



The Risks of Islamic Fintech

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Abstract The article explores the risk factors that trail the introduction of technology into Islamic finance in Nigeria. While Islamic finance is relatively nascent in the Nigerian financial sector, it would not be out of place to underscore the impact it has made. Borrowing from its conventional counterpart, Islamic finance has largely followed the trend and development to structure and market its offerings to the Nigerian public. Typically, Islamic finance is faced by similar risk exposures as documented for its conventional counterpart which include strategic, financial, regulatory, operational, technological and political risks. The additional peculiar risk exposures are Shari'ah compliance and business partnership risks. By and large, the practical experience in Nigeria suggests herculean hurdles for Islamic finance to cross to give birth to financial Eldorado.

Keywords Islamic • Fintech • Shariah • Nigeria • Risks • Finance

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INTRODUCTION

The tremendous impact that technology has had in general life has been awesome, more so in financial services. This, inadvertently, means a phenomenal challenge to financial service delivery. The problem of financial exclusion has been a recurrent decimal in the Nigerian economic landscape. The Nigeria financial services industry is beset with multifarious challenges that can only be overcome by technology. Statistics from the National Bureau of Statistics (NBS) suggest abysmal record of gross social inequality that has further fuelled insurgency in the northern part of the country.

The financial dimensions of exclusion in Nigeria suggest a dire need of technology to jump-start its economic recovery. The emerging Fintech landscape in the country galvanizes players from various industries are competing for the future of financial services. In this regard, Fintech startups have carved a niche for themselves in areas such as digital payments, microfinance, credit scoring, and remittances. Major Fintech brands in Nigeria are Paga, Interswitch, Vanso, Flutterwave, Paystack, Aella Credit and Venture Garden Nigeria (Oguh, 2017).

The Islamic finance's foray into the Nigerian financial industry coincides with the era of the development of Fintech. The experience trend of the conventional financial institutions has been replicated for Islamic financial Institutions. The risk exposure profile has been largely similar save in the areas of Shariah compliance and manpower. The intermediation process in financial market creates a series of interconnected contractual obligations and relations which alters the values of the variables in the risk equation (Akkizidis & Khandelwal, 2008).

The global financial services industry is continually transformed with the adoption of innovative technologies in the delivery of financial products and services. Innovation in finance is not a new concept, but Fintech focuses on the technological innovations that are applied to financial products and services (Rana & Akinlaso, 2018). In recent years, it has impacted the offering and consumption of products and services significantly. The advent of Fintech presents a value proposition for new opportunities and more inclusive access to financial services. Since its emergence, it continuously receives an increasing public attention and attracts growing investment interests.

Fintech promises to lower entry barriers in the financial service industry and enable nonfinancial corporations to offer financial services that were

traditionally dominated by regulated financial institutions. The likes of Apple or Samsung are corporate brands synonymous to technology development, Amazon or Alibaba known as online market place, and many others whose core business is not finance have leveraged the capabilities of technology to enter the financial market place to offer payment and online lending solutions.

More so, with the aid of Fintech, incumbent financial institutions are able to adapt and develop new tech-oriented business models. While several large financial institutions switching strategies to adopt new technologies, many small and new market players are springing up to offer financial services that is powered by innovative technologies. There are now over 12,000 start-ups globally, with Fintech investments reaching \$57.9 billion in the first half of 2018 (DIEDC, 2018).

THE HERALD OF ISLAMIC FINANCE

The Islamic finance segment is not left out in the global digital transformation strides. Islamic financial service providers are adapting to the new digital trend and leveraging innovative technologies to deliver financial services to their customers. Young, digitally native customers are the main stakeholders driving this change, and both large financial service providers and start-ups are responding accordingly.

More specifically, the Islamic Fintech is at the very beginning of an exciting, transformative journey for the industry that still dominated by large traditional Islamic financial institutions (IFIs). More so, the young, digitally native Muslim demographic that is on average younger than the world's non-Muslim population adds to the prospect of Islamic Fintech.

Despite the many advantages and opportunities provided by the technological innovations in finance, the Islamic Fintech like the regular Fintech solutions is exposed to many risks. The Islamic Fintech risk exposures extend beyond operational and technical risks and are interwoven in effect. It also includes technology, strategic, Shariah compliance risk, reputational risk, regulatory risk, fraud risk, data security risk and agent management or third-party risks. These risks often share similar causes and their effects are strongly related. For instance, technology risk, strategic risk, agent management risks and Shariah compliance risk can all lead to legal risk which could result in reputational risk and further financial losses.

In order for the Islamic financial services industry to be able to fully capitalize on the benefits of Islamic Fintech, it is important that the

associated risks are understood and adequately addressed. The Islamic Fintech risks factors are discussed as follows.

Strategic Risk

Strategic risk refers to the actual losses that result from the pursuit of an unsuccessful business plan or the potential losses from missed opportunities (IFC-WorldBank, 2016). Strategic risks include losses that are related to business models, technology, branding, reputation, competition and economic trends.

Islamic Fintech Firms (IFFs) can be exposed to strategic risk as a result of misapprehension of market demand, misunderstanding of competition, poor product or channel design. For instance, IFFs may suffer actual losses as a result of an ineffective product, failure to respond to change in the business environment, inadequate resource allocation or poor customer judgement.

Strategic risk exposure may vary for different IFFs for some inherent heterogeneity in business models, regulatory environment, competition and market sentiment. For instance, the strategic risk exposure for a charity-based crowdfunding IFF will be distinctive to that of an equity-based crowdfunding IFF, although they are both in the crowdfunding business. So is the case for an Islamic peer-peer financing platform and an Islamic investment platform. They may exist in the same market and enjoy the same customer base, but their business models and regulatory requirements are not necessarily identical. Hence, the strategic risk exposure varies and so does the approach to their risk management.

Strategic risk if not managed appropriately could result in loss of investment for the IFF. An IFF must however identify and monitor the strategic risk indicators to their business in order to manage their strategic risk exposure. Depending on the IFF, such indicators may include drop in net revenue, decline in active customers, fall in the volume transactions per customer, drop in active agents or customers per agent, change in macro-economic policy.

To manage strategic risk, IFFs must leverage their position in gathering and analysing customer and market data. Simultaneously, IFFs must be reviewing perspectives from customers as well as external sources such the bloggers, market reviewers and information trendsetters. See Table 20.1 for causes, effects and indicators of strategic risk in Islamic Fintech firms).

Table 20.1 Strategic risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
The actual losses that result from the pursuit of an unsuccessful business plan or the potential losses from missed business opportunities	<ul style="list-style-type: none"> • Misapprehension of market demand • Misunderstanding of competition • Poor product or channel design 	<ul style="list-style-type: none"> • Loss of investment 	<ul style="list-style-type: none"> • Drop in Net revenue • Decline in active customers • Fall in the volume transactions per customer • Drop in active agents or customers per agent • Change in macro-economic policy

Source: Authors and IFC-WorldBank (2016)

Regulatory Risk

Regulatory risk refers to the risks associated with complying (or not complying) with the rules or guidelines that are sanctioned by the regulatory authorities in the jurisdictions where a Fintech firm operates. Examples of such regulatory provisions includes the Know Your Customer (KYC), anti-money laundering (AML), combating financing of terrorism (CFT), data privacy (PDPD or GDPR) and transaction limits (IFC-WorldBank, 2016).

Generally, regulatory risk for the IFF stems from non-compliance or violation due to change in regulatory provisions for due diligence, agent management, capital requirement, trust, interoperability, privacy and deposit insurance in some cases. For the IFFs, regulatory risk is a crucial concern, and non-compliance can have significant impact on business operations, increase regulatory oversight, invoke fines, penalties and even loss of licence.

A typical indicator for regulatory risk in IFFs is anything short of the regulatory requirement on any aspect of the business. Such indicators include the percentage of incomplete registration, percentage of rejected registration or capital inadequacy.

Table 20.2 Regulatory risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
Risks associated with complying (or not complying) with the rules or guidelines that are sanctioned by the regulatory authorities in the jurisdictions where they operate	<ul style="list-style-type: none"> • Abrupt change in regulatory provisions • Poor product or channel design • Poor communication and training of personnel and agents • Weak governance 	<ul style="list-style-type: none"> • Increased regulatory oversight • Rising cost of compliance • Penalty or fines • Loss of licence • Loss of investment 	<ul style="list-style-type: none"> • Drop in net revenue • Decline in active customers • Fall in the volume transactions per customer • Drop in active agents or customers per agent • Change in macro-economic policy

Source: Authors, Deloitte (2018) and IFC-WorldBank (2016)

To manage regulatory risk, IFFs must ensure that their personnel, process and agents are up-to-date on regulatory provisions. The IFF may also align incentives to its personnel, agents or customers towards the fulfilment of regulatory requirements. Also products or service offers may be restricted to customers based on the level of compliance and even penalty for non-compliance where applicable Table 20.2 presents the causes, effects and indicators of regulatory risk in Islamic Fintech firms.

Operational Risk

Operational risk refers to all potential losses from inadequate or failed internal processes, employees and systems in business. Operational risk is inherent in any business. In the case of the IFF, it involves risks associated with products, business practices, damage to physical assets as well as the execution and delivery of service.

Some of the common indicators of operational risk in IFFs centre around the productivity of back office team, which is measured by delays in transaction processes such as the numbers of suspense transaction

Table 20.3 Operational risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
Potential losses from inadequate or failed internal processes, employees and systems in business	<ul style="list-style-type: none"> • Poor planning • Inefficient implementation of operational procedures • Ineffective monitoring and evaluation 	<ul style="list-style-type: none"> • Resource mismanagement • Loss of customer • Regulatory issues • Loss of funds 	<ul style="list-style-type: none"> • Number of suspense transaction resolved • Number of days' transaction stay in suspense accounts • Decline in active customers • Time taken to resolve disputes • Drop in active agents or customers per agent

Source: Authors, Deloitte (2018) and IFC-WorldBank (2016)

resolved, number of days' transaction stay in suspense accounts or time taken to resolve disputes.

Managing operational risk requires a regular review operating manual against list of procedures being undertaken. This must be in a view to improve efficiency by adding any missing procedures, updating existing procedures as required and adding the exception use cases to all (Table 20.3).

Technology Risk

Technology risk is closely linked to operational risk. It refers to the potential loss due to technology failure that leads to the inability to implement transactions. Technology risk is inherent in IFF business as the in-core operation relies on technology infrastructure. Any technical failure leaves opportunities for fraudsters to take advantage of system inadequacies to conduct unauthorized transactions that results in loss of data and funds.

Technology risk has spill-over effect to the forms of risk, and its indicators are common across the various types of Fintech firms. For instance, a drop in the rate of successful transactions on a Fintech platform would indicate a technical failure. So are system glitches during peak service period, which indicate an insufficient capacity to cope when user requests (demand) are high at a particular time. Another common source of technology risk in IFFs is the reliance on third-party technology provider, since technology is not the core competence for most of them. They stand the risk of delays in service maintenance and failure in some cases.

Managing technology risk is crucial to any Fintech business, as it is the vehicle to deliver the firm's value proposition to users and maximize return. To manage such risk, an IFF first needs to ensure the service of competent technology talents to deliver a robust system. Secondly, the process of managing the platform must be efficient such that it calls for routine test of end-to-end transaction process. More so, Fintech platforms should have performance monitors installed to show the system traffic and raise alarm when it is approaching capacity limits. Lastly, for IFFs that rely on third-party technology, having an enforceable service-level agreement will help minimize technology service failure. Table 20.4 summarizes the causes, effect and indicators of technology risk to an IFF.

Table 20.4 Technology risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
Potential loss due to technology failure that leads to the inability to implement transactions	<ul style="list-style-type: none"> • Poor technology architecture • Weak security firewall • Power failure • System faults (software and hardware) • Network connectivity failure 	<ul style="list-style-type: none"> • Data loss • Loss of customer confidence • Reputational risk • Financial losses • Security breach • Regulatory sanctions 	<ul style="list-style-type: none"> • Drop in transaction success rate • System glitches during peak periods • Customer reports on failed transaction • Reliance on third-party technology

Source: Authors, Deloitte (2018) and IFC-WorldBank (2016)

Financial Risk

Financial risk is an important risk factor in the Fintech firms, Islamic or otherwise. Financial risk in Fintech is defined as the potential for financial loss in all financial transactions of Fintech (Ryu, 2018). While all risks discussed in this chapter may give rise to financial losses, directly or indirectly, there are specific risks related to the financial management of an Islamic Fintech business. Financial risk for an IFF depends on the nature of Fintech activity (payments/billing, financing, investments, transfers/remittances, crowdfunding, blockchain/cryptocurrencies, institutional/B2B, insurance, etc.), area of service (innovation, regulation, financial inclusion, financial education, services or operation) and core technology (adoption/externality, mobile, blockchain, big data, biometrics, security, risk, etc.).

A brief description of five of such specific risks—namely, credit risk, liquidity risk, interest rate risk, foreign exchange risk and concentration risk—is as follows:

1. Credit risk: The risk that clients default on their financial obligation and the IFF is unable to collect on it.
2. Liquidity risk: The risk that an IFF becomes insolvent and unable to meet its cash flow obligations.
3. Interest rate spill-over risk: The risk of an interest rate hike spill over on IFF's cost of fund, while the IFF is unable to share such risk with its clients.
4. Foreign exchange risk: The risk of incurring losses from when trading currency or a mismatch of currencies in which transactions, financing or deposits are denominated.
5. Concentration risk: The risk due to excessive exposure to a particular credit counterparty or sector. For instance, if an IFF holds majority of its funds in one particular bank. Such IFF is at risk of excessive loss should the bank become insolvent.

Managing financial risk in IFFs depends on a number of factors mentioned earlier that differentiate them and the financial risk channel such as credit, liquidity, interest rate, foreign exchange or fund concentration. However, a general measure to manage financial risk in IFFs is to ensure that the financing (foreign or local) and payments are in local currency terms. Risk that cannot be avoided should be transferred or shared. Table 20.5 summarizes the causes, effect and indicators of financial risk to an IFF.

Table 20.5 Financial risks in Islamic Fintech firms: channels, effect and indicators

<i>Description</i>	<i>Channels</i>	<i>Effect</i>	<i>Risk indicators</i>
Potential for financial loss in all financial transitions of Fintech	<ul style="list-style-type: none"> • Credit risk • Liquidity risk • Interest rate risk • Foreign exchange risk • Concentration risk 	<ul style="list-style-type: none"> • Book or real Loss • Insolvency • Loss of customer confidence • Regulatory sanctions 	<ul style="list-style-type: none"> • Foreign exchange rate fluctuation • Interest rate fluctuation • Poor client credit rating • Fund concentration • Dropping liquidity ratio

Source: Authors, Deloitte (2018) and IFC-WorldBank (2016)

Political Risk

Political risks are external risk that often affects IFFs, significantly. It refers to the potential loss incurred from the political decisions, events or conditions in the environment where IFFs operate. Political risks have direct impacts on operational risk, strategic risk and financial risk in particular and spill over to other risks.

IFFs are exposed to political risks as a result of civil unrest, terrorism, war, corruption, unfavourable economic conditions due to fiscal or monetary policy changes by the government. These events are exogenous and beyond the control of IFFs. As such managing them requires anticipation and contingency plans in case the anticipated risk materializes. Table 20.6 summarizes the causes, effect and indicators of political risk to an IFF.

Fraud Risk

Fraud risk refers to the potential loss resulting from fraud activities. Fraud risk is a notorious risk that concern IFFs, their consumers and the market regulators. It is a multi-faceted risk that relates to several other risks. For instance, a failure in operation or flaw in technology can lead to fraud risk, which may result in financial risk. Fraud risk is also a significant driver of reputational risk.

In the global Fintech industry, large cases of fraud have been reported over the last few years that have caused financial damages worth millions

Table 20.6 Political risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
Potential loss incurred from the political decisions, events or conditions in the environment where IFFs operate	<ul style="list-style-type: none"> • Political instability • Elections • War or terrorism • Economic policy 	<ul style="list-style-type: none"> • Inaccessibility due to loss of connectivity • Inoperability of business • Loss of investment • Asset destruction • Risk spill-overs 	<ul style="list-style-type: none"> • Election policy • Agent activity • Customer activity

Source: Authors and IFC-WorldBank (2016)

of dollars. These fraud cases have been perpetuated by Fintech service customers, agents and employees through the creation of ghost accounts to perform fraudulent transactions (Akinlaso, Adediran, Diallo, & Mahomed, 2019). As a result, funds have been stolen from Fintech providers, agents and customers.

Managing fraud risk requires regular assessment of system and processes to understand where fraud could be detected and prevented. There are three general reasons for fraud: pressure (or motivation to commit fraud), opportunity (typically because of poor systems or processes) and rationalization (that they will not be caught). An effective way to prevent fraud is to decrease the opportunity for fraud through detection technology and procedures. Table 20.7 summarizes the causes, effect and indicators of fraud risk to an IFF.

Agent Management Risk

Agent management risk refers to the potential loss to an IFF resulting from a third-party engagement in Fintech service delivery. Some IFFs employ the service of third-party agents to deliver some aspect of their services, and as a result, such IFFs enjoy benefits in terms of cost, geographical reach and scale. However, any inadequacy in the management and supervision of agents can result in potential losses for the IFF, its clients and the agent themselves. Hence, such IFF is exposed to agent management risk.

Agent management risk exposure is limited to IFFs that use the service of third-party agents. It triggers other risks such as operational,

Table 20.7 Fraud risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
Potential loss resulting from fraud activities in Islamic Fintech business	<ul style="list-style-type: none"> • Misaligned business incentives • Technical lacuna • Third-party access • Lax customer on boarding procedure 	<ul style="list-style-type: none"> • Loss of customer confidence • Loss of reputation • Regulatory scrutiny • Financial loss • Loss of investment 	<ul style="list-style-type: none"> • Suspicious transaction report • Unverified client access ratio to total client • Unsupervised staff access

Source: Authors

technological, legal, reputational and fraud risks. For IFFs, agent management risk can be caused by a number of factors that depends on the nature of IFF's activity and service. Such factors include the distribution of agents across geographical areas and user base, agents to user ratio, agent liquidity options (in transfers and remittances service) and security, teller errors, agent-customer relationship management, training and regulatory updates, brand marketing and operating procedures.

To manage the risk from third-party agents, IFFs must first put in place a robust agent on-boarding procedure and due diligence (e.g. a regulatory licence requirement, or pre-fund capital requirement), adequate quality control process and supervision (e.g. process that detects when agents fail to meet their liquidity requirements), regular engagement with agents or the use of super agents (where liquidity is involved), agent-specific help lines. Table 20.8 summarizes the causes, effect and indicators of fraud risk to an IFF.

Reputational Risk

Reputational risk refers to the potential loss resulting from damage to the image of an IFF, its partner or stakeholder, leading to a negative perception and reduction of trust from clients and agents. An IFF can be directly exposure to reputational risk on event of frequent technology failure (that hinders customer from transacting), lack of transparency in pricing and

Table 20.8 Agent management risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
Potential loss to an IFF resulting from a third-party engagement in Fintech service delivery	<ul style="list-style-type: none"> • Inadequate agent management strategy • Suboptimal agent distribution • Inefficient agent on-boarding procedure (due diligence) • Inefficient agent liquidity management • Ineffective provider-agent relation 	<ul style="list-style-type: none"> • Loss of agents • Loss of customer confidence • Decline in sales • Regulatory scrutiny • Financial loss • Loss of investment 	<ul style="list-style-type: none"> • Agent due diligence compliance flags • Agent-provider engagement • Agent liquidity requirement flags • Agent density • Regulatory updates

Source: Authors, IFC-WorldBank (2016) and Ryu (2018)

opaque policies, fraud, inadequate liquidity, ineffective agent management, poor customer engagement and regulatory and Shariah compliance issues.

Indirectly, IFFs are often exposed to reputational risk through other risk channels such as regulatory, financial, operational and Shariah non-compliance risks. Such exposure can affect the IFF in the form of loss of customers, reduced revenue and shareholder value, increased operating costs, legal liability, diminished brand equity.

Managing reputational risk is crucial to the success of any Fintech business and quite tricky for an IFF. This is because for a conventional Fintech firm, reputational risks emanating from regular transaction of regulatory provisions are not far-fetched and easily managed. But for an IFF, a Shariah non-compliance reputation has a severe consequence for business and its effect can be long lasting.

The foremost strategy to managing reputational risk for any IFF is rule compliance. Then setting up a public relations strategy that has contingency to manage negative press. Also a transparency culture that attracts the trust of client and partners. Table 20.9 summarizes the causes, effect and indicators of reputational risk to an IFF.

Table 20.9 Reputation risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
Potential loss resulting from damage to the image of an IFF, its partner or stakeholder, leading to a negative perception and reduction of trust from clients and agents	<p><i>Direct</i></p> <ul style="list-style-type: none"> • Lack of transparency • Technology failure • Poor customer engagement <p><i>Indirect Channels</i></p> <ul style="list-style-type: none"> • Shariah non-compliance risks • Regulatory risk • Financial risk • Operational risk 	<ul style="list-style-type: none"> • Public embarrassment • Loss of customer confidence • Decline in revenues • Regulatory scrutiny • Loss of investment 	<ul style="list-style-type: none"> • Shariah compliance issues • Customer dissatisfaction • Regulatory scrutiny • Technology inadequacies

Source: Authors, IFC-WorldBank (2016), Ryu (2018) and Erdem Oz, Zahid ur Rehman Khokher, Mohammad Mahbubi Ali, and Romzie Rosman (2016)

Business Partnership Risk

Business partnership risks are the potential losses from a third-party partnership in delivering a Fintech service to end users. Partnerships are necessary in the global financial service segment for smooth and expanded service provision. Fintech firms partner with each other and with traditional financial and non-financial institutions to leverage on the existing infrastructure for operational efficiency and cost savings.

In some cases, partnerships are required by regulatory authorities to ensure stability and growth in the financial service sector. For instance, some degree of collaboration is required between banks and mobile network operators (MNOs) for mobile money and remittance operations. In such case, banks rely on MNOs for connectivity and the MNOs depend on banks to hold funds as deposit and disburse them or in trust.

For IFFs, business partnership risk exposure can include the breakdown of relationships with operational and strategic partners such as distributors, principal agents, vendors, technology providers, outlet partners and donors. The presence of a pro-active regulator can foster meaningful partnerships that support IFFs. But lack of a level playing fields in regulatory

Table 20.10 Business partnership risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
Potential loss from a third-party partnership in delivering a Fintech service to end users	<ul style="list-style-type: none"> • Poor strategic planning • Loose service contracts with partners • Increasing demand ahead of capacity 	<ul style="list-style-type: none"> • Service disruption • Loss of customer confidence • Loss of funds 	<ul style="list-style-type: none"> • Business uptime • Partner service consistency • Technology inadequacies

Source: Authors, IFC-WorldBank (2016), Ryu (2018) and Erdem Oz, Zahid ur Rehman Khokher, Mohammad Mahbubi Ali, and Romzie Rosman (2016)

environments in which IFFs operate may lead to suboptimal partnership arrangements that result in risk exposure.

Managing business partnership risk in IFFs requires the establishment of detailed service-level partner contracts that are enforceable. The IFF should also ensure regular technical reviews with partners to ensure compliance with deliverables and planning ahead. Lastly, IFFs should incentivize partners and align incentives with deliverables to keep the service running. Table 20.10 summarizes the causes, effect and indicators of reputational risk to an IFF.

Shariah Non-compliance Risk

As defined by the IFSB, Shariah non-compliance risk (SNCR) the potential of loss that arises from the “failure of the Islamic banks to comply with the Shariah rules and principles determined by the Shariah board or the relevant body in the jurisdiction in which the Islamic Bank operates” (Erdem Oz, Zahid ur Rehman Khokher, Mohammad Mahbubi Ali, & Romzie Rosman, 2016). Drawing from this definition, Shariah non-compliance risk in IFFs is the potential loss that arises from the failure to comply to the Shariah rules as determined by the relevant authorities in the jurisdictions where the IFF operates.

Shariah is the backbone of Islamic financial institutions: it is instrumental in maintaining the confidence of stakeholders and the public at large. Shariah non-compliance risk occurs from events or transactions that are not in congruence with the tenets of the Shariah. Ensuring compliance

Table 20.11 Shariah non-compliance risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
Potential loss that arise from the failure of an IFF to comply with the Shariah rules as determined by the relevant authorities in the jurisdictions where they operate	<ul style="list-style-type: none"> • Inadequate Shariah governance framework • Deviation from the tenets of Shariah 	<ul style="list-style-type: none"> • Illegitimacy regulatory scrutiny • Loss of customer confidence • Loss of investment 	<ul style="list-style-type: none"> • Novel business activity • Internal Shariah board competence • Communication break with Shariah board members • Diminishing autonomy of internal Shariah board

Source: Authors and Erdem Oz, Zahid ur Rehman Khokher, Mohammad Mahbubi Ali, and Romzie Rosman (2016)

with the Shariah is a necessary condition for the legitimacy of an IFF. As such, Shariah non-compliance risk is a principal risk and a distinctive risk factor for an IFF. It is also a significant implication for reputational risk.

Managing Shariah non-compliance risk requires a regular track of status of transactions and processes for Shariah non-compliant events. It is important to regularly engage internal Shariah compliance functions to ensure timely sharing of information and proper coordination to handle any emerging Shariah compliance matters. It also requires procedures to ensure purification of non-permissible income through income de-recognition. Table 20.11 summarizes the causes, effect and indicators of reputational risk to an IFF.

Cyber Security Risk

Cyber security risk refers to the potential loss due to security compromise in the transaction operations of IFFs. Security risks are unpredictable and not unique to IFFs. It presents a major challenge because of the potential systemic risks and interaction with other risks. Increased connectivity and new entrants that may not well equipped with security infrastructure can increase the entry points for cyber criminals and the potential for successful attacks.

Security breaches can lead to direct financial losses for IFFs, data privacy breaches or through denial of services that triggers reputational and

Table 20.12 Cyber security risks in Islamic Fintech firms: causes, effect and indicators

<i>Description</i>	<i>Causes</i>	<i>Effect</i>	<i>Risk indicators</i>
Potential loss due to security compromise in the transaction operations of IFFs	<ul style="list-style-type: none"> • Weak security framework • Outdated security systems • Third-party security system 	<ul style="list-style-type: none"> • Financial loss • Data privacy • Regulatory scrutiny • Loss of customer confidence 	<ul style="list-style-type: none"> • Outdated security infrastructure • Reliance on third-party security

Source: Authors and Lukonga (2018)

regulatory risks (Akinlaso et. al, 2019). Table 20.12 summarizes the causes, effect and indicators of reputational risk to an IFF.

CONCLUSION

The foregoing discussion presents the peculiar background to the integration of technology to the Nigerian financial industry which commenced about five years ago. Though starting later than Kenya and South Africa, the most populous black nation on Earth has attracted steady investment and destination for Venture Capital investors. The dire abysmal scorecard in financial exclusion statistics has further accelerated Fintech integration into the conventional financial setting. This has been further boosted by the foray of Islamic financial institutions into the Nigerian financial sector. The attendant risk exposures faced by Islamic Financial Institutions (IFIs) include strategic, financial, regulatory, operational and regulatory. Others are Shariah-compliance and Business Partnership risks. These risks, though while typical under conventional setting, have their impact on IFIs in a peculiar sense due to their nature of product design and packaging. The management of these risks is also peculiar; requiring special approach and methodology.

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