ISLAMIC DIGITAL FINANCE

Are We Building a Value-based Ecosystem?

INTRODUCTION

Disruption of banking services over the last five years has evolved into a more normative expectation of new financial technology (fintech) with varied offerings and competitive solutions compared to incumbent (traditional, mainstream) banks. National initiatives have also focused on building micro, small and medium enterprises (MSMEs) in the aftermath of the pandemic and have successfully applied digital transformation strategies to support their market inclusion. For example, Southeast Asian economies rely on MSMEs as they represent almost 70 per cent of the respective national labour forces and over 40 per cent of the countries' gross domestic product (GDP) (Asian Development Bank, 2020). The big challenge has been access to financing for entrepreneurs, where over 60 per cent of surveyed MSMEs claimed they were unable to access financing (Harvard Business Review, 2021).

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Informal workers estimated to account for almost 70 per cent of the Southeast Asian workforce remain financially underserved (ILO, 2018). Many of these informal workers cannot access financing as they have no credit histories and end up involved in informal debt from loan sharks. The expansion of digital financial services is therefore expected to substantially increase access to finance for small businesses whilst offering first-level retail solutions to individuals who have stayed away from traditional financial services due to high fees, hard selling (typically insurance), and uncertainty over investment products.

For Islamic finance, two distinct yet entwined categories of fintech can be identified: fintech solutions and Islamic digital banking. The broader category of fintech solutions is driven by start-ups offering Banking as a Service (BaaS) operating mostly outside regulatory approvals or licenses. The most popular solutions are found in crowdfunding (53 per cent), followed by payment channels and challenger banks or neobanks (34 per cent).

By sector, fintechs that provide financing dominate, representing more than 53 per cent (199 companies) of the market, whilst wealth management solutions have reached almost a third of all fintechs. In addition, digital asset solutions have gained ground, even with regulatory hurdles, and have increased offerings internationally. The crypto space has also been developing rapidly, but Islamic social impact tokens are mostly non-existent (see Figure 1).

With competition looming and BaaS solutions increasing in sophistication, the most strategic approach for incumbent banks is collaboration: incumbent banks are partnering with fintechs to leapfrog over traditional evolution (e.g., Bank Islam and Kestrl). The digital regulatory landscape is expected to enable and protect digital natives. The Malaysian financial regulators have recently released Islamic digital bank licenses, issued technology risk exposure drafts and provided extensive funding/training support through hubs, accelerators and incubators, all with the objectives of increasing financial inclusion and providing cheaper access to funding for those who need it.

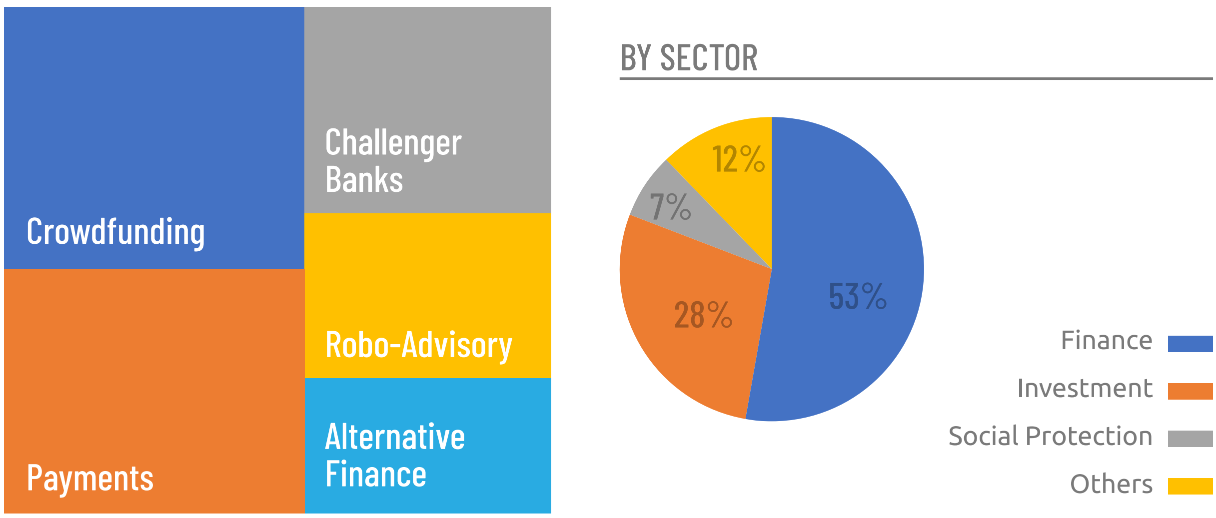

Figure 1: Islamic Fintech by Category and by Sector (Larger Area Indicates a Higher Number of Start-ups)
Source: Mahomed (2022)

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The Malaysian Value-based Intermediation (VBI) initiative, which provides guidance for banks to achieve sustainability through the objectives of Islamic law (*maqasid al-Shariah*), is also anticipated to provide a more responsible financing ecosystem. But are Islamic digital banks and Islamic fintech solutions expected to operate within the existing VBI ecosystem, or is a new value-based digital finance ecosystem required? The article attempts to answer these questions.

UNDERLYING RISKS IN THE ISLAMIC DIGITAL FINANCE ECOSYSTEM

Digital finance offers significant advantages to communities that were traditionally financially excluded. For example, Bharadwaj *et al.* (2019) assessed the usage and impact of M-Shwari, a digital credit product, and found that users were 6.3 per cent less exposed to negative shocks.

Riley (2019) found that female recipients of digital micro-funding received 15 per cent higher business profits and 11 per cent more capital. Remittances especially have been positively impacted through mobile money transfers. Munyegera and Matsumoto (2016) found that the probability of receiving remittances in Uganda increased by 82 per cent compared to traditional methods. Most less developed and developing countries relying on remittances are member states of the Organisation of Islamic Cooperation (OIC). Offering Shariah-compliant digital solutions to many of these Muslim-majority countries is expected to promote economic growth and include those that did not engage with the financial market due to belief.

Islamic digital finance is as susceptible to underlying digitalisation risks as conventional digital finance is. Learning from existing statistics of the more established conventional digital finance experience may prompt Islamic digital finance into a more robust ecosystem that protects the consumer. Unfortunately, some startling statistics on digital finance transformation have been documented in the Outseer Fraud & Payments Reports between 2017 and 2021. For instance, from 2016 to 2020, there was an almost 500 per cent increase in the number of records exposed, whereas new data created only increased by half or 257 per cent. Similarly, between 2019 and 2020, the share of mobile app transactions increased by 40 per cent, but fraudulent mobile app transactions increased by 83 per cent. For example, South Africa's banking sector experienced 90 per cent higher mobile app fraud between 2017 and 2018, with only a 10 per cent increase in smartphone users (CGAP, 2022). SIM swap fraud, account hijacking and social media scams have increased much faster than technological processes or digital finance adoption.

The Consultative Group to Assist the Poor (CGAP) February 2022 research report findings on digital financial services (DFS) consumer risks noted that it was the poorer nations, vulnerable segments, and rural populations that were most exposed to DFS consumer risks (Chalwe-Mulenga, Duflos & Coetzee, 2022). Some possible reasons include low levels of digital literacy and financial skills, low infrastructure reliability, and poor data security. CGAP found, for example, that rural women were impacted most severely because of agent fraud, sharing their PINs with unscrupulous vendors and being unable to complain due to limitations in social norms. Again, the majority of these vulnerable segments are in OIC countries.

Another significant risk identified by CGAP was over-indebtedness. Easier access to financing without financial planning and budgeting result in excessive consumption loans that are often paid off with new loans, thereby increasing personal debt with compounding interest. This increase in leveraging is from legitimate peer-to-peer (P2P) lending platforms but at higher than market rates due to higher-risk consumers. Credit checks are simpler, and access to funds is based on push apps, resulting in higher default ratios. For example, Kenyan mobile digital borrowers are 21.1 per cent likely to default compared to informal borrowers (15.9 per cent) or bank borrowers (6.9 per cent) (FinAccess, 2019). In addition, consumers are exposed to fraudulent digital platforms that steal data and use online credentials to create more debt or access investments of unknowing customers. Similar fraud tricks consumers into sending money through authorised push payment (APP) scams increased in the UK by 40 per cent in 2021 alone (Clark, 2022). The World Bank estimates that approximately 1.7 billion people were unbanked by 2017, with the vast majority (70 per cent) in OIC countries. Is it the natural evolution that banked consumers become more debt-ridden in already poor countries through irresponsible financing practices? If, through the adoption of VBI, Islamic finance practices are expected to provide only responsible financing, then

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digital finance solutions, albeit Shariah compliant, seem to fail the *maqasid* test of protection of wealth as it exposes to vulnerable to worse-off financial situations.

The increasing mismatch between the rate of digitalisation and the frequency of fraud is concerning but could be set off with consumer protection. However, another emerging risk is that redress mechanisms have been largely inadequate, requiring victims to fill in elaborate forms and move from department to department, seemingly hoping that the tedious bureaucracy would deter victims from claiming losses. For a VBI-based approach, good conduct is a key thrust that expects customer complaints to be handled efficiently and with swift compensation in valid cases. However, the conventional approach seems inadequate and misaligned with maqasid and VBI expectations. Therefore, Islamic digital finance redress mechanisms would have to match the aggressive and exponential increase in fraud to protect the consumer.

Probably the most concerning emerging risks are artificial intelligence (AI) and ethics. AI is used more extensively to mine data, undoubtedly the most valuable commodity in the information age. Through big data analytics, sentiment analysis and global tracking, AI-driven finance marketing is based on individual behavioural profiles, using psychological techniques such as nudging and playing to biases to convince (or manipulate) individuals into accessing more finance, for example. For this emerging technology to be used responsibly and within an Islamic ethos, detailed ethical constructs are required that are mostly absent in existing finance parameters. For example, there is no consensus on ethical benchmarks, and the extent of data exposure is not understood by the masses. If AI is trained to maximise profit, then how will VBI-based digital finance achieve its objectives? In addition, AI-algorithmic bias, data intrusion and logic-driven decision-making have exposed consumers to new and complex risks. Shariah advisors who are expected to pronounce these solutions are also not technically skilled enough to guide towards *maqasid*-based solutions.

SUMMARY

Emerging risks from conventional finance digital transformations provide the Islamic financial industry with several lessons. These can be summarised as DFS consumer risks in mobile app fraud, cyber identity fraud, and authorised push payment scams, amongst others. Digital fraud has increased much faster than its usage or the data available, indicating that criminals are becoming more sophisticated and new consumers are technologically unaware of cybersecurity threats.

For Islamic digital finance, financial inclusion of the underserved and unbanked is a priority as long as it promotes socioeconomic empowerment, reduces the inequality gap and improves well-being.

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However, this cannot be achieved by encouraging over-indebtedness or increased exposure to private data.

Therefore, it is recommended that an ethical framework be developed with key thrusts in line with the VBI strategy, customised to the digital finance ecosystem. This is expected to bring technological risk within the *maqasid* expectations, maintain responsible financing and encourage entrepreneurship through risk-based funding. It may be said that if Islamic digital finance does not effectively integrate a value-based digital finance ecosystem, it may propel Islamic finance further into the path of convergence of Shariah interpretation, negating its very spirit or need for existence.

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