and high mobile using Islamic finance user base. Adopting services such as mobile payment and P2P finance while leveraging distributed ledger technology and crypto assets will increase operational efficiency and customer experience.
- **Leveraging AI/data analytics:** Targeting the right customer base using data analytics and improving the user's experience through AI should further catalyze acceptance of Islamic financial services. This will be particularly valuable in Islamic wealth-management expansion.
- **P2P lending/trade financing:** Islamic P2P and related fintech platforms are poised to further facilitate cross-border trade and financing. Incumbent IFIs should be looking into investing in this opportunity given the scale of resources and regulatory experience needed.
- **Insure-tech:** *Takaful*-tech can be leveraged to provide coverage with low-cost premia against unforeseen adversities that may arise from the incapacitation of the family's income earner.

- **Incumbent/Startup/Tech collaboration:** Islamic fintech is ripe for incumbents, startups, and big tech companies to start developing fintech services collaboratively. Moreover, consolidation between challengers and incumbents will expedite innovation and market penetration. Challengers that are collaborative and open to risk-taking will find allies in incumbents with large customer databases and well-established systems.
- **Open banking architectures:** Islamic banks can adopt open banking architectures to enable fintech to directly access banking platforms and offer complementary services. Concurrently, by employing Open-X technology, fintech could provide services from IFIs' platforms as if they were their own.

2. Address significant financial inclusion gaps within core markets:

- **SME and unbanked retail solutions:** *Shari'a*-compliant P2P lending, mobile-driven simple banking solutions, insurtech, and other fintech based *Shari'a*-compliant services will address some of the reasons why people are not using financial services today. This includes the reduction in cost of services.
- **Payment solution innovations:** *Shari'a*-compliant payment innovation should be one of the main focus areas for both IFIs and challengers looking to improve market expansion and financial inclusion as this is the main fintech technology besides P2P that has incentivized the unbanked to open bank accounts.

3. Deliver Islamic social financing to support global SDGs and needs:

- **Islamic social fintech to deliver on wider global social needs/SDGs:** Islamic fintech is poised to tap the multi-billion-dollar Islamic social financing pool to meet wider global social funding needs as defined by the 17 SDGs of the 2030 Agenda for Sustainable Development. Multi-laterals such as UNHCR, UNDP and others are already taking advantage of this opportunity.



Roadmap per Key Stakeholders

Islamic fintech is well-placed to drive the Islamic finance industry to its next phase of evolution and opportunity. Below is a high-level roadmap for the Islamic fintech development for different stakeholders.

Governments and regulators balancing customer protection and fintech growth¹⁰⁰

Governments have now begun to play an active role in the development of fintech, enabling startups to grow and more mature providers to offer financial services. Governments in Malaysia, Indonesia, UAE, and Bahrain have initiated incubators and accelerators. However, as fintech's impact grows, governments are taking measures to prevent misuse. A balance must be found between regulation required for consumer protection, and preserving the growth of fintech.

Governments need to be one step ahead to promote a healthy fintech ecosystem

Governments and regulators play a crucial role in fostering a healthy fintech ecosystem. Proactive regulation is imperative for fintech's sustained growth with regulators in Bahrain, the UAE, and Saudi Arabia providing good examples of this approach. A hospitable environment for fintech startups has been created in these jurisdictions through initiatives such as regulatory sandboxes that enable new companies to test their technologies in the marketplace while still ensuring sufficient consumer protection.

In contrast, requirements like ISO certifications in Indonesia for fintech companies do not offer any significant benefits to customers but are adding to the cost of offering financial services. Restrictions on cryptocurrencies to register with only one exchange also hinders their growth by reducing the liquidity provided by being registered with multiple exchanges.

Investors should target Islamic fintech to tap into large Muslim market

In 2018, an estimated USD 504 million worth of M&A transactions occurred within Islamic finance with very little Islamic fintech related investments noted. Relative to a fast growing global fintech universe, Islamic fintech has seen only a miniscule amount of investments.¹⁰¹ While this report has not identified Islamic fintech VC/PE investments, it is a fraction of the USD 38.1 billion invested globally in all of 2017. IFIs should be actively looking to acquire developing Islamic fintechs to boost their operations and time-to-market. They would also benefit from separately incubating such acquisitions before full integration within their overall operations.

IFIs could have two alternatives in reducing development cost and to expedite technology adoption: merge with or acquire relevant Islamic fintech companies, or form partnerships with them.

Acquiring startups can add services that IFIs have not been able to provide, and access previously unbanked customer segments. If IFIs can effectively identify the gap between current products or services and

¹⁰⁰ The complete interviews are in the appendix. Except for face-to-face interview with the CEO of Blossom Finance, all responses were gathered through email interviews.

¹⁰¹ DinarStandard 2019, *State of the Global Islamic Economy Report 2019/20*

a potential fintech provider that effectively addresses this deficit, an acquisition can be considered. However, acquisitions of technology companies by financial institutions have often floundered on an inability to integrate different business cultures.

The IFI may also acquire an equity stake in a fintech company, where board representation should enable strategic direction to be provided and ensure that all interests are aligned.

Risks of Islamic Fintech and Potential Mitigations

Risks:

Convenience in borrowing could lead to being trapped in debt

Mobile, Shari'a-compliant P2P financing enables financial inclusion by accessing unbanked populations regardless of the reasons that had caused the customers' absence. However, the relatively easy-to-obtain financing can potentially encourage people to borrow more than required and accumulate excess debt. Instead of financing micro or small businesses, the end result can just be increased consumerism fueled by debt.

New methods of scams and fraud could emerge

P2P finance offers convenience where credit approvals can be granted within minutes based upon personal data and telephone numbers. However, the fees charged are significantly higher in comparison with IFI financing. Moreover, in the case of default, financiers may resort to aggressive measures to coerce repayment.

Unsuspecting donors may contribute towards fake ventures through crowdfunding. Once collected, the funds may be used for unrelated causes. Faster funds collection means faster scamming.

Lack of financial infrastructure could result in unbanked populations

In the US, prospective customers are able to open bank or investment accounts simply by entering specific personal information which is automatically checked against government records. If all the details are accurate and valid, the customer's account is opened almost instantaneously. The lack of such financial infrastructure in many developing countries may make account opening quite cumbersome and act as a deterrent to many people.

AI could lead customers to acquire products or services they do not need due to a lack of understanding

Emergence of AI in the financial services industry where, for example, robo-advisory may be employed in wealth management, could potentially advise the wrong products or services as a result of the algorithm's limitations.

Stringent fintech regulations to stifle growth

IFIs must embrace the fact that many governments are now starting to regulate fintech due to its growing size and significance along with the potential threats from cybercrime, terrorism, and money laundering. Compliance with additional regulation can be expensive and time consuming for IFIs who might not possess the requisite knowledge on these issues. Consequently, IFIs could partner with regtech companies or support a regtech startup to assist in complying with regulatory requirements.

There are several other potential risks:

- Data analytics could potentially advise IFIs to only provide services to the most profitable customers, excluding all others.
- IFIs' risk management could be obsolete and need upgrading to avoid mis-selling and customer exploitation.
- Shortage of Islamic scholars that can issue pronouncements (*fatawa*) on complex products due to a knowledge gap in relation to technology.

Potential mitigations:

- Hiring the right talent is critical to ensure *Shari'a* compliance. It is imperative that the company's CEO attaches the same weight to ensuring *Shari'a* compliance as he/she does to product development and innovation.¹⁰²
- Islamic fintech should adhere to the spirit of *Shari'a*-compliant finance by eschewing products that simply accumulate debt by providing easy credit. Islamic microfinance co-operatives (BMT) in Indonesia, for example, will only provide financing to genuine micro and small businesses.
- The spirit of *Shari'a* should be embedded in the products and services and should not just be cosmetic in nature. Providing financing using *Qard-ul-Hasan* should not be accompanied by relatively high processing fees that increase transaction costs for the customer.¹⁰³
- Having robust risk management policies and procedures is critical, especially for fintech startups given their wide reach. Technology is the key that allows companies to access sizable segments of underserved consumers, and it should be used effectively to create holistic KYC, AML, and risk management frameworks and controls.¹⁰⁴ This includes creating digital identities for unbanked populations.
- Key stakeholders of Islamic fintech including regulators, incumbents, and challengers must work with *Shari'a* scholars to align their vision and knowledge.

¹⁰² Information gathered from Interview with Blossom Finance.

¹⁰³ Ibid.

¹⁰⁴ Information gathered from Interview with Wahed Invest.

Appendices



APPENDIX 1

Interviews

Interview with Blossom Finance

Note: Below responses are the summary of a face-to-face interview. The responses are not reproduced verbatim but concluded from the interview.

Q: What challenges did you face early on, in particular when launching Blossom Finance?

A: Lack of awareness in the Muslim community in the US leads to avoidance of financial services.

Q: Could you explain briefly what is being offered by Blossom Finance?

A: Blossom Finance is not a P2P platform, we only provide funding for institutions, with the amount of USD 100 thousand to 3 million.

Baitul Mal Wat Tamweel (BMT, Islamic cooperatives in Indonesia) could raise funds from overly liquid institutions without paying the high "listing" cost. The BMT association will rigorously filter and test creditworthiness of BMTs eligible to receive funds. Only BMTs with high scores are eligible to be financed and only the top rating qualifies for eligibility.

Q: What is your plan with the current company for the next 5 years, in terms of product suite and/or expansion?

A: *Sukuk* as a funding vehicle for BMTs. Creating a pan-Asian retail bank, unit-linked equity schemes, unit finance, and a stand-alone development bank. Blockchain is central, tokenizing assets that are sold on a web-based platform. Target is to become USD 100 billion valued company.

Q: Which technological trend or development would Islamic fintech entrepreneurs need to look out for in the next 3-5 years?

A: We will see increasing retail participation and cross border transactions, especially leveraging blockchain. Tokenization will be the future trend. Every asset has the potential to be tokenized and traded at a fraction of total value.

Additionally, banks and other Islamic finance players will go digital, future expansion will be for branchless banking and branchless finance. While 'brick and mortar' banks will still be around, expansion will no longer build fully physical new branches as it is today.

Q: In your view, what has been done successfully by governments and/or regulators in supporting Islamic fintech? What else should they do in the future?

A: The US has supported fintech by allowing platforms to raise funds.

While the Indonesian government has a regulation for BMT or microfinance to operate, the central bank also has a special program for SMEs, which supports Blossom in providing financing. Recently the Indonesian Financial Services Authority (OJK) passed legislation on cryptocurrencies and at the

end of 2018 formed a body named National Islamic Financial Committee (KNKS) to harmonize Islamic finance initiatives nationwide.

Q: What can the government do additionally?

A: Requirements such as ISO certifications are not offering benefits to consumers or safer transactions, can be eschewed as they increase startup costs for fintech.

It is easier to open a bank rather than to start a cryptocurrency. The law requires that cryptocurrencies can only sign up at one exchange, due to arbitrage. This law should be removed as it restricts liquidity in these currencies.

Q: What challenges need to be addressed by IFIs if they want to remain competitive?

A: Muslims should obtain their financial services through IFIs if they are able to provide the same user experience and pricing as the conventional financial institutions.

To offer the same user experience, bigger IFIs should form partnerships with Islamic fintech companies, and leverage their technology and expertise. This is a better alternative than acquiring a fintech company. Acquiring fintech companies could take a considerable amount of time, effort, and cost, while having a high probability of failure. If IFIs are still adamant to acquire, the fintech company should be allowed to operate as a startup and innovate independently.

A better alternative may be to acquire an equity stake in an Islamic fintech and provide direction through board representation.

Q: Why do you consider investors should invest more in Islamic fintech?

A: Muslims comprise 1 out of every 4 people in the world. If 60% of them represent a new market, the potential size is significant. Investors should not forego the potential revenue from this huge market while the underserved and unbanked Muslims should also be tapped.

Q: In your view, what are the risks of financial inclusion through Islamic fintech and how would you mitigate such risks?

A: *Riba* and debt is either *haram* or strongly discouraged in *Shari'a*. Islamic finance should emphasize equity-based transactions over debt. Islamic fintech should avoid becoming another loan shark or induce people to accumulate unnecessary debt. Islamic microfinance (BMT) in Indonesia, for example, will only provide financing to genuine micro and small business, and may even advise customers how to lower the operating costs of micro businesses.

Hiring the right talent that is eager to follow *Shari'a* law could enable its spirit to be infused not only in the product and services, but pervade the culture of the fintech. For instance, if financing is provided using *Qard-ul-Hasan*, relatively high fees should not be charged to raise costs for the customer.

CEOs should attach the same importance to *Shari'a* compliance as they do to launching new products. This responsibility should not just be delegated to the *Shari'a* Board or compliance team and then ignored.

Interview with Wahed Invest

Q: What challenges did you face early on, in particular when launching Wahed Invest?

A: Wahed's mission is to make halal investing accessible and efficient. These two words implicate a wide range of topics in the world of investment management—a product that is available to everyone, pricing that is simple, clear and competitive, no hidden fees, seamless onboarding, no lock-in period, an intuitive interface, etc. Launching a product that encompasses all the above was not an easy task. There were a lot of moving pieces that we had to juggle and we're really proud to have built what has become a global robo-advisor. All departments had to be in sync to ensure that execution is flawless, so clear communication between teams and overall project management was crucial.

One other aspect that we really focus on is education. We made sure that we provided and continue to provide our users with the right educational material not just about Wahed, but about investing in general. A lot of our users are first-time investors, so raising awareness about the benefits of investing is of utmost importance.

Q: What is your plan with the current company for the next 5 years, especially in terms of product suite and/or expansion?

A: The halal and ethical investing industry have been expanding rapidly and we're excited to play a major role in this advancement. We are working on localizing our product offerings in our key markets while also adding more tools that will allow clients to invest with more flexibility. This added depth will make saving easier, and planning and reaching goals a little more fun. At the same time, we've been working on creating our own investment products and vehicles that could be a lot more efficient than traditional mutual funds, keep an eye out for this space! The end goal for the company though, is to become the one-stop shop for overall *Shari'a*-compliant money management.

Q: Which technological trend or development would Islamic fintech entrepreneurs need to look out for in the next 3-5 years?

A: Inclusivity, accessibility, and efficiency are three key items that are needed for this space to take off, whether that's Islamic investing, insurance, or any other sector. A recent survey we ran in the UK showed that over half of British Muslims feel excluded by mainstream financial services. People love to throw around buzzwords like AI, machine learning, IoT, among others, as they have been without a doubt a key pillar in boosting the fintech space into the spotlight. But to be able to leverage these technologies properly, companies first need to ensure that they are user-centric and product-focused. There is a lot of opportunity in different sectors but following and understanding that philosophy behind building products is needed to allow for more advanced technological developments.

Q: What future opportunities do you see in the Islamic fintech industry as a whole? In which areas do you see the most promising growth opportunities?

A: We firmly believe in our mission to bring awareness to personal finance and investing. More than 80% of our users are either new to investing or not very familiar with investing. This alludes to the current landscape's ripe ecosystem. We're seeing an increasing focus on retirement and family planning based on several surveys we've previously run. In the US and UK, it is more or less the norm to have your own retirement account which you contribute to regularly, and this trend is now moving east.

Q: In your view, what are some of the challenges for Islamic fintech to increase financial inclusion?

A: There are numerous factors that impact financial inclusion, aside from a company's product features. I'll share an example from our experience in the US

and UK, which explains how governments play a vital role in this journey of financial inclusion. In the US, users are able to open bank accounts or investment accounts simply by entering specific personal information which is automatically checked against government records. If all the details are accurate and valid, the user's account is opened almost instantly. Not all countries have this infrastructure set-up so naturally, account opening is not always as seamless. Individuals in rural areas in developing countries may also not even have the right supporting documents, which partially explains the high percentage of unbanked users typically found in these areas.

Q: In markets or countries where Wahed Invest has a footprint, in your view, what has been done successfully by the government and/or regulators in supporting Islamic fintech? What else should they do in the future?

A: Governments and regulators play a crucial role in fostering a healthy fintech ecosystem as a whole. We view them as partners, and this mindset allows us to be nimble. Since most fintech players are introducing brand new solutions to the market, naturally the regulators need to not only keep the same pace but also be one step ahead to be able to advise the companies efficiently. Being lean and agile, startups move fast, and regulators who behave similarly will benefit from developing a healthy and leading ecosystem. The formula that they seem to follow is having the right amount of red tape to protect the user and balancing it with clear policies and processes to allow startups to go to market effectively. The number of high-growth fintech startups in the West is a testament to that.

Q: What challenges need to be addressed by IFIs if they want to remain competitive?

A: They need to be efficient. Users expect similar services, experience, and pricing from incumbents now. For example, if you need to update your email some banks in the MENA region still force you to go to a branch or ATM machine, and even then, the change will take a few business days to get implemented. On the contrary, you can open an account with Wahed literally in minutes. These small

examples stem from a cluster of issues that need to be fundamentally reviewed by incumbents, which usually takes some time.

Q: In your view, what are the risks of financial inclusion through Islamic fintech and how would you mitigate these risks?

A: Having solid risk management systems and policies is more important now than ever, especially for fintech startups given their wide reach. Technology is the key that allows companies to access sizable segments of underserved consumers, and it can and should be used the same way to create holistic KYC, AML, and risk management frameworks and controls.

Translating these policies into core product features (whether consumer facing or internal tooling) as opposed to viewing it as an afterthought is critical to be able to handle new users at scale. Ensuring that these features smoothly fit into the user onboarding journey will not only help users feel more secure but will also ensure that only the right users are signing up without ruining the experience for others, which is the ultimate goal.

Interview with LaunchGood

Q: What challenges did you face early on, in particular prior to launching LaunchGood in 2013?

A: It was a real struggle to just build the website. Not being a coder, I was dependent on contracting out developers to do the work – but we had little cash and less experience managing such a process. We ended up going with some guys in Pakistan who initially gave us a 3-month timeline – but it ended up taking 18 months! You have to be really stubborn to wait that long to see your idea come to life.

Q: Could you explain briefly on what is LaunchGood's value proposition?

A: At LaunchGood, we believe Muslims have incredible values to share with the world, and we're providing an ecosystem for those values to flourish and manifest as a real, global impact.

Q: What is your plan with the current company for the next 5 years, in terms of product suite and/or expansion?

A: LaunchGood is more than just a fundraising website – it's an ecosystem and network for Muslims to be and do their best. We operate primarily as a crowdfunding platform now, but over the next 5 years we have ambitious goals to expand with more digital platforms – social media network, hiring platform, etc. – as well as a global collection of co-working spaces and physical communities and events that bring people together in real life.

Q: Which technological trend or development would Islamic fintech entrepreneurs need to look out for in the next 3-5 years?

A: Blockchain and cryptocurrency seem like the obvious answers, as they should be.

Q: What future opportunities do you see in the Islamic fintech industry as a whole? In which areas do you see the most promising growth opportunities?

A: A super ambitious project would be to create an easy-to-digest cryptocurrency embraced widely. But something more realistic with a big demand: our own

payments platform. There's a lot of discrimination against Muslims in the banking industry, and it affects countless charities and companies – including LaunchGood!

Q: In your view, what has been done successfully by the government and/or regulators (globally or in a specific country) in supporting Islamic fintech? What else should they do in the future?

A: There's a growing interest along with money for Islamic fintechs. That's awesome to see – for example Abu Dhabi Islamic Bank's EFICA competition with a USD 100,000 top prize! There have been a number of incubators I've heard of (but no direct experience). That gives me a lot of hope, but definitely there needs to be more done still. I prefer it comes from the private sector rather than governments though, to make it less vulnerable to changing political tides.

Q: What challenges need to be addressed by IFIs if they want to remain competitive?

A: Design matters. It's easy to think about the technology, but the user experience is just as important – and given how amazing mainstream fintech products look, the interface is important too, because it conveys quality and trustworthiness. The bar's a lot higher now than when we started 7 years ago.

Q: Why do you consider Investors should invest more in Islamic fintech?

A: There are nearly 2 billion Muslims globally who are becoming increasingly wealthier and savvy, yet want to remain true to their values. Whoever can conveniently make that happen stands to make a lot of money.

Q: In your view, what are the risks of financial inclusion through Islamic fintech and how would you mitigate these risks?

A: The risk is the watering down of values, similar to what we saw with the *sukuk* model of *halal*-bonds when they started taking off in the 2000's and became a bit out of control.

APPENDIX 2

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