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BRINGING SMART POLICIES TO LIFE

KYC Innovations, Financial Inclusion and Integrity

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AFI SPECIAL REPORT

KYC INNOVATIONS, FINANCIAL INCLUSION AND INTEGRITY IN SELECTED AFI MEMBER COUNTRIES

March 2019

Contents



List of acronyms

AFDB	African Development Bank
AFI	Alliance for Financial Inclusion
AML	Anti-Money Laundering
API	Application Programming Interfaces
ATM	Automatic Teller Machine
BCB	Central Bank of Brazil
BCEAO	Central Bank of West African States
BFIU	Bangladesh Financial Intelligence Unit
BVN	Bank Verification Number
CBE	Central Bank of Egypt
CBJ	Central Bank of Jordan
CBN	Central Bank of Nigeria
CDD	Customer Due Diligence
CENFRI	Centre for Financial Regulation and Financial Inclusion
CFT	Combating the Financing of Terrorism
CGAP	Consultative Group to Assist the Poor
COAF	Council for Financial Activities Control
DFSWG	Digital Financial Services Working Group
DLT	Distributed Ledger Technology
ECOWAS	Economic Community of West African States
eKYC	Electronic-Know Your Customer
ESAAMLG	Eastern and Southern Africa Anti-Money Laundering Group
FATF	Financial Action Task Force
FIU	Financial Intelligence Unit
FSP	Financial Service Providers
GAFISUD	Financial Task Force on Money Laundering in South America
GDP	Gross Domestic Product
GIABA	Inter-Governmental Action Group against Money Laundering in West Africa
GPS	Global Positioning System
ID	Identification
ID4D	Identification for Development
IHRC	The Immigration History Research Centre
ITU	The International Telecommunication Union
Jo-NAFTECH	Jordan National FinTech Hub
KYC	Know Your Customer
Lift	Laboratory of Financial and Technological Innovations
ML	Money Laundering
MMO	Mobile Money Operators
MNO	Mobile Network Operators
MOI	Memorandum of Incorporation
MOU	Memorandum of Understanding
NCW	The National Commission for Women
NFIS	Nigerian National Financial Inclusion Strategy
NGN	Nigerian Naira
NID	National Identity Database
NIMC	The National Identity Management Commission
NIN	National Identity Number
NRC	Norwegian Refugee Council
Pier	The Information Integration Platform for Regulators
PIN	Postal Index Number
POA	Proof of Address
RBA	Risk-Based Approach
RG	General Registry
SDG	Sustainable Development Goal
SME	Small and Medium Enterprise
TBML	Trade-Based Money Laundering
UN	United Nations
UNDP	United Nations Development Programme

CHAPTER 1

INTRODUCTION

It is estimated that approximately one billion people across the world do not have access to an officially recognizable identity[1]. Most of these people live in developing economies. The ability of a person to prove their identity is fundamental to their active participation in political, social and economic life. Without a trustworthy identification mechanism, an individual may be unable to exercise the range of human rights as set out by international laws and conventions. This is of particular concern for marginalized individuals, such as forcibly displaced or stateless persons, and other vulnerable groups, who lack the most basic form of identification. They are also prone to being excluded from accessing and using financial services that are key to their livelihoods. Furthermore, the accurate verification of identity is integral to the Know Your Customer (KYC) processes necessary for compliance with Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT) regulation. The inability of financial institutions to properly verify prospective clients will lead to financial exclusion.

High levels of exclusion are a threat to the financial integrity of economies. To this effect, the Financial Action Task Force (FATF) has recognized that the implementation of AML/CFT need not worsen exclusion and should consider financial inclusion considerations[2]. This means that countries should align their financial inclusion objectives with financial integrity objectives. While there has been some progress in developing financial inclusion strategies and objectives, their integration with financial integrity objectives has not fully reached its potential, thereby fuelling exclusion (Cenfri, 2017).

Worsening this exclusion are KYC and customer due diligence CDD[3] processes and requirements that limit the concept of identity to key documents (such as ID, proof of address and passport), yet these are relatively inaccessible to the underbanked and unbanked as shown in Section 2. Yet the advent of the digital economy and the consequent increased participation of individuals in the digital realm have made verification of identity even more important. As processes and economic activities become more digitised, the importance of digital identities become more pronounced and paper-based physical identities become less desirable. In some cases, however, the latter may still be a necessary requirement as a starting point to bring in the excluded segments of society.

Innovations in KYC and CDD processes are therefore paramount in addressing financial exclusion risks as outlined. Innovations in KYC processes and requirements entail advances that make it easier to identify and verify customers and citizens, thereby facilitating access to and use of financial services. These advances include regulatory adjustments such as exempting certain marginalized groups up to a certain transaction or value limit (tiered KYC) and the use of electronic documents and signatures to effect transactions (eKYC). Other changes include using sophisticated technology, such as data analytics to monitor customer behavior and place of residence, as well as technologies like blockchain to assign virtual identity.

Against this background, an exploration of current KYC innovations, gender aspects of KYC innovations, regulatory implications and FinTech opportunities in KYC are important in assisting jurisdictions to advance financial inclusion and integrity objectives. It is in this light that the Alliance for Financial Inclusion (AFI) and its Digital Financial Services Working Group (DFSWG) commissioned this report under its KYC sub-group to explore KYC solutions that promote financial inclusion and strengthen AML/CFT compliance.

Approach

To that end, this report explores KYC innovations in a select number of AFI member countries that are advancing financial inclusion and financial integrity, particularly where this impacts women and marginalized groups. The information and analysis contained in this report are based on stakeholder interviews and desktop research. Stakeholder interviews, based on interview guides pre-approved by AFI, targeted central bank stakeholders as well as financial intelligence units[4]. Country selection was purposive and based on criteria agreed upon with AFI.

Apart from engagements with the public-sector stakeholders referred to above, a select number of further engagements were conducted with KYC solution providers to enrich the perspectives already provided. Desktop research and secondary literature reviews were performed to complement information gathered through interviews. The resulting information was synthesized and developed into a report. The developed cases were sent back to stakeholders for review and comments were incorporated.

Structure of the report

The structure of this report is as follows:

- Section 2 contains a brief discussion on the concept of identity and the importance of identity to financial inclusion and financial integrity objectives.
- Section 3 includes case studies, each of which contains a discussion of the most promising KYC innovations present in the respective country as well as the drivers and barriers to their success. It also discusses emerging FinTech that has the potential to address identified KYC challenges and offer important new KYC opportunities.
- Section 4 highlights the cross-cutting issues and insights emerging from the cases.
- The report concludes with a set of recommendations for creating an enabling environment for KYC innovations.

Using a smart phone to pay for various services

CHAPTER 2

KYC, IDENTITY AND FINANCIAL INCLUSION

This section discusses the broader concept of identity, its role in society as it relates to financial inclusion and how innovations are shaping our understanding of identity.

Concept of identity

Identity has been broadly accepted as a basic human right

Access to a legal identity is included in the Sustainable Development Goals (SDGs) under Goal 16, target 9[5]. It states that "By 2030, provide legal identity for all, including birth registration." This article aims to ensure that all natural persons have a legally recognized identity. This is key to unlocking access to formal political, economic, social and financial market participation. In the absence of a verifiable identity, an individual might be denied access to basic rights and services.

An identity is a collection of attributes[6]

At its core, an identity is nothing more than a unique set of attributes. The attributes themselves do not have to be unique, but the combination thereof (the set) has to be unique. For example, the name John Smith is not unique, but the name John Smith combined with other attributes such as a physical characteristic – a biometric – and a date of birth increases the probability of uniqueness. By means of these attributes an individual can be uniquely identified by another individual or system. Through verification of identity, the individual gains access to services. This is because verification gives the service provider – whether it is a government or a private entity – confidence that the individual is who they claim to be.

Components of identification assertions

There are three ways through which identity can be asserted. Firstly, there is identification by something that the individual *knows*. Secondly, there is identification by something that an individual *has*. For instance, an individual can present a physical document, such as a specific ID book, which enables access to a service. Thirdly, there is identification through something that an individual *is*, such as a physiological trait. An example of this is a biometric identifier like a fingerprint. Authentication regimes can also use a combination of identification factors to reduce the risk of misidentification, but often at the expense of efficiency (Consult Hyperion, 2017).

The concept of digital identity

At a fundamental level, a digital identity is no different from any other form of identity. Like a non-digital identity, it can be used for authentication or verification purposes. A digital identity is formed when an individual's identification attributes, such as biometrics, are digitally stored. An example is a card that contains a chip with machine-readable functionality. Such a card enables the user to verify their identity through a PIN or a biometric which is stored in the card. The major advantage of a digital identity is that it is designed for online identity verification mechanisms, which are typically more efficient and cost-effective than paper-based mechanisms. At present, however, most identification mechanisms are not digitally enabled. For instance, government-led national identity schemes are generally paper-based with no – or very little – digital functionality (Bankable Frontier Associates, 2018).

The identity challenge in financial inclusion

National identity systems are at various stages of development and coverage

In countries where identity is defined in terms of a physical document, such as an ID book, partial coverage by national identity schemes implies the potential for discrimination or exclusion. The inability of a segment of the population to be identified has adverse consequences for their ability to gain access to or participate in formal processes in the economy and society.

Biometrics as a type of digital identity

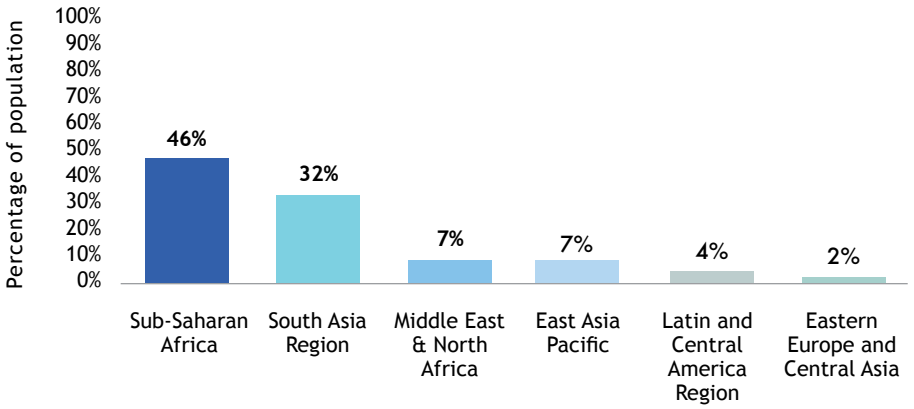


Figure 1: Percentage of population without an official identity
Source: World Bank ID4Development database, 2017

Figure 1 above indicates the percentage of the population in various regions of the world that do not have access to an official identity. This illustrates that access to an identity affects regions differently and is a problem that has not been universally solved.

High levels of identity exclusion exists across sub-Saharan Africa and South Asia

Coverage of official identity documents is of particular concern in sub-Saharan Africa and South Asia. In sub-Saharan Africa, 46 percent of the population (approximately 500 million people) do not have an official identity. In South Asia, 32 percent of the population (approximately 350 million people) do not have an official identity. In the other developing regions of the world, the lack of access to identity is less stark, particularly in Eastern Europe and Central Asia, where official identity is widespread.

Lack of access to identity documents contributes to financial exclusion

The ability of institutions to verify the identity of prospective customers is a necessary condition for financial inclusion. Without verifiable identities, such institutions cannot adhere to KYC requirements as stipulated in AML/CFT regulation. Figure 2 next page depicts the percentage of

adults that are financially included and the percentage thereof that cited a lack of formal identity as the reason for their exclusion from the formal financial sector. Financial inclusion in sub-Saharan Africa is the lowest amongst the developing regions, with a lack of official identity cited by 18 percent of adults as the reason they do not have an account at a formal financial institution. In Latin and Central America, 13 percent of adults indicated that KYC requirements are a barrier to financial inclusion. Accordingly, it is clear that KYC barriers are a significant impediment to the expansion and inclusiveness of the formal financial sector. Access to the formal financial sector is, in turn, an important driver of increasing the reach of economic development opportunities through participation in the formal economy.

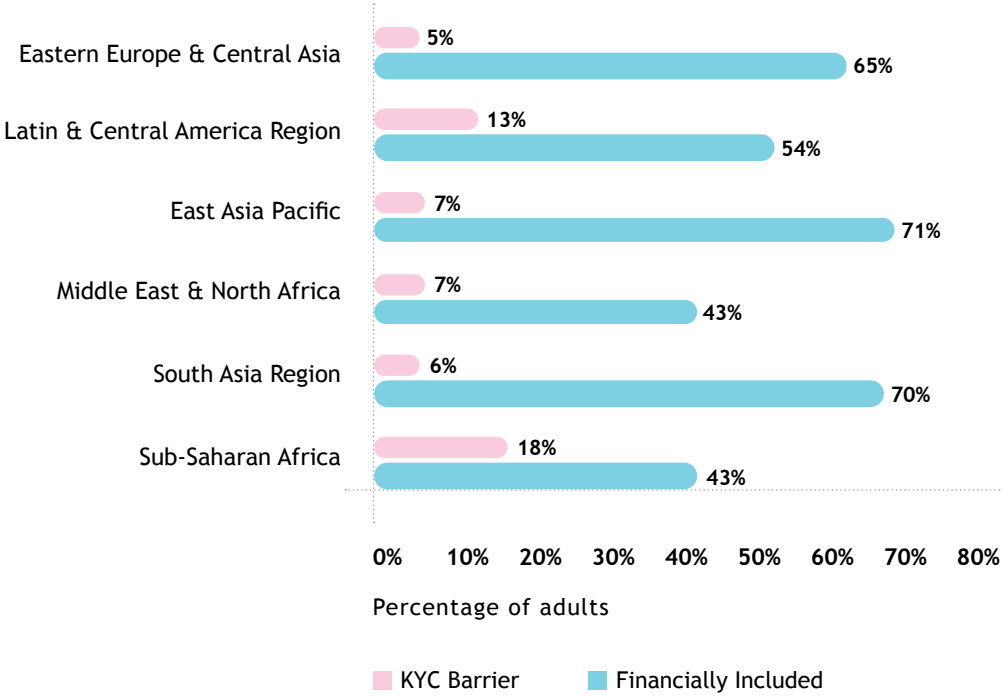


Figure 2: Financial inclusion and KYC barriers to access[7]
Source: World Bank Global FinDex, 2017

> The inability of a segment of the population to be identified has adverse consequences for their ability to gain access to or participate in formal processes in the economy and society.

KYC innovations are a potential remedy for a lack of universal coverage

As discussed in the preceding paragraphs, many national identity systems in emerging economies are struggling to achieve universal coverage (Figure 1), which in turn amplifies the negative impact of restrictive KYC requirements imposed by countries on financial institutions (Figure 2). Innovation, through the application of certain technologies and risk-based supervisory approaches, has the potential to lower the KYC barrier for formal financial inclusion. It is also reasoned that KYC innovations have the greatest potential for impact where regulatory regimes are outcome-based rather than input-based[8]. The next section discusses several KYC innovation case studies to illustrate the potential that KYC innovation holds for financial inclusion.

CHAPTER 3

KYC CASE STUDIES IN AFI MEMBER COUNTRIES

The following are case studies that have been developed to showcase KYC innovations, their impact on inclusive integrity, regulatory issues, and the extent to which they are incorporating the needs of women and other marginalized groups. Although different countries are pursuing various KYC options and opportunities, the focus of these cases is on the most promising KYC innovations with respect to advancing financial inclusion and AML/CFT implementation (inclusive integrity). The objective of highlighting the main KYC innovations, advances and challenges to date, as well as regulatory issues and the respective challenges, is to provide a learning opportunity for other AFI members.

One of the most prominent KYC innovations in recent years has been the implementation of a nationwide biometric identity system in India, known as Aadhaar. This national biometric identity database captures 10 fingerprints and two irises of individuals to develop a unique Aadhaar number for each recipient (AFI, 2018). The individual can use their biometric identity to access key services, including financial services for payments and onboarding. Crucially, it enables eKYC, a function which greatly enhances the efficiency of the KYC process and fosters financial inclusion. Further details on this innovation for financial inclusion can be found in AFI FinTech for Financial Inclusion Report. Hence in this report, the case study of India and the Aadhaar biometrics system is omitted because it has been widely written about in other publications. However, it can be used as a reference to the impacts that can be created through these types of innovations, if implemented correctly.

3.1. Brazil

Brazil is historically one of the largest economies in Latin America. In 2017, the population grew to over 209 million individuals with a nominal GDP per capita of USD 9,821[9]. The Brazilian population further reflects a high degree of urbanization with only 14 percent residing in rural areas and is composed of a relatively even split in gender, with 51 percent of the population being female.

State of inclusive integrity

The Brazilian national identity system is a strong but flexible component of KYC

Identity and the verification thereof are prerequisites for KYC procedures in Brazil (stakeholder interview, 2018). National ID cards or "RG" are mandatory for all citizens and this underpins its near universal ownership in Brazil (Medium, 2017)[10]. This level of identity coverage has led the Central Bank of Brazil (BCB) to consider accurate systems of identity verification as being crucial to AML/CFT compliance (stakeholder interview, 2018)[11]. This is opposed to legacy approaches that rely on obtaining copies of documents in paper format.

Potential for closer links between integrity and national financial inclusion

There is currently no discernible link between CDD and financial inclusion in national policy frameworks. The 2030 National Strategy to Combat Corruption and Money Laundering focuses exclusively on addressing the legal and technical issues pertaining to AML/CFT procedure in public administration (de Souza, 2015). The BCB BC+ agenda addresses elements of AML/CFT through the lens of an efficient national financial system (BCB, 2018)[12]. Interviewed country regulators do, however, recognize the danger of this disconnect and the need to regard identity verification as key for not only financial integrity, but also a sustainable inclusive society (stakeholder interview, 2018).

Notable gains have been achieved in both financial inclusion and identity. In 2017, the adult population reflected an account ownership rate of 70 percent at a financial institution, and a 98 percent penetration rate of identity cards (Global Findex, 2017).

Market place in Brazil

In the same year, however, 19 percent of financially-excluded adults claimed a lack of KYC documents as the main reason for their exclusion, despite near-universal access to identity documentation (Global Findex, 2017). This suggests a significant hurdle that KYC processes may impose on financial inclusion in Brazil. The stringency of these processes likely reflects ongoing efforts by authorities to curb the prevalence of financial crimes, such as corruption and fraud, in the country (Mutual Evaluation)[13].

Promising KYC innovations

KYC innovation is supported

In recent years, the regulator has taken strides to promote efficient identity verification through the development of a BCB Open Data Portal[14] for information-sharing, permitting simplified KYC accounts, and allowing customers with an authenticated digital identity to remotely open and manage digital bank accounts (BCB 2018; stakeholder interview, 2018)[14]. Further, the use of physiological traits by commercial banks is at the forefront of innovative identity verification in Brazil.

Behavioral, geographic and biometric techniques strengthen the ability to monitor and audit identity without physical documentation

These techniques encourage both the robustness of digital banking as well as effective identity fraud detection. They include the use of GPS data to consensually track the location of bank customers to monitor what transactions are being made and where (stakeholder interview, 2018). This allows financial institutions to correlate average income levels in relation to demographic information, and to provide relevant geographic data. Image recording (facial recognition) and detection of physical life, for example, through short videos taken on smartphones, are also being used to confirm proof of life in addition to standard biometric attributes, such as fingerprints (BCB, 2016).

Benefits of behavioral and biometric KYC verification

According to the stakeholder interviews, physiological identity verification techniques offer several benefits to various stakeholders:

- *Effective fraud detection and prevention:* unlike paper-based documentation that can be forged, stolen or outdated, physiological attributes are relatively immutable and appear to have contributed to the stabilization of identity fraud trends in Brazil over the past two years (stakeholder interviews, 2018).
- *Onboarding processes are made easier for new clients:* time and administrative costs are saved through identity verification conducted via fingerprints rather than cumbersome KYC documentation processes[15].

- *Appropriate and verifiable customer profiles promote intermediation for the banked poor:* this is particularly beneficial for remote, low-income and high-risk consumers seeking credit (stakeholder interviews, 2018).
- *BCB's provision for electronic document submission and storage support financial inclusion efforts:* this is made possible through its promotion of faster onboarding times, adoption of electronic innovations and lower administrative burdens to financial institutions.

Challenges to verification innovation

Though many current innovations remain relatively new, challenges which may threaten their sustainability can be identified:

- *Financial institutions bear full financial risks in case of innovation failure:* this would suggest that financial institutions, irrespective of their systemic importance to the financial system, are liable in the event of data breaches, false positives or fraud (stakeholder interview, 2018). This comes from the lack of a public safety net or state assistance for risks related to financial innovation (stakeholder interview, 2018).
- *Absence of a national centralized database limits the effectiveness of verification techniques to monitor and detect suspicious customers:* though efforts are underway to overcome this challenge, closed-loop databases between financial institutions remain prevalent.

Regulatory considerations

The BCB sets an example in promoting an enabling environment for KYC innovation

Since 2004, the BCB has granted KYC exemptions on special demand deposit and savings accounts, otherwise known as "simplified accounts" (BCB, 2012)[16]. In 2018, the BCB further initiated several additional programs such as the Laboratory of Financial and Technological Innovations (Lift)[17] and exploratory proofs of concept on distributed ledger technology (DLT)[18]. The latter has since resulted in the BCB launch of a blockchain-based information-sharing platform, in collaboration with other financial regulators, called the Information Integration Platform for Regulators (Pier)[19].

Digital banking can flourish in the absence of prescriptive regulatory interventions

Emerging successes from an enabling regulatory environment

The promotion of an enabling approach towards innovation has produced various positive outcomes:

- *Flexible regulatory approach promotes provider freedom, resulting in more innovation:* moreover, by assuming the role of innovation assessor rather than policeman, the BCB protects its reputation while incentivizing banks to ensure the veracity of their techniques.
- *Digital banking can flourish in the absence of prescriptive regulatory interventions:* Nubank, a financial service FinTech, for example, has reported opening 1.5 million digital savings accounts during the first six months of the product's release in early 2018 (Peyton, 2018)[20].
- *Allowance for electronic document submission through innovations suggests the potential to remove ill-fitting proof of address procedures from KYC processes:* this presents a positive step towards eliminating its role as a key barrier to financial inclusion[21] faced by the poor and the unbanked.
- *Outcomes-based risk approaches promotes the efficiency of both onboarding and financial integrity processes:* reduced KYC stringency regarding input enables banks to streamline onboarding processes without documentation and empowers the BCB and local FIU, or "Council for Financial Activities Control" (COAF), to mitigate the rate of financial crimes more rigorously by utilizing accurate identification information.
- *Existence of inter-agency agreements promotes trust and future collaboration potential for new innovations:* the emergence of new information-sharing platforms and efforts toward a centralized identity are already positive outcomes of inter-agency collaboration (stakeholder interview, 2018).

Challenges to regulating for KYC innovation

The provision of an enabling environment has not been without stumbling blocks:

- *Consumer data protection may be compromised due to lack of formal evaluation criteria or guidance regarding data privacy or protection:* this poses risks to the integrity of the financial system and forces BCB supervision to be prescriptive rather than descriptive (stakeholder interview, 2018).
- *Physical proof of address remains an entrenched KYC requirement for institutions when onboarding:* the persistence of this requirement is particularly harmful when requested by financial institutions to open non-traditional digital accounts (stakeholder interviews, 2018). Proof of address, however, is not explicitly requested by COAF for digital accounts, thus underlining its negative impact as a KYC requirement for financial inclusion (stakeholder interviews, 2018).

There is an absence of regulation in KYC data protection and governance

There is currently no law that governs consumer data privacy in Brazil (stakeholder interview, 2018). The Minister of Justice is presumed to be the regulator in this regard (stakeholder interviews, 2018). Discussions regarding the delegation of supervision and the establishment of necessary regulation are underway (stakeholder interview, 2018). The 2018 BCB Resolution 4658, however, provides a cybersecurity policy framework for financial institutions regarding the processing, cloud computing, contracting and storage of consumer data.

Lessons learnt from Brazil on the value of regulating for innovation

Key to the take-off of innovative techniques in KYC verification has been the concerted effort by the regulator to establish an enabling regulatory environment. The focus of the BCB on the outcomes, rather than the input of KYC procedures, has been instrumental in encouraging FinTech innovators and banks to capitalize on the high mobile phone penetration and innovate within tolerable risk bounds (stakeholder interview, 2018).

Although the BCB still has progress to make in actively promoting inclusive integrity within policy frameworks, its cultivation of a flexible environment positions itself well to not only achieve financial integrity objectives, but to also promote ongoing collaboration and trust between the private sector and the regulator for greater financial inclusion.

3.2. Peru

Peru is a South American country with population of roughly 32 million, a GDP of USD211 billion and a GDP per capita of USD6,053 (World Bank, 2018). Peru is one of the fastest growing countries in the world, with annual GDP growth rates consistently above 5 percent. In terms of its population, 50 percent is female, and roughly 20 percent is rural.

State of inclusive financial integrity

Peru's robust national identity document is the main identifier for the population

Identity in Peru is recognized as a constitutional right. According to stakeholder interviews held in 2018, what constitutes identity is not explicitly defined in legislation, save for a few minimum criteria, such as date of birth, place of residence, name and gender. The National ID (DNI), which is issued by the National Identity Authority (RENIEC), is the main identity document used and recognized by public and private sector entities for Peruvians in the country. This identity card contains various details about the individual including: name, civil status, photo, personal unique identity number and a biometric in the form of a fingerprint. Despite the volume of information contained on the card, data privacy is a constitutional right, and the Personal Data Protection Law (29733) empowers individuals to have control over their personal information and how it is used.

The increase in financial inclusion is indicative of Peru's growth trajectory

A key goal of the Peruvian government has been the creation of an inclusive, diversified financial sector that meets the needs of its people. Peru's financial inclusion strategy focuses on improving systems for accessing services, consumer protection, and financial education (Kelly, 2015). The National Financial Inclusion Strategy (NFIS) aims for at least 75 percent of adults to be financially included by 2021. Between 2014 and 2017, the financially included adult population rose by 13.6 percentage points, from 29 percent to 42.6 percent. This shows that Peru is making strong headway in terms of creating an inclusive financial system.

Peruvian woman with her baby, The Sacred Valley, Cuzco

Some constraints remain

According to a wider survey conducted by the SBS (2016), the main barrier to financial inclusion is that many do not find any advantage in the financial system. A lack of documentation represents only 4 percent in this survey. Regarding the account ownership between men and women, SBS's survey found a breach of 10 percent (men 46 percent and women 36 percent)[22].

Promising KYC innovations

Peru has made significant progress in digitizing and modernizing its ecosystem for payments

In 2016, a national payments platform called *BiM* was launched. This initiative is focused on the creation of a mobile payment ecosystem based on a shared e-money platform that can be used by different electronic money issuers (bank and non-bank companies). From the outset, it has included, interoperability features across three levels: platform, agents and telecom operators. *BiM* offers a multitude of services to customers, such as cash-in/out, balance enquiry, person-to-person transfers, and airtime top-ups and taxes payments. Moreover, subscribers can send electronic money to anyone, even if that recipient is not signed up with *BiM* (Caruso et al., 2016). This initiative is still in an incipient stage; however, at the end of 2017 the number of BiM's customers was 398,284 people, which represents an increase of 59.46 percent compared to 2016, according to the Banking Association of Peru. The challenge in Peru is to make other initiatives outside of e-money interoperable.

Tiered KYC is important for financial inclusion

There are three tiers of KYC requirements: simplified, general, and enhanced. The specific requirements per tier vary depending on the product. For example, simplified e-money only requires a valid identity card, whereas simplified deposit accounts require a valid identity card and address information. The General tier normally requires some additional information, such as a phone number and declaration of employment. The Enhanced tier involves extended due diligence, for example, scrutiny of family members, if the customer is a Politically Exposed Person. (AFI, 2018).

Regulatory considerations

Collaboration and Integration between department is important for efficiency

The financial inclusion and financial integrity units of the financial supervisor work closely and collaboratively in each other's projects and initiatives. This is important for ensuring that initiatives and objectives are

aligned and do not have adverse effects on the other. As noted in stakeholder discussions, whenever there is a financial inclusion project, the AML department is consulted. The AML department promotes regulatory simplification initiatives from the perspective of a risk-based approach applicable to Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT) risks. The departments also come together if there is a new product being developed. There is no need for a Memorandum of Understanding (MOU) given how closely the units work together.

A digital identity is a recognized form of identity

Recently, RENIEC[23] launched the e-DNI, an electronic national identity card with chip information on it. It became available to Peruvians in 2016. This identity card allows for digital signatures and faster processing of information (Dunnel, 2018). Notably, the Peruvian government has accepted digital identity as a legally recognizable form of identity in Legislative Decree No. 1412, which approves the Digital Government Law, thus enabling the use cases of the e-ID to develop (stakeholder interviews, 2018). This is an important step in the potential digitization of financial services and KYC processes.

Peru is an example of a fast-developing country looking to capitalize on its impressive growth

Although financial inclusion figures have historically been poor in Peru, it has recently seen marked improvements. This is due to economic growth and innovative developments, such as interoperable mobile money and a tiered KYC system. Some constraints remain, however, such as a gender gap in access to services.

3.3. Nigeria

Nigeria is the largest economy in Africa with a GDP of USD375.8 billion in 2017 and a population totalling just over 190 million (World Bank, 2018). The population is 51 percent male and reflects a relatively even geographical split between urban and rural segments. Despite the large size of the economy, GDP per capita has failed to increase at the rate of population growth and amounted to a relatively low level of USD1,969 per person in 2017.

State of inclusive integrity

"Identity" is a document-based but evolving concept

AML/CFT regulation in Nigeria defines identity in the financial sector as the ability to produce evidence of life and nationality, or residence (Central Bank of Nigeria [CBN], 2011). Nigeria does not, however, possess a functional system of unique identification from birth, thus making alternative forms of identification important for accessing financial services (National [Money Laundering & Terrorist Financing] Risk Assessment Forum, 2016)[24].

National Financial Inclusion Strategy sets ambitious targets

The 2018 Exposure Draft of the Nigerian National Financial Inclusion Strategy (NFIS) reaffirms 2012 national financial inclusion objectives[25]. These objectives include the achievement of an overall inclusion rate of 80 percent of the adult population by 2020, and a formal financial inclusion rate of 70 percent (CBN, 2018). Unlike its 2012 predecessor, however, the 2018 NFIS takes a first-principles based approach towards the integrity and inclusiveness of the financial system (CBN, 2018)[26].

Financial integrity as an enabler of financial inclusion

The 2018 NFIS identifies reduced KYC hurdles to onboarding as one of five key enablers of financial inclusion. The harmonization of KYC requirements across providers, risk-based tailoring of KYC requirements,

Making alternative forms of identification are important for accessing financial services

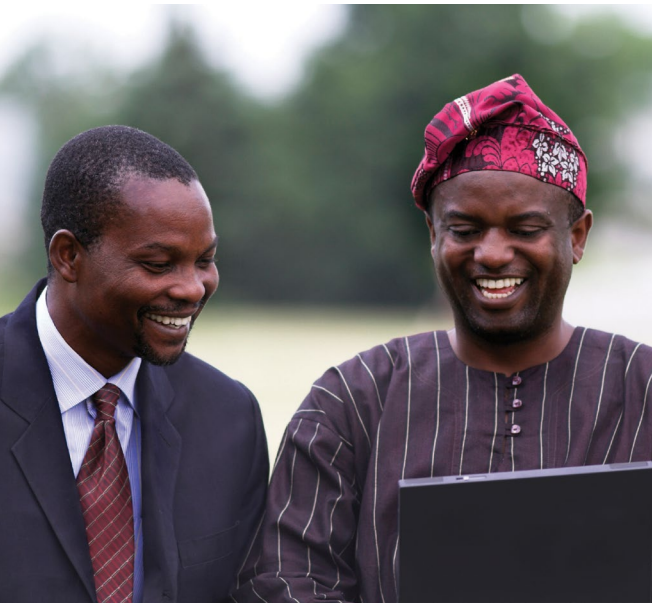
and the universal coverage of national identity cards underpin this enabler (CBN, 2018). Last, the CBN aims to achieve 67 percent ownership of a National Identity Number (NIN) among the adult population (CBN, 2018)[27].

Progress is still to be made towards objectives

According to the 2017 Global Findex, 40 percent of the Nigerian adult population reported ownership of a formal account in 2017. Although 11 percent of those financially excluded in 2017 attributed their exclusion to a lack of documentation, the ownership of NIN remains low at 15 percent of the population in 2016 (World Bank, 2017; CBN, 2018). The absence of a functional unique national identification system from birth, cultural norms that inhibit access to proof of identity for women, constrained record-keeping, weak harmonization of regulation and inconsistent applications of simplified KYC procedure further impose barriers to achieving inclusive financial integrity (National [Money Laundering & Terrorist Financing] Risk Assessment Forum, 2016; GIABA, 2015; CBN, 2018).

Promising KYC innovations

The focus of the CBN on financial inclusion has created fertile ground for innovations in KYC. These have ranged from a multi-bank customer address verification repository and blockchain-based storage platforms to the creation of digital identities via "selfie technology" and a simplified risk-based tiered KYC regime in 2013 (Vanguard, 2017; Planet Biometrics, 2018).



BVN methodology is well positioned to address Nigeria's KYC challenge

The most promising KYC innovation coming out of Nigeria is the Bank Verification Number

The Bank Verification Number (BVN) initiative was launched in 2014 by the CBN in collaboration with the Bankers' Committee. The BVN is a unique identification number linked to a centralized bank verification system. It uses and stores biometric information to identify and verify customers at any Nigerian financial institution. Identity captured by the BVN system consists of "442" fingerprints — two sets of four fingers and two thumbs — signature and facial recognition (iris and face). By linking each bank customer to a unique BVN number, the BVN methodology is well positioned to addresses Nigeria's KYC challenge of delivering unique individual identifiers[28].

Benefits of the BVN

The introduction of the BVN system in Nigeria has produced notable benefits for the accessibility and integrity of the national financial system:

- *Access to financial services is made easier and more convenient through the fingerprint technology for BVN-enrolled customers:* this functionality is enabled by the existence of a centralized database

of pre-populated identification information that is held by the CBN and shared between all financial institutions to source and verify identities.

- *Greater cost savings exist for customers and financial institutions through the use of biometric attributes, as opposed to the presentation of paper-based documentation:* the time taken to acquire or deliver necessary identity due diligence is reduced, and financial institutions can limit costs associated with collecting, processing, verifying and storing individual KYC information or documentation.
- *Over 10 million BVN records have been shared with the National Identity Management Commission (NIMC):* this has helped to assist the NIMC to identify and enrol individuals who previously did not have a NIN (Fatokun, 2018).
- *Ghost workers can be removed from government payrolls through BVN identification:* the BVN is now readily applied by the Nigerian government to reduce the national wage bill (stakeholder interviews, 2017/2018).

Challenges of the BVN

The roll-out of the BVN has endured several growing pains since its inception:

- *BVN requirement for physical enrolment limits coverage to predominantly urban regions:* this implies a costly barrier for citizens living in remote or rural locations, and directly excludes the international diaspora (International Telecommunications Union (ITU), 2016).
- *Low public awareness and confusion surrounding the program limits the uptake of BVN:* in certain instances, this confusion has led to the removal of bank account funds due to a lack of understanding of BVN (ITU, 2016).
- *Patriarchal practices in Northern Nigeria hinder female access to BVN enrolment:* this amplifies existing female exclusion from proof of address or other forms of identification that are predominantly registered in a man's name within these regions (stakeholder interview, 2018).
- *Slow integration of BVN data into the national ID database has inhibited the effectiveness of BVN verification:* as of 2018, 14 million BVN records have been provided to the NIMC in six cycles, out of which 10.15 million records have been successful and 64,730 unsuccessful, with 3.8 million pending[29].
- *Inadequate electricity supply in rural BVN enrolment centres undermine the efficiency and effectiveness of BVN:* this has encouraged the CBN to promote the use of hand-held devices within these regions (ITU, 2016)[30].
- *BVN legitimacy, as a CBN-generated form of identification, has been historically challenged by NIMC, the legal national authority on identity:* although resolved in 2014, this dispute remains a key driver of fluctuating BVN political support (stakeholder interviews, 2017/2018)[31].

Multiple use cases for the BVN hint at its potential for longevity and financial sustainability

In addition to KYC verification by banks, the BVN database is accessible to a wide range of non-bank institutions such as mobile money operators (MMO) and law enforcement agencies[32]. The BVN is also used for the disbursement of farmer subsidies, civil servant wages and student enrolment (stakeholder interviews, 2017/2018)[33].

Regulatory considerations

A sustained effort has been made by the CBN to encourage innovation and ameliorate KYC hurdles to financial inclusion

In 2018, regulatory sandboxes were introduced by the CBN in collaboration with Nigeria Inter-Bank Settlement System (NIBSS) to allow FinTech innovators to propose and test solutions in controlled environments. In the same year, the CBN entered into a partnership with the private sector to aggressively rollout a 500,000 super-agent network across Nigeria to improve access to financial services. Remote BVN enrolment services were also rolled out during this time. Greater access to acquiring a BVN has strengthened the effectiveness of the 2013-tiered KYC regime in providing an alternative KYC requirement for "medium value" accounts.
The tiered regime has been successful in permitting electronic due diligence and reducing the KYC burden for mobile banking (stakeholder interview, 2018).

Challenges of the risk-based tiered KYC hampers its effectiveness

Despite preliminary successes of the regime, several constraints have become apparent:

- *Low-income consumers are likely to be locked into low-value tier 1 accounts:* this is experienced by individuals who lack access to tier 2 and 3 levels of identification (stakeholder interviews, 2018).
- *Proof of address continues to be requested to the detriment of rural populations:* explicit requests for proof of address under the tiered KYC regime risks excluding rural populations from tier 2 and 3 accounts (stakeholder interview, 2018)[34].
- *A conservative compliance environment constrains efforts to remove exclusionary requirements from formal regulation:* this conservatism towards rules is highlighted by stakeholders in relation to both regulation and bank auditors who continue to request physical proof of identity or life (stakeholder interviews, 2017/2018). These environment risks undermine national efforts to eliminate barriers to innovation.
- *KYC requirements relating to tier 1 accounts are more stringently enforced for bank accounts than for mobile*

money accounts: according to the CBN, "tier 1 bank accounts [historically] required a verifiable ID whereas tier 1 mobile money accounts could be opened and operated with just a SIM card registration." (CBN, 2018). Although efforts are underway to harmonize requirements around mobile and bank accounts, the current distinction risks limiting the effectiveness of the tiered regime to promote onboarding (CBN, 2018).

- *Lack of regional harmonization:* the absence of guidelines on cross-border transfers relating to tier 2 and 3 accounts, reinforces confusion among financial institutions on the application of the tiered KYC regime to international remittances relating to transactional values (stakeholder interviews, 2018). This limits the positive impact of the regime on Nigeria's large remitter population.

KYC data protection and governance

Guidelines on Data Protection in Nigeria were released in 2017. These Guidelines prescribe principles for data protection and an approach towards data collection, processing, cybersecurity and data access by individuals and businesses.

The governance of data and the interoperability of databases between financial institutions is coordinated by NIMC, which has an understanding with CBN, as funder and driver of the BVN, to operate as the primary holder of identity information in Nigeria (stakeholder interview, 2018).

Lessons learnt in KYC innovations from Nigeria

The establishment of a centralized biometric database has proven successful in assisting Nigeria to overcome identity barriers to financial inclusion. It alleviates much of the due diligence burden for existing customers when using accounts or opening new ones, and facilitates onboarding with a set of fingerprints. However, key to the success of the system itself has been the collaboration between the CBN and the private

> In the same year, the Central Bank of Nigeria entered into a partnership with the private sector to aggressively roll-out a 500,000 super-agent network across Nigeria to improve access to financial services.

sector. Another significant factor is the use of incentives to encourage adoption among financial institutions (stakeholder interviews, 2017/2018).

Multiple use cases for the BVN further secure its future as a valuable tool for stakeholders. However, it is recognized that further progress in eliminating the need for proof of address and physical documentation is needed as a key step towards ensuring the sustainability of efforts to promote financial inclusion (stakeholder interview, 2018).

3.4. Eswatini

Eswatini is a relatively small country in Southern Africa with a population of roughly 1.3 million. The female population accounts for 52 percent of the total. Most of the population lives in rural areas (78 percent), but urbanization is progressing, albeit at a slow rate (World Bank, 2018). The GDP of Eswatini was USD4.4 billion in 2017, and GDP per capita was USD3,224. Eswatini is therefore a low-income country with a predominantly rural population.

State of financial inclusion and integrity

National identity is the primary means of legal identification in Eswatini

Eswatini has not officially defined "identity". It is stipulated in terms of the home affairs regulation as the national identity number (stakeholder interviews, 2018). The financial system adopts the national identity card with personal identification number as the primary means of identification. Almost everyone in the country has an identity document. It is affordable and easy to obtain from the government (stakeholder interviews, 2018).

Eswatini is committed to financial inclusion The National Financial Inclusion Strategy (NFIS, 2017-2022) highlights the commitment of the Ministry of Finance to transform the local financial system to meet the needs of the population. The NFIS aims to increase access, quality and usage of financial services for citizens of Eswatini. The aim is to reduce exclusion from 27 percent of the population to 15 percent by 2022. According to Finscope (2014), 54 percent of the population is banked, 56 percent is included through other (non-bank) entities and 40 percent use informal financial services.

Almost everyone in the kingdom of Eswatini has an identity document

Committed to financial integrity

Eswatini has implemented the risk-based approach and aims to have a proportional approach to AML/CFT. The main AML/CFT regulation includes the Money Laundering and Financing of Terrorism Act (2011) as well as the Suppression of Terrorism Act (2008). Section 6 of the former requires that accountable institutions ascertain the identity of customers or beneficial owners before entering a business relationship. Full KYC includes proof of employment, proof of address and proof of identity.

Promising KYC innovations

The interoperable KYC process for SIM and mobile money is efficient for consumers and mobile network operators (MNOs)

When acquiring a SIM card, telecommunications operators require the national identity card and proof of residence. They also take a picture of the subscriber. This is done by agents either at the mobile network operator's service centre or remotely. The KYC requirements for a SIM card are identical to the KYC requirements for mobile money (stakeholder interviews, 2018). This means that a consumer need only go through the KYC process once, for SIM card registration, and they would have the option to open a mobile money account, and vice versa. This is a significant success as it ensures efficient and easy access to mobile financial services for consumers, while lowering costs for mobile money operators (MMOs).

The "Person verifying another" arrangement has helped ease proof of address requirements

In some cases, individuals cannot provide proof of address because they live in a shared household. In these cases, an affidavit that has been signed by the owner of the title deed or utility bill, stating that the applicant lives in the said household, is acceptable. This helps individuals open accounts which require proof of address and it has been particularly useful for women who do not own title deeds or who are not named on utility bills despite being prominent household figures.

Governmental departments are working together to reduce conflict and ensure efficiency

The Central Bank of Eswatini and the Eswatini Communications Commission have signed an MOU stating the intention to collaborate and consult before implementing regulations which may affect the other institution. This is a positive development as it ensures that regulators do not implement regulations that conflict with the regulations of other sectors, and adversely affect the ability of consumers to access key financial services.

Regulatory considerations

The cost of KYC is lowered by enabling the use of electronic signatures

Eswatini has implemented the Electronic Evidence Act (2009)[35]. This Act allows electronic documentation and signatures to be used as evidence in court. This is a key enabler for the electronic storage of KYC data, including photos of individuals. Banks and financial institutions can therefore lower their compliance costs because they don't need to process or store physical documents for due diligence purposes.

A risk-based approach is a challenge

Stakeholder discussions indicate that Eswatini is still grappling with implementation of the risk-based approach. The indications are that private sector stakeholders find it a challenge to evaluate risk and apply proportional KYC based on risk. The transition from a rules-based to a risk-based AML/CFT approach is still in its early stages.

Although a small country, Eswatini's success in overcoming KYC barriers serves as a source of reference for other countries

The integration of, and harmony between, telecommunications and financial services regulatory requirements (and the benefits this brings to the economy) is highlighted as a key success. What is also a significant success is the interoperability between MNO KYC and mobile money KYC. The challenge is to improve the robustness of identity systems through new technology, including biometrics, and to continue to improve access to services for rural people, as has been recognized by interviewed stakeholders.

3.5. West Africa Economic and Monetary Union (WAEMU)

The WAEMU is a union of eight countries sharing a common currency, guided by a regional central bank responsible for a common regulatory and supervision framework[36]. All financial institutions are connected to one Real Time Gross Settlement (RTGS) and one Automated Clearing House (ACH) managed by the Central Bank. They also share a common card scheme switch managed by the banks.

State of inclusive financial integrity

The concept of "identity" is not explicitly defined in WAEMU

Requirements to establish and verify identity vary per country, but the following documents are usually accepted as proof of identity across the region – birth certificate, passport, driver's license and etc.

WAEMU is committed to financial inclusion and financial sector development

WAEMU's regional financial inclusion strategy was developed by the Central Bank of West African States (BCEAO) in partnership with the respective Ministries of Finance. The strategy aims for more than 75 percent of the region's adult population to be financially included by 2020 (CGAP, 2016). In addition, it emphasizes the development of the ecosystem for digital payments, the extension of services to youth, women, SMEs and those in rural areas through agent networks and increased interoperability between all financial services.

There have been strong gains in financial inclusion in recent years

According to Findex, financial inclusion figures vary significantly among countries in WAEMU. For example, in Cote D'Ivoire, financial inclusion of the adult population was 37 percent in 2017, up from 32 percent in 2014, while for Guinea Bissau it was 18 percent up from 5 percent – a 13 percentage point increase. Despite the variances, financial inclusion has been improving across the region. The average adult inclusion rate for countries in WAEMU rose 18 percentage points from 14 percent in 2014 to 32 percent in 2017. The advent of mobile money has had a large impact on the above. The average percentage of adults with mobile money accounts grew from 7.5 percent in 2014 to 23.4 percent in 2017 (Findex, 2017).

Lack of documentation is a key barrier to financial inclusion in WAEMU

Documentation challenges vary across countries. For example, of those who are financially excluded in Senegal, 17 percent cited lack of documentation as a reason. For the same population group in Niger, 31 percent cited lack of documentation as a reason. On average in WAEMU, 30 percent of the excluded population are in those circumstances due to lack of documentation. Stakeholder interviews from 2018 reveal that lack of identity and proof of address are key barriers to financial inclusion in the WAEMU region, which corroborates Findex (2017) data.

Lack of harmonized identity document standards hinders regional integration of consumers

Stakeholder interviews from 2018 also reveal that a key issue in WAEMU is the lack of standardization of identity documents across the different countries. This means that the technical specifications of identity documents in one WAEMU country differs from the specifications in another. Therefore, an identity document accepted for KYC in one WAEMU country is not acceptable in another. Although the requirements for KYC have been standardized in the region, differences in the specifications of the identity documents create challenges for financial service providers (FSPs).

The legal frameworks for identity are very underdeveloped in many west African countries

Promising KYC innovations

Creating a regional financial identity for WAEMU citizens

As part of the Regional Financial Inclusion Strategy, BCEAO has a project to implement biometric identification linked to a payment scheme for all the users of the financial system in the region. The project aims to address the issue of multiple bank accounts (with high turnover) and enhance consumer's access to the financial system.

Unique identification of WAEMU citizens is an ongoing challenge

According to stakeholder interviews from 2018, there have been some difficulties in implementation of the project. Firstly, the legal frameworks for identity are very underdeveloped in many of the countries. Secondly, it is difficult to uniquely identify individuals, because many of them have the same name and surname. Thirdly, there has been resistance to the use of innovative technology, such as biometrics, to uniquely identify people.

Regulatory considerations

A new AML/CFT regulatory framework has been designed to meet the goal of financial inclusion without compromising its effectiveness in combating crime.

BCEAO adopted a new regulatory framework in July 2015, inspired by the 2012 FATF Recommendations that introduced the risk-based approach. The development and application of risk-sensitive and proportionate AML/CFT frameworks are a key step in BCEAO's plan to build a more inclusive regulated financial system, and enable a larger proportion of the population to access appropriate financial services, especially the most vulnerable and underserved groups.

This new framework creates three new types of KYC regimes based on the level of risk:

1. **Regular:** financial institutions are required to comply fully with the regulatory KYC requirements.
2. **Simplified:** financial institutions are allowed to reduce their level of compliance to the regulatory KYC requirements due to the lower risk carried by the clients or the product/service. This regime namely permits remote on-boarding and contains several exemptions for e-money operations.

3. **Reinforced:** financial institutions are required to comply fully with the regulatory KYC requirements and take additional actions due to the higher risk carried by the clients or the product/service.

Financial institutions have the discretion to determine which KYC regime is appropriate, based on the level of risk. They are, however, required to be able to objectively justify their decision at all times when asked by the regulator.

Moreover, the framework seeks to promote digital payments and other cashless transactions, by imposing a limit on the amount of cash that can be used for an operation.

BCEAO's overall approach on AML/CFT regulations is that with the right framework, financial integrity and financial inclusion could be mutually strengthening.

Regulatory uncertainty reduces risk appetite

Certain aspects of the legal environment are not harmonized in the WAEMU region. This creates compliance challenges for banks and financial institutions. According to stakeholder discussions, privacy legislation in each of the countries is different. As a result, banks are unsure which legislation they need to comply with given the location of the customer, while compliance with all legislation is onerous and costly. Due to this regulatory uncertainty, banks do not have a large appetite for risk. This stifles innovation and financial inclusion. The BCEAO initiative aimed at harmonizing financial sector laws is envisaged to reduce this type of uncertainty and increase appetite for risk.

Regional standardization and harmonization can be pursued by other Africa regions

Although most African regions are not as advanced as the WAEMU region in terms of regional integration, they can still learn from the WAEMU initiative and experience of attempting to create a standardized regional financial identity and supporting the harmonization of identity and laws. Apart from enhancing financial inclusion, this is at the core of regional integration as it fosters regional trade and free movement of people across borders.

3.6. Egypt

Egypt is the third largest economy in Africa after Nigeria and South Africa (World Bank, 2018). In 2017, it possessed a nominal GDP of USD235 billion and a population size of 97 million (World Bank, 2018). Nominal GDP per capita in the same year was USD2413 (World Bank, 2018). The population is composed of 49 percent female citizens and is relatively agrarian with 57 percent of the population residing in rural areas in 2017 (World Bank, 2018).

Women and the state of inclusive integrity

Identity is a structured but gender inclusive concept in Egypt

Article 6 of the 2014 Egyptian constitution defines identity as a right that is regularized and secured by the law (National Commission for Women, undated). It was not until the 2014 reform of the 1923 Constitution, however, that the national rights of women were formally recognized as equal to those of men (National Commission for Women, undated). In terms of CDD, the right to identity is legally recognized by financial institutions through the provision of official documents validating identity (stakeholder interview, 2018). These documents remain paper-based, but the acceptance of digital identity is a key goal of the Central Bank of Egypt (CBE) as gathered from a stakeholder interview in 2018.

Progress is still to be made in financial inclusion and gender gaps in identity

In 2017, 33 percent of the national population possessed access to an account. In the same year, 27 percent of the women reported access to an account relative to 39 percent of men (Global Findex, 2017). This discrepancy in access to financial services is typically associated with a gender gap in identity (National Commission for Women, 2017). Although 92 percent of the population in 2017 reported owning an identity card, the World Bank ID4D database estimates that 57 percent of the unregistered Egyptian population, below the cut-off age, is female[37]. Approximately 13 percent of the overall financially excluded population list cites lack of identity documentation as a key reason for their exclusion (Global Findex, 2017).

Progress in financial inclusion is constrained by multiple factors

According to stakeholder discussions, transactions made through the informal economy, and its implications for the integrity of the financial system are key challenges to KYC compliance in Egypt (stakeholder interview, 2018)[38]. The prominence of a gender gap in identity is an additional barrier to KYC as patriarchal, cultural and religious barriers prevent women from receiving identification in their own names. Poverty and illiteracy further exacerbate identity gender gaps (Department of Foreign Affairs and Trade, 2017).

Promising KYC innovations

Gender-based KYC initiatives are among the most promising innovations in Egypt

In recent years, the CBE has authorized two key initiatives to target the financial inclusion of women (stakeholder interview, 2018). These include the promotion of Village Savings and Loan Associations (VSLAs) and the creation of mobile money products specifically tailored for divorced women to receive electronic alimony payments (stakeholder interview, 2018)[39]. In terms of KYC specific innovations however, the Women Citizenship Initiative (WCI) represents Egypt's most direct intervention to ensure the identification of women. Initiated in 2011 through a collaborative effort between UN Women, the UNDP, the National Commission for Women (NCW) and various other national departments and international stakeholders, the aim of the WCI is to issue more than a million national ID cards to Egyptian women (UN Women, 2012)[40]. The WCI takes a two-pronged approach to achieve this: 1) to establish mobile registration points in marginalized areas to target excluded women, and 2) to launch public awareness campaigns aimed at promoting the benefits of national ID cards (UN Women, 2012).

Successes of the WCI

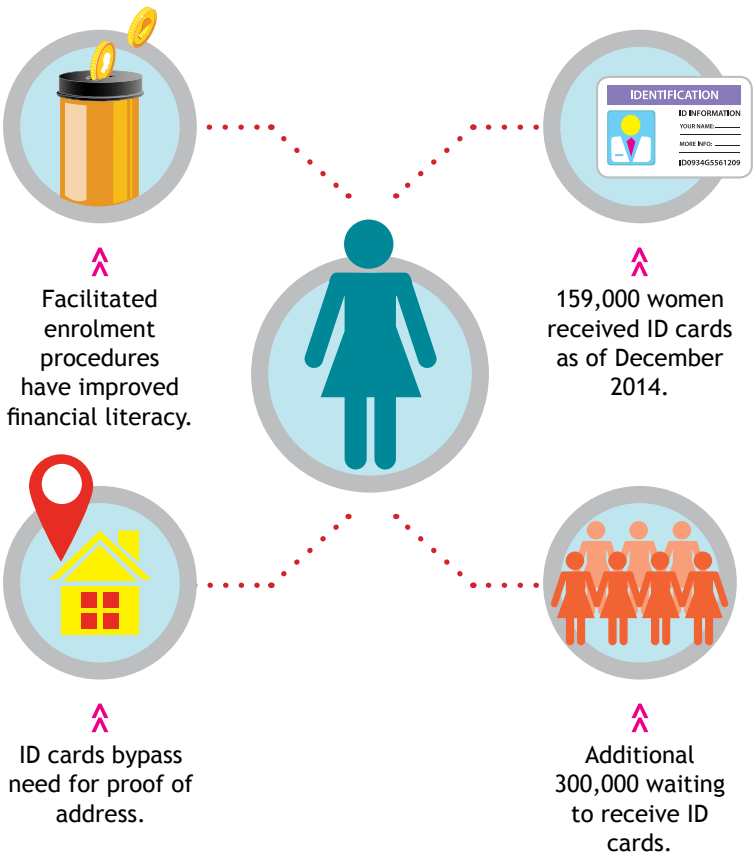
The WCI has produced several positive outcomes in a relatively short period of time:

- *As of December 2014, 159,000 women have received national ID cards across Egypt:* a further 300,000 women are registered and waiting to receive national IDs (UNDP, undated).

- *Enrolment procedures facilitate improved financial literacy among disadvantaged and remote women:* this service is at no additional cost and may account for the rise in account penetration among women from 7 percent in 2011 to 27 percent in 2017 (Global Findex, 2017).

- *Identity card registration through the WCI bypasses the need for proof of address:* through the WCI, the registration of identity cards requires only the provision of a woman's birth certificate. Together with CBE simplified mobile accounts, this suggests the enhanced ability of women to access financial services by avoiding the challenges of acquiring proof of address.

Successes of the Women Citizenship Initiative (WCI)



Women under the age of 16 are excluded from the WCI

Challenges faced by the WCI

The WCI currently faces limitations to its impact on financial inclusion despite its positive objectives and outcomes:

- *Women who are completely undocumented are excluded from this initiative:* the WCI is unable to provide national ID cards to women who do not possess birth certificates (UNDP, 2012).
- *Women under the age of 16 are excluded from the WCI and vulnerable to systematic exclusion:* young girls from remote or marginalized areas are therefore particularly disadvantaged by this program limitation (UNDP, 2012).
- *Conservatism in remote areas can hinder uptake of new services:* women from conservative areas may be slow to participate, or even resistant to the provision of new services such as financial

literacy programs due to their lack of financial education and their religious background (stakeholder interview, 2018). These demographic characteristics may in turn undermine outreach initiatives and their inclusion in more digital innovations such as mobile agent banking (stakeholder interview, 2018).

Regulatory considerations

Egypt's 2013-tiered KYC regime has enabled it to make inroads in financial inclusion

The regime is defined by the following tiers: simplified KYC (with limits of up to EGP10,000[41] and requiring national ID only) and full KYC (with no limits but requiring national ID, proof of address and proof of salary). eKYC is currently under development, with limits yet to be defined, and was largely incentivized by an increasingly youthful tech-savvy population. In 2016, the CBE released the second version of its simplified KYC framework to promote financial inclusion (stakeholder interview, 2018).

This framework includes the innovative development of capped mobile money accounts with simplified KYC requirements, through agent bank networks, as an alternative to standard bank accounts with full KYC requirements (stakeholder interview, 2018)[42].

Lessons on the effectiveness of gender-based KYC innovations

The successes of the WCI highlights the value of developing programs that directly target identity registration as a key prerequisite to financial services. However, as shown by its limitations, the effectiveness of these programs to promote wider economic empowerment critically depends on their support by broader reforms aimed at reducing disproportionate KYC burdens for women. In other words, although access to identity can go a long way to enable financial inclusion, policy initiatives such as CDD at customer premises and use of service providers in conducting KYC are proving to be contextually and culturally relevant to the country. Further, provisions for agent banking and simplified KYC requirements for mobile payments by remote individuals are already positive steps in this regard (stakeholder interview, 2018).

3.7. Jordan

Jordan is a relatively small Middle Eastern country with a population of nine million and a nominal GDP per capita of USD4130 in 2017 (World Bank, 2017). The Jordanian population comprises approximately 51 percent males and is highly urbanized, with 84 percent of the population residing in urban areas.

State of inclusive financial integrity

There is a strong commitment to financial inclusion

In 2017, Jordan became the first Arab nation to release a National Financial Inclusion Strategy (NFIS) (AFI, 2017). As part of its two-year agenda between 2018 and 2020, the NFIS targets three core pillars for financial inclusion. Four key enabling factors for the promotion of each pillar include financial consumer protection and financial capabilities, data and research, innovation of FinTech and lastly, regulation. The last highlights the need to clarify and simplify KYC procedure for the onboarding of specific vulnerable groups such as the bottom 40 percent of the population, women, youth and refugees (Central Bank of Jordan [CBJ], 2017).

Jordan is on track towards progress in both financial inclusion and identity

The 2018-2020 NFIS defines its financial inclusion target as the increased ownership of accounts by the adult population from 33.1 percent in 2017, to 41.5 percent by 2020 (CBJ, 2017). According to the

A Jordanian teenager (foreground) stands outside the shop where he works in the busy commercial center of Amman

2017 Global Findex, 42 percent of the adult population owned an account in 2017. In the same year, there was 88 percent penetration of national identity documentation in Jordan. However, while only nine percent of the excluded population reported a lack of documentation as a primary barrier to account ownership, these figures likely do not necessarily represent the experiences of refugees or other targeted vulnerable populations who may face greater identification barriers to financial services than the average Jordanian.

Promising KYC innovation

Innovative collaboration to identify and financially include refugees

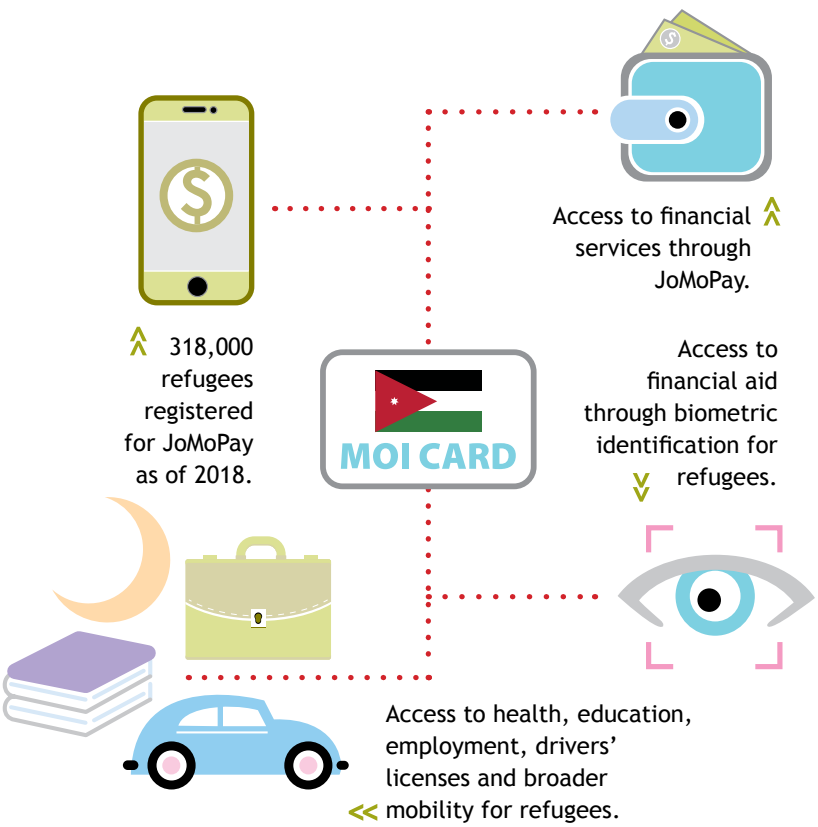
Numerous innovations are currently being piloted or conceived in Jordan, from the roll-out of national e-identity cards in 2016, to the development of eKYC procedure (stakeholder interview, 2018). The most promising among these innovations is the 2015 re-release of the United Nations High Commission for Refugees (UNHCR)-led Ministry of the Interior (MoI) biometric identification card (MoI card). These cards are for UNHCR registered Syrian refugees living in Jordan (NRC and IHRC, 2016) and serve as "nationally recognised, consistent and secure government issued identity cards" that recognize refugees as both legitimate residents of Jordan and beneficiaries of its services (NRC and IHRC, 2016).

Key successes of MoI cards

Access to MoI cards has produced several benefits for refugees in Jordan:

- *MoI cards enable refugees to access basic financial services through the Jordan Mobile Payments platform,* JoMoPay[43]. As of 2018, 348,000 mobile wallets were registered with JoMoPay (CBJ,2018).
- *MoI cards equip refugees with biometric digital identities that suffice for financial service access:* this ability has been successfully employed through the UNHCR's common cash facility, which allows refugees to access aid through iris-scanning ATMs rather than through cards or PIN codes.
- *Various use cases of the MoI card suggest longevity and wider refugee inclusion:* MoI identification facilitates refugee access to health, education, employment, drivers' licenses and broader freedom of mobility throughout Jordan (NRC and IHRC, 2016).

Key successes of MoI cards



Key challenges undermining the success of MoI cards

Despite its potential, the MoI card has experienced a range of challenges that currently undermine its effectiveness for refugees:

- *MoI cards require cumbersome documentation and physical presence for registration[44]:* this implies that the most vulnerable and displaced of refugees are often excluded from this resource as they may struggle to provide the necessary documentation.
- *Refugees reportedly struggle to obtain required proof of address, whether verbally or through documentation[45]:* the inconsistent acceptance of various forms of proof across police stations further inhibits MoI access for refugees (NRC and IHRC, 2016).
- *MoI cards lack universal acceptance as a valid form of identity for financial services at all financial institutions:* at present, it is only accepted by select digital wallets and UNHCR aid disbursement through one local bank branch. This may restrict refugee access to a wider array of financial services and undermine their economic participation.

Regulatory considerations

Progress in regulating for innovation

Two major steps have been taken by the CBJ in recent years to advance the NFIS agenda. Firstly, in 2017, the CBJ amended the Mobile Payment Instructions of 2013 to streamline KYC requirements for e-wallets by requiring only an identity or MoI card for onboarding. Secondly, the CBJ has initiated the Jordan National FinTech Hub (Jo-NAFTECH) as a forum to promote and incubate FinTech innovations (CBJ, 2017).

Regulatory sandboxes on innovations were additionally launched in June 2018 to test the feasibility of pre-selected innovations chosen by the CBJ (CBJ, 2018)[46]. Key outcomes from these sandboxes to date include a national project on "Documents verification using Blockchain and Smart Contracts," QR codes for check verification, "e-checks" and on-going experiments with electronic document submission (CBJ, 2018; stakeholder interview, 2018)[47]. eKYC, and its benefits for the financial inclusion of females by eliminating the need of the physical presence of men, is also increasingly been considered by the CBJ (Faris, 2017).

Institutional constraints hinder regulatory gains

The will of the CBJ to foster KYC innovation through its NFIS is currently curtailed by a lack of enabling regulation and institutional capacity (stakeholder interviews, 2018). According to stakeholder discussions, the absence of a clear regulatory framework on innovation, as well as a limited of understanding of these innovations, impedes progress on the practical implementation of proposed innovations (stakeholder interview, 2018). CBJ infrastructure further constrains the ability of the regulator to accommodate innovations such as blockchain.

Regulation for the protection of personal data has been recently introduced

In 2017, the CBJ "Instructions on the Protection of Personal Data of the Clients of Payment Services and Electronic Transfer of Funds" came into force. These instructions prescribe the types of policies, measures and mechanisms required from payment companies to protect personal customer data[48]. The extension of data protection regulation to financial institutions (beyond payment service providers) does not appear to have taken place as of October 2018 (stakeholder interview, 2018).

Jordan provides a lesson on successful donor-public partnerships for innovation

In particular, Jordan shows that while a country may not be ready to actively implement its own innovation, external partnerships can be leveraged as vital resources for the inclusion of both target groups and the broader population. In the case of MoI cards, both the UNHCR and national government were instrumental in their respective roles to register cardholders, as well as to integrate them into the national payment system respectively. Because of this partnership, refugees not only possess access to legal identification in Jordan, but also the ability to access financial services with streamlined KYC requirements. This success story in turn highlights the value of partnerships for innovation, and the evident trust and cooperation that is needed between partners for innovations to succeed.

3.8. Bangladesh

Bangladesh is a South Asian country neighbouring India and Myanmar. It has a population of 163 million and a GDP of USD249 billion (World Bank, 2018). It has experienced strong economic growth in recent times, surpassing per capita growth rates of both India and Pakistan. This has been due to a relatively low population growth rate coupled with strong growth in manufacturing industries (Basu, 2018). It has led to urbanization, decreased poverty, and increasing availability and usage of technology.

State of financial inclusion and integrity

Financial inclusion and digitization is a priority

Bangladesh does not yet have a financial inclusion strategy, but it is currently developing one. According to the Bangladesh Ministry of Finance (2017), the strategy will highlight several key goals and outcomes, including: consumer protected through legislation and business practice; increasing the number of delivery channels to cater to the excluded; creating interoperability between payment systems; creating and enabling regulatory environment, and digital innovations.

A comprehensive national identity system

Identity is not explicitly defined under the law because the institutions are expected to assess whether identity has been proven by a customer based on the information provided and the risk of the customer. This is important for shifting focus from rules-based to risk-based approaches. Bangladesh's national identity is comprehensive in terms of its features. It developed a National Identity Database (NID) in 2009, and this database includes some biometric information (stakeholder interviews, 2018). In 2016, Bangladesh issued 'smart' national identity cards. These cards include richer biometric information including 10 fingerprints as well as biometric information from the iris. It was primarily issued for voting, but can be used across a multitude of services, including banking and financial services (Rahman, 2016).

Growth in financial inclusion a result of policy interventions

In 2017, 51 percent of the adult population had an account at a financial institution (Findex, 2017). This is up from only 31 percent in 2014, showing strong gains in financial inclusion in recent years. In rural areas, ownership of an account at a financial institution rose from 29.6 percent in 2014 to 49.9 percent in 2017 (Findex, 2017). This represents an increase of more than 20 percentage points. Growth in rural financial inclusion is a result of targeted initiatives by the government of Bangladesh. The introduction of mobile financial services, agent banking, and a central bank regulation mandating banks to have at least 50 percent of their branches in rural areas has been key in increasing access in rural areas (AFI, 2018). Some nine percent of those who are financially excluded stated that lack of documentation was the reason for their exclusion (Findex, 2017). This indicates that lack of documentation is a factor that contributes to financial exclusion but is not the major driver in this regard.

Identity fraud a growing concern

Identity fraud is a concern in Bangladesh – an example is when fake identities or the identity cards of others are used to register multiple accounts (stakeholder interviews, 2018). The indications are that this has been particularly problematic in mobile financial services. For example, mobile money agents sometimes register multiple SIM cards to conduct anonymous transactions or accept customers without the necessary unique identification documents (Hasan, 2017).

Refugees from neighboring countries are an identity challenge

In addition to this, Bangladesh has been a destination for many Rohingya refugees from Myanmar over the last few years. This has presented a KYC challenge in terms of identifying and documenting these individuals, who are not recognized as citizens of their home country, Myanmar, which has also not provided them with identification documents. Apart from being a challenge, this has presented an opportunity for authorities to further innovate on identity, working with international agencies.

Promising KYC innovations

Biometrics in agent banking is making the onboarding process safer and easier

As mentioned earlier, the introduction of agent banking in 2013 has been key for financial inclusion. Notably, the KYC approach has been efficient and safe, which has allowed onboarding through agent banking to flourish. To open an account, the agent requires an ID, a photo, as well as proof of address. In addition, agents can scan the fingerprint of consumers and verify their identity against the national database.

Simplified KYC in agent banking helps vulnerable people access financial services

According to stakeholder interviews from 2018, agent banking has been particularly useful for refugees. After a mass exodus of people from Myanmar in 2017, the government of Bangladesh, together with humanitarian agencies such as the UNHCR and the World Food Program (WFP) started biometrically registering these refugees. This has given individuals an identity which can be used to obtain important services.

Biometrical registration of refugees has given individuals an identity which can be used to obtain important services

The government of Bangladesh has integrated these identities into national databases and is able to confirm identity for KYC purposes. As such, FSPs can allow Rohingya refugees to open accounts. Although recent statistics are not available, stakeholder interviews from 2018 indicate that almost all Rohingyas have now been registered biometrically. This is a good example of the benefits of government and international agency partnerships, as well new technologies such as biometrics.

A biometric SIM card identity database can reduce fraud and terrorism risk in mobile money

Biometrics are now also being used in the mobile industry. While the national ID has had biometric information for some time, the mobile network operators developed a biometric database in 2015 in response to fraud issues. The mobile network biometric identity system has now registered as many as 140 million biometric SIM cards (stakeholder interviews, 2018). These SIM cards were supposed to be biometrically verified against the national identity database. However, in some cases, the telco companies did not comply with this requirement (Hasan, 2017). Some telco agents even biometrically registered some SIMs without the knowledge of the customers concerned and sold those to criminals at higher prices. Ultimately, many people were able to register for SIM cards under fake IDs or were able to register multiple SIM cards under the same ID and conduct fraudulent transactions under these assumed identities.

Lack of interoperability between databases is costly

A challenge is the fact that the many different databases are not interoperable. For example, the telco database of identities is separate from the national database. Each database is generally used for its own single use case. In the case of the National ID, this is usually for voting. Having separate biometrics databases is quite costly and not having an ecosystem of use cases can affect the long-term viability of these databases (Cooper et al. 2018). This is particularly problematic in Bangladesh because the telco database is not accurate due to lack of verification and needs to be verified against the NID to ensure its integrity.

Regulatory considerations

Establishment of a multi-agency consultative forum for KYC propositions provides opportunities for innovation

Bangladesh has also established a multi-agency consultative forum that looks at KYC approaches on a case-by-case basis. The forum includes the Bangladesh Financial Intelligence Unit (BFIU), and relevant departments of the Central Bank (stakeholder interviews, 2018). This type of development is good for promoting collaboration between departments that are involved in AML/CFT. Moreover, it ensures that innovative solutions to KYC are not hindered by strict regulation. However, there is a need to reduce the time taken for case-by-case evaluations to ensure it that it does not stifle innovation.

Regulatory grey areas reduce efficiency in the KYC process

There are specific provisions for the acceptance of electronic signatures and electronic records in the Information and Communication Technology Act, 2006. However, there are no regulations regarding digitization of the KYC process and digital signatures have not yet been introduced. This hinders the extent to which KYC processes can be fully digitized. eKYC can reduce KYC cost by enabling pre-population of forms and removing the need to store physical documents. Currently, banks may choose to store documents physically or make copies of physically-signed documents to minimize risk. To fully digitize the KYC process, it is important to provide regulatory certainty that KYC documents can be stored electronically and that customers can give consent through an acceptable form of e-signature – for example, by consenting to use of a verified biometric.

The disconnect between different sectors affects the ability to combat ML/TF

Despite innovative developments in KYC, understanding of risk within FATF's risk-based approach is still a challenge for Bangladesh as it is for other countries (stakeholder interviews, 2018). There is opportunity to substantially increase effectiveness of CDD by improving the technical capacity to understand and interpret risk. The BFIU also has difficulty getting access to important ML/TF related information, such as SIM registration information and call detail records in the telecommunications sector. Currently, regulation requires the BFIU to request this data from the telcos. However, processing a request takes a few days. This impacts the ability of the BFIU to identify ML/TF in real time and to get important information in a timely manner (stakeholder interviews, 2018).

3.9. Russia

The Russian economy has undergone significant changes since the end of the Soviet Union. The economy moved from being centrally planned to a market-based system. In the 1990s, most industry was privatized, apart from the energy, transportation, banking and defence sectors. It had a GDP of USD1.3 trillion and a GDP per capita of USD10,743 in 2017 (World Bank, 2018). Despite impressive growth since the 1990s, growth has slowed in recent years. The total population of Russia is 144 million, of which 25 percent is rural and 54 percent is female (World Bank, 2018).

State of financial inclusion and integrity

Russia is one of the few states to have attempted to define the concept of identity for AML/CFT purposes

"Identity" is defined as a set of identifiers that support an identity, such as the characteristics of a person (stakeholder interviews, 2018).

In Russia, "Identity" is defined as a set of identifiers that support an identity, such as the characteristics of a person

For opening accounts and starting relationships with financial institutions, the following identifiers are used:

For natural persons: name, passport/ foreign passport (to confirm identity abroad) foreigner's passport, migration card/document permitting stay in the Russian Federation/refugee ID, taxpayer ID card, personal pension account number, place of residence. For legal entities, the following is required: name, taxpayer ID card, place and date of registration.

Almost all Russians have a national identity document

According to Findex (2017), 98 percent of adults in Russia have a national passport, and over 75 percent of adults have an account at a financial institution. Because of such strong penetration of identity systems, only 11 percent of those excluded stated lack of documentation as the reason for exclusion.

Extending financial services to excluded populations

In its National Financial Inclusion Strategy (2018-2020) the Bank of Russia has committed to improving access to, and quality of, financial services. The strategy targets previously excluded populations such as the rural, elderly, disabled, and low-income groups. The measures taken by the Bank of Russia have universal features, which means that they also cover gender issues. Russia differs from many other countries in that women had equal access to financial services and education from the era of the Soviet Union.

Promising KYC innovations

As mentioned, financial inclusion and lack of identity are not key challenges in Russia. As such, the following KYC innovations are mainly focused on enhancing verification, dealing with fraud as well as enhancing customer due diligence under the FATF's risk-based approach framework.

Centralized database of identity information enables verification for KYC

FSPs can confirm the identity of potential customers by verifying the passport or ID number at several national identity databases. This allows for fast verification of the documents being provided by customers and reduces the chance of false matches. The database also has a list of "Politically Exposed Persons, which allows FSPs to easily identify high-risk clients. The databases which FSPs have access to are interlinked (stakeholder interviews, 2018), meaning that they can be used to cross-check information and ensure that it is consistent across databases.

Linking industries for faster payments and access to government services

The benefits of interlinked databases and services extends into payment services. Stakeholder interviews from 2018 revealed that mobile money e-wallets are linked to bank payment cards. One of the resultant benefits of this has been that money transfers now take under one minute to settle. More than 35 percent of Russian citizens already prefer to use

e-government services. Citizens and enterprises are provided with access to e-government services via the Unified System of Identification and Authentication (USIA) created by Minsvyaz. The USIA has many advantages: quick user identification, high productivity and stability. The system protects allocated information in accordance with the Russian legislation. The USIA meets requirements of legislation on simplified identification and can be used for simplified identification by banks. While entering Internet bank users will be able to use e-government services. Login and password from Internet banking and login and password form the USIA will be different. They will be stored according to safety rules in Internet banking and the USIA. It will significantly expand possibilities of banks and will contribute to distribution of e-government services.

The tiered system assists rural population access financial services

Russia has a tiered KYC system which allows lower levels of identification and monitoring to be applied for low-risk individuals. In particular, this enables people without proof of identity to make one-off transactions. For one-off transactions below USD250, a consumer need only provide their passport, and not proof of address. This removes the proof of address barrier for low-income or rural individuals who often lack this.

New biometric database to provide more accurate verification services

The government is currently considering the implementation of a biometrics database[49]. This database is intended to provide detailed information on the consumers including advanced facial biometrics. The biometrics provided can be verified against a server operated by Rostelecom and user data would be protected by encryption (Finextra, 2018). This database would provide more authentic verification services than the current government database, as it is more difficult to commit fraud through a biometrics database (Cooper et al. 2018). The system is currently being tested at various banks and will be rolled out within the next year.

A biometric database can digitize the financial services ecosystem

In addition to making identification more convenient for consumers, the biometric database will provide a multitude of remote financial services. For example, deposits, savings accounts, loans, bank cards, payments and transfers will be available remotely, without visiting the office (FinTech Futures, 2018).

This system will assist in facilitating digitization of financial services in Russia. If integrated with credit repayment behaviour, it could mitigate risks while assessing the client's profile.

Russia is at the forefront of new technologies such as blockchain

According to stakeholder interviews (2018), Russian authorities focus more on unlocking innovative technologies and business models as opposed to identifying the population. This is because of the robust and pervasive identification system which is already in place. Russia is currently exploring a multitude of new technologies to employ in the financial sector. For example, Russia is looking to become a leader in the application of blockchain technology, while also looking into other technologies, such as big data and artificial intelligence for use in the financial services and civil services sectors (EY, 2017).

Regulatory issues

Strong penetration of national identity is a result of simple but effective regulation

Although not a technological innovation, the strong penetration of Russia's identity card system is not arbitrary. According to stakeholder interviews from 2018, it is mandatory (citizens are obligated) to obtain a national passport. This results in very few people choosing not to get an ID or not being able to obtain one.

There is difficulty implementing the risk-based approach

According to interviews conducted, Russia face challenges in adopting the risk-based approach more so than it does with identifying consumers for KYC purposes. The challenges with the risk-based approach (as reflected by FATF ratings) are not peculiar to Russia and they impact developing and developed countries alike.

Utilizing a robust identity to improve financial service offerings for Russians

Russia presents an interesting case of a country which has made significant success in KYC due to a strong, comprehensive and robust identity system. It is one of the only countries encountered in the research to have defined identity for AML/CFT purposes, and it has shown great political will in its top-down approach to understanding and implementing identity solutions. Additional challenges remain in digitizing the financial services sector and enabling citizens to use their robust identities for a multitude of services.

CHAPTER 4

CROSS-CUTTING INSIGHTS

4.1. Restrictive legal conception of identity

Due diligence requirements to identify clients focus on what a person has rather than who an individual is

During interviews, country stakeholders indicated that country regulatory requirements relating to the identification and the need to verify the identity of clients, and specifically what constitutes an acceptable "identity", are typically set out in a rules-based format. In most cases, country regulatory requirements revolve around proof of identity relating to what an individual *has*, such as rules-based lists for identification documents, rather than around who an individual is in terms of physiological traits (Cooper et al. 2018).

There are opportunities to increase the convenience and affordability of both onboarding and identity verification processes of institutions through enabling regulatory requirements that provide greater scope to identify and verify the identity of clients in relation to who an individual *is*. However, legacy frameworks have been shown to be less conducive to excluded populations who struggle to acquire necessary documentation to open bank accounts (Cooper et al. 2018).

South Africa as a good example of regulatory innovation that supports innovative approaches to establishing and verifying identity

Extensive consultation with public and private sector stakeholders in South Africa has resulted in the introduction of a flexible principles-driven regulatory framework that took effect in October 2017. Institutions have until April 1, 2019 to develop their risk management and compliance programs to comply with the new regulatory requirements. Although the identity of individuals will still, in most cases, be linked to a government-issued identity document, what constitutes identity is no longer narrowly specified by rules. This is a significant innovation that is encouraging new and efficient ways to identify and verify clients in a manner that supports inclusive integrity objectives.

4.2. KYC requirements established in terms of input rather than outcome

Different approaches to CDD have different results

Due diligence-related regulatory requirements that are put in place by a country should be risk-based across the rules and principles regulatory continuum. An example of a rules-based approach was seen in South Africa prior to the introduction of a new regulatory regime in October 2017. The rules-based approach stipulated the criteria and documents needed to identify each type of client, for example, a South African natural person[50]. Further, what was required to verify the identity of clients was also specified in a rules format, and often resulted in arduous processes, which demanded significant resources and knowledge to confirm identity[51]. This was not necessarily commensurate with the level of ML/TF risk. Principles-based frameworks, on the other hand, do not include stringent rules as to what constitutes acceptable customer due diligence. Principles relating to identity and what is required to verify identity are set[52].

This approach provides room for institutions to determine procedures that best allow them to succeed in identifying and verifying customer identity with a view to achieving due diligence objectives. Although this regulatory approach may result in a relatively high level of uncertainty as to what is required to comply with principles-level requirements, it offers financial institutions flexibility and agency towards applying processes that support inclusive integrity outcomes.

The distinction between ML/TF risks and compliance risks remain unclear for many regulators

Several regulators continue to specify KYC requirements in terms of information that must be obtained and documents that must be acquired rather than in terms of the risk being mitigated. The broad understanding that ML/TF risks may not necessarily be ameliorated by obtaining certain documents (such as proof of address) has not generally been leveraged into changes in regulatory frameworks of

countries. Accordingly, country AML/CFT authorities and institutions are often focused on addressing compliance risk rather than addressing ML-TF risk. When there is a comprehensive understanding of the different risks, and it is reflected in country frameworks and processes, i.e. compliance and ML/TF risks, this will assist in giving due attention to required AML/CFT outcomes, rather than to narrow compliance with regulatory requirements.

4.3. Tiered KYC has taken root and helped address exclusion

The adoption of tiered KYC regimes has produced an array of positive outcomes for implementor countries

Tiered KYC regimes have been widely adopted in case study countries including Nigeria, Russia, Eswatini Peru and Egypt and been given nuance for the respective local contexts. For example, in Nigeria, the tiered system has fostered the inclusion of low-

An Egyptian fruit seller

risk consumers through enabling mobile accounts with simplified KYC requirements, the electronic submission of identity documents and broader adoption of mobile banking accounts among rural and marginalized segments of society (stakeholder interviews, 2018).

Although originally prompted by the need to promote inclusion among young Egyptians, the regulatory adjustments to the Egyptian tiered regime encourages broader benefits for society. The recent development of capped mobile money accounts with simplified KYC requirements that enables alternative and easier banking methods for the unbanked is notable in this regard.

Challenges to the smooth operation of tiered regimes persist despite its growing familiarity among regulators

Some of the notable challenges identified across case study countries include (among others) the inability of low-income consumers to progress to higher transactional tiers without requiring additional documentation such as proof of address, and the challenge of implementing the risk-based approach in a way that fosters inclusion of low-income and excluded groups.

4.4. Biometrics and new innovative technology

Emerging use of biometrics with growing potential across the world

Stakeholder interviews reveal the emerging use of biometric methods to verifying identity, though at different stages of implementation. In Nigeria, the prevalence of the BVN system in

the financial sector has allowed for fingerprints and iris scans to be used increasingly for opening and managing accounts. In Brazil, GPS tracking is becoming an important method of verifying proof of life, work and address. In other countries however, such as Bangladesh, Egypt and Eswatini, the application of biometric techniques is only in its initial stages of either conception or roll-out. Lessons learnt from Nigeria on the value of multiple use cases for biometric innovation offers a key insight for countries looking to develop this approach.

4.5. Limitations of electronic record-keeping inhibits effective innovation

Legal acceptance of electronic identity is key to facilitating innovation

Interviews with all case study countries reveal that the electronic submission of documentation used to establish and verify identity of customers is increasingly becoming accepted as a norm. In several cases, such as Nigeria, tiered KYC regulation explicitly highlights this as an option. It is this type of enabling regulation that has been a key factor in the facilitation of technological innovations in KYC, and the rise of digital banking in countries such as Brazil.

A prevailing trend among several countries is the confusion surrounding both regulation and expectations of financial institutions with regard to record-keeping

More specifically, while some countries such as Eswatini and South Africa have explicitly allowed financial institutions to maintain electronic due diligence records, regulation on this matter in other countries is less well developed. This has led to some confusion and misaligned expectations between regulators and financial institutions, as well as between financial institutions and auditors who hold preferences for proof of identification in hardcopy formats.

4.6. Opportunity for greater interoperability of identification databases

The lack of harmonization of databases that can be used for due diligence purposes is a key challenge across case study countries

Despite select advances in identity and verification systems, very few countries seem to possess interoperable databases that can be used to optimize the use cases of innovations. It is common to find "silo" databases that predominantly cater for the storage of identification information for specific industries such as the banking sector, voter registries and public administration. In the case of Brazil, each financial institution has its own database of customer physiological traits, thus implying that individuals may possess multiple identities if banked at various institutions. This duplication of identity is both costly and inefficient (Cooper et al. 2018). Furthermore, duplicate identities across various databases may not necessarily comply with the same standards, therefore potentially undermining the effectiveness of innovative verification techniques that source from multiple databases (Cooper et al. 2018). FinTech innovators have highlighted the dangers of weakly harmonized databases as a potential barrier to the accuracy of their verification APIs (stakeholder interview, 2018).

Promising efforts are being made towards harmonization of databases in countries and regions

Recognition of the importance of harmonized and centralized databases that can be used for due diligence purposes is prompting countries to initiate integration efforts. In Brazil, efforts by the BCB are currently underway to harmonize identification databases between financial institutions on a centralized database (stakeholder interviews, 2018). The financial sector in Nigeria

has already made strides in developing a centralized BVN system that is complete and interoperable between banks. Within the West Africa Economic and Monetary Union (WAEMU), the concerns of the Central Bank of West African States (BCEAO) relating to interoperability are driving initiatives by the union to develop a platform for harmonizing identity, related laws and KYC requirements across the region (stakeholder interview, 2018)[53]. Although the achievement of this level of harmonization remains constrained by national challenges, efforts taken towards this goal highlights the significant potential for BCEAO members and other innovating countries to achieve and benefit from interoperable and centralized identification databases.

4.7. Limited gender-based KYC innovation

Efforts to prioritize gender equity in policy are apparent but limited across stakeholder countries

All stakeholder countries affirm the importance of ensuring gender-inclusive identity systems and KYC requirements. However, very few interviewed countries appear to have taken any specific or targeted initiatives towards achieving this objective. Egypt is a notable exception in this regard following its WCI and Central Bank of Egypt-backed programs to create mobile payment products specifically tailored to the needs of women. The receipt of formal identity by at least 159,000 women in 2014, because of the WCI, is particularly indicative of Egypt's success in working towards both financial integrity and the financial inclusion of one of its most marginalized population segments. Broader KYC innovations that financially include the displaced and vulnerable, such as refugees in Jordan and individuals without proof of address in Eswatini, additionally highlight the gains of targeted national programs.

Gender bias may only be an unintended outcome, rather than a driver, of identity gaps in some jurisdictions

In some countries that participated in the study, the prevailing understanding by stakeholders interviewed is that there is no gender gap because of KYC requirements. In Brazil, the coverage of identity cards is near universal. Women in Peru have greater access to identity and financial services than men because they are perceived to be more trustworthy than men (stakeholder interviews, 2018). In cases where gender inclusion profiles do not appear to be a concern, the pursuit of universal identity coverage and inclusive access is represented by stakeholders to be crucial. However, this view towards inclusion is also held by stakeholders in countries where gender discrimination does reportedly exist, such as in Northern Nigeria.

Targeted gender initiatives are necessary but not sufficient to remove broader disparities in identity

Irrespective of methods adopted to tackle gender discrimination in relation to due diligence requirements, all case studies display a clear recognition of the need to remove barriers in KYC procedures that risk reinforcing existing disparities in financial access. In most cases, this realization supports the removal of due diligence requirements that unduly exclude marginalized groups. Proof of address is a notable example of a potentially exclusionary barrier given that it is capable of inhibiting access to the poor and women who are often doubly disadvantaged as both poor and female (AFI, 2018). The indications are that, while targeted initiatives to include women may be successful, their implementation should be in conjunction with broader policy reforms which aim to remove KYC barriers in general.

4.8. Identity and proof of residential address

The requirement to verify the residential address of an individual (proof of address) has adversely impacted financial inclusion

Stakeholder interviews confirmed lack of documentation for CDD as a limiting factor to access financial services by the poor.

In this regard, proof of address was a key factor, especially for excluded groups (stakeholder interviews, 2018)[54]. The question of why a customer's address should, in all cases, form part of the identity of a customer should be considered. Notably, it is evident that although FATF recommendations do not specify that address verification must take place, many AFI member countries continue to include address

Lack of documentation for CDD is a limiting factor to access financial services by the poor

verification requirements in their regulations[55]. This disconnect between international guidelines and country practice begs the questions: "what risk is being mitigated by imposing requirements for address verification?" and "what are the implications of these requirements for the achievement of inclusive financial integrity?"

De-linking identity from proof of address is a key enabler for inclusive integrity

Discussions held during interviews over the course of the study provide several insights into innovation that are taking place in respect of "proof of address" requirements relating to customer due diligence. These include the adoption of principles level regulatory requirements that do not make address verification mandatory (e.g. South Africa), flexible address verification requirements included in regulatory requirements (e.g. Brazil) and regulatory exemptions that provide a proof of address carve-out for institutions. The regulatory developments in South Africa are a noteworthy innovation. They have duly moved away from mandatory address verification requirements and this is providing impetus for innovation by institutions in product design and delivery targeted at the lower end of the market.

Due diligence requirements need not have hard-coded proof of address rules

The table on the right shows that there has been progress among interviewed countries in recognizing the need for flexible or graduated due diligence requirements. Examples of regulatory innovation (for illustration purposes) is seen in the table that highlights key aspects of developments that support favorable financial inclusion outcomes.

Country	South Africa	Brazil	Nigeria
Address verification context	Regulatory requirements are framed in a principles-based format[56] supported by comprehensive guidance[57].	Address verification is required in terms of regulatory requirements that are not overly prescriptive.	Address verification is required in terms of rules-oriented regulatory requirements.
Innovation relating to address verification	In terms of Guideline Note 7, a residential address is no longer automatically part of an individual's identity. This will depend on the circumstances. This leaves the door open for institutions to ask for address information, but this would not necessarily need to be verified (flexible compliance responses must be risk-based). The previous rules-based Exemption 17 has been withdrawn as this is no longer needed as a "carve out" to support financial inclusion.	Innovative due diligence measures have been encouraged in view of the enabling regulatory framework that allows a level of flexibility in identifying and verifying clients. These include the use of data analysis, third-party information, and links to GPS coordinates to establish the address of a client. There are business and fraud prevention drivers that overlap with opportunities to establish the residential address of clients.	A three-tier due diligence framework has been implemented that allows for simplified due diligence in the lower tiers, i.e. eliminating the need for proof of address in relation to low value business. This has been in place for an extended period and is still viewed favorably (stakeholder interviews, 2018).

Table 1: Innovations relating to proof of address in select focus countries

Enabling regulatory frameworks are key to facilitating due diligence innovation

Insights from stakeholder interviews suggest that there are effective innovations in due diligence that are being enabled by new technologies. These relate to data analysis, behavioural profiles, geographic locations, biometric features and proof of life to establish the identity of clients and to provide an appropriate level of assurance relating to such identities. The door for such innovation is only open when a country's regulatory framework enables this and when institutions have sufficient confidence relating to the supervisory implications thereof. Brazil appears to have made significant progress in this regard, as reflected in the case study that has been developed as part of this study.

CHAPTER 5

FinTech PERSPECTIVES AND KYC SOLUTIONS

5.1. FinTech solutions and possibilities in customer due diligence

Inventive products by FinTech innovators are paving the way for inclusive financial integrity

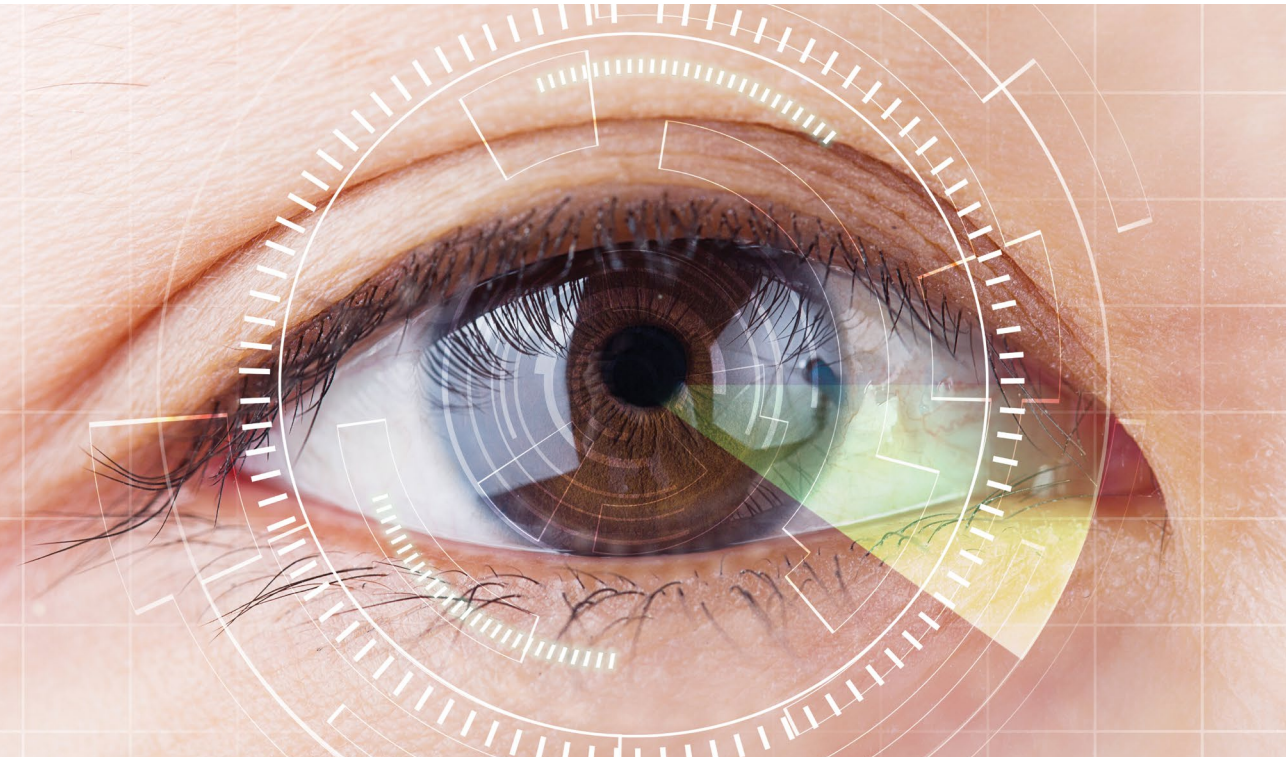
A 2018 special report by AFI, entitled FinTech For Financial Inclusion: A Framework for Digital Financial Transformation, identifies FinTech innovators as having the potential to promote financial inclusion when built on a solid foundation of digital identification and electronic payment systems (AFI, 2018). Towards this outcome, several such innovators are taking the lead in KYC innovation by developing new technologies that not only make digital identities possible, but also assist financial institutions to overcome challenges in identity verification and enable national authorities to pursue ambitions of financial inclusion and integrity.

Promising FinTech KYC innovations were identified among AFI members and other countries around the world

The following were identified during stakeholder interviews and through desktop research:

- **Facial recognition:** Application Programming Interfaces (API) are increasingly being developed by FinTech innovators as a mechanism to allow customers to provide portrait pictures of themselves, taken on smartphones, as proof of life or digital identity (stakeholder interview, 2018)[58].
- **GPS data** linked to smartphones is additionally used by FinTech innovators in Ghana to supplement facial images with location data, creating temporary identities that offer both proof of life and address (stakeholder interview, 2018)[59].
- **Machine learning** can improve upon these processes by using algorithms that learn to identify patterns and relationships between different sets of information over time.
- **Legal entity and entity consolidation** processes are being used by global FinTech innovators to build identity profiles or entities that match names of individuals with biographic information on national databases (stakeholder interview, 2018)[60].

- Economic identities are further being enabled by **blockchain technology** through its ability to link an individual's transaction history, health records, credit history, cash transfer, education records and various other sources, into a combined single digital identification profile[61].
- **Decentralized data storage** which gives control of sensitive KYC data to consumers can be used to reduce risk for financial institutions, decrease cost and enhance consumer protection (see Box 1 on next page).
- Identification through **biometric attributes**, such as fingerprints or behavioral traits, allow for FinTech innovators to remove the need for physical documentation when onboarding or authenticating transactions.
- **Iris recognition technology** can also be used to convert an image of an iris into a unique code that can then identify an individual (AFI, 2018)[62].



The boxed information below provides a discussion of decentralized data storage.

Currently, sensitive KYC-related data is generally held by central authorities, banks, financial institutions and other centralized databases like Facebook. In an ecosystem where data is decentralized, financial institutions and other companies requiring personal data would not store, own, or hold onto any data. Rather, financial institutions would essentially store encrypted references to the actual data which is stored securely elsewhere on interoperable databases. The customer would need to consent to the use of the reference for the financial institution to gain temporary access to the actual data. This greatly reduces risk for financial institutions, as they would not be liable for breaches in private information since they do not store such data.

The consumer's data can be stored on decentralized networks like distributed ledger technology or on the cloud across multiple servers in encrypted pieces that are meaningless on their own. The consumer owns this data and decides whether to allow providers to access it and for what purposes. This type of technology could decrease the cost of KYC for financial institutions by significantly lowering risk and security costs. It would also allow consumers to store detailed granular information with the knowledge that such information is only used when authorized by the owner.

In a decentralized network as described above, the provenance[63] of data is detailed and robust. Whenever the data is utilized for something, a record is created and attached to the data which specifies who used the data and for what purpose. This means that if the data is used for unscrupulous purposes, it is easy to identify. By attaching a strict provenance to the data, it is possible to see where data has moved and who has used it. This has the potential to give financial institutions a much clearer picture of the risk of a client, and allows for the creation of more accurate risk profiles under the risk-based approach. Thus, decentralized networks of consumer-owned data do not only decrease risk for financial institutions, but also enhance capacity to assess risk. This is in addition to empowering consumers through granting them ownership of their data.

Box 1: The potential role of decentralized data in KYC

5.2. Challenges hindering the growth of FinTech innovation

Despite their significant potential to optimize inclusive financial integrity and national financial inclusion efforts, secondary research and discussions with FinTech innovators highlight several obstacles that inhibit the effectiveness of their KYC solutions:

- *Unclear KYC requirements:* lack of clear and consistent regulatory articulation (at the national level) on what is required for KYC and customer due diligence is highlighted as a barrier to effective identity verification for FinTech innovators, national payment platforms and international payment hubs.
- *Weak harmonization of regulation:* AML/CFT regulation that is not harmonized between regions undermines the national and international operation of FinTech innovators. In some instances, conflict between regulatory KYC requirements across regions has impeded operations by payment providers in international jurisdictions (stakeholder interview, 2018).

- *Stakeholder communication and collaboration:* insufficient communication of regulatory reform, and its implications for various stakeholders, is identified as a key challenge for FinTech innovators where reform has been relatively swift.

Incomplete and incorrect data on national government databases undermine the veracity of innovative verification techniques

- *Poor data collection:* incomplete and incorrect data on national government databases undermines the veracity of innovative verification techniques. This is identified as a particularly strong barrier where national agencies are unable to provide surnames or any identification information at all (stakeholder interview, 2018).
- *Offline identification records:* identification data for rural or remote populations in some developing countries are offline and not yet in electronic format. This limits the reach of digital innovations that depend on the accessibility of basic online identity data to conduct verification processes (stakeholder interview, 2018).

CHAPTER 6

CONCLUSION

The cases included in this study show that while significant progress has been made in these countries regarding KYC innovations, there remains much to be done to advance KYC innovations, financial inclusion and financial integrity. Countries are navigating different KYC solutions and innovations depending on their priorities, their technology appetite and their level of development, among others.

In light of the case study analysis, the following KYC innovations hold promise for financial inclusion and financial integrity (inclusive integrity); tiered KYC (Bangladesh, Eswatini, Nigeria, Brazil, Russia, Egypt); Bank Verification Number allowing individuals to access a wide range of financial services (Nigeria); simplified KYC in agent banking as well as biometric SIM card identity database (Bangladesh); "person identifying another" arrangement as well as a simultaneous SIM and mobile money KYC processes (Eswatini); identity verification using customer behavioural traits, GPS, data analytics and biometrics (Brazil and Nigeria); Women Citizen Identity and Alimony initiative (Egypt); centralized database for KYC as well as blockchain (Russia), and harmonization of member countries' identity systems and laws (WAEMU; BCEAO).

Blockchain and other distributed ledger technologies are still in the initial stages of development in case study countries and are being pursued with varying degrees of intensity (stakeholder interviews, 2018). However, the cross-cutting considerations for these KYC solutions, as well as others which are available, should include their ability to unbundle value to consumers (especially at the low end of the market), and promote national development priorities while achieving AML/CFT objectives, among others.

There are KYC innovation opportunities that will significantly contribute to advancing financial inclusion and integrity. The role that FinTech innovators (including local start-ups) can play in this respect should be further explored and facilitated. Although most of the leanings should be local and country-led, the role of local, regional and global platforms (such as AFI) in expediting cross-country learning, policy and practice change, will be more significant going forward.

CHAPTER 7

RECOMMENDATIONS

The following recommendations draw from the experiences of what works in different cases (and across cases) and provides a framework for AFI members to enhance KYC innovations for the purposes of promoting financial inclusion and integrity. These recommendations should be appropriately sequenced and nuanced depending on AFI member states' stage of development as well as their level of engagement with KYC innovations.

Provide regulatory clarity, remove barriers and foster enabling regulatory environment for KYC innovations

To enable widespread use and adoption of FinTech solutions, regulators could consider providing regulatory clarity for FinTech innovators (including local start-ups) especially on how their innovations can be regulated and supervised. How these innovators are regulated greatly influences the extent to which they interact with conventional banks and other financial sector players within the ecosystem and therefore has implications with regard to the KYC-related data they can access, as well as the sustainability of their business models.

In addition, countries could consider strengthening and providing regulatory guidance and recommendations to industry players (including FinTech start-ups). Additional support to local FinTech innovators and start-ups could be provided via an incubation platform or forum (e.g. Jordan's National FinTech Hub-Jo-NAFTECH). This provides opportunity for innovators to become acquainted with regulatory developments. Where possible, they can also be linked to existing KYC information platforms (such as the ones in Bangladesh and Eswatini, among others) to avoid duplication and competing initiatives.

Facilitate elimination of proof of address as an absolute (rules-based) KYC requirement

Removing proof of address (especially where this does not have a bearing on a person's identity or is not useful in developing an understanding of ML/TF risk) will greatly enhance access to services for women and marginalized groups such as refugees. Regulators could consider "test and learn" and sandbox approaches for the gradual and phased elimination of proof of address based on customer segments, specific financial institutions and target sectors, among other considerations.

Integration and harmonization of KYC databases and legacy systems can reduce silos and system costs

This could be monitored, and financial inclusion and integrity implications documented. Existing AFI platforms such as the GPF and the AML/CFT training sessions that take place yearly, as well as any of the working group sessions, could be key in sharing progress and learnings regarding FinTech and regulatory coordination towards proof of address elimination.

Understand and establish KYC requirements from an outcome perspective

Client due diligence should be viewed as a process with input and output. Regulators should initiate and support changes in KYC requirements with financial integrity outcomes in mind. This will assist in promoting private sector compliance with AML/CFT obligations with the objective of understanding and reducing ML/TF risk rather than placing the focus on "mechanical compliance" or "ticking boxes". There is potential to reduce the due diligence burden (particularly in respect of the legacy reliance on documents) and enable financial inclusion opportunities for excluded

> "There is potential to reduce the due diligence burden and enable financial inclusion opportunities for excluded populations, including women and marginalized groups."

populations, including women and marginalized groups. Such groups often face disproportionate documentation barriers due to their circumstances, but do not necessarily represent high ML/TF risks that require such documentation from a risk mitigation perspective. This thinking should be developed in line with the FATF's risk-based approach and should specifically address the conflation of ML/TF risk and compliance risk that is common among AML/CFT stakeholders. Some AFI member countries such as South Africa have made significant progress in this regard.

Strengthen alignment of financial inclusion and integrity objectives (inclusive integrity)

Alignment allows countries to map clear paths towards and develop an understanding of what success looks like in respect of financial inclusion and financial integrity. There should be a clear view of what is measured in understanding the level of achievement of AML/CFT and financial inclusion objectives. It also helps countries understand where they want to go regarding inclusive integrity, where they currently are, and how to accelerate progress on this path. This could entail joint planning, monitoring and review of AML/CFT and financial inclusion objectives by relevant stakeholders to promote alignment. Scenario planning could also be a helpful tool for countries to navigate inclusive integrity paths. Possible scenarios and interventions that lift the line of sight of regulators and stakeholders should be considered and could be facilitated at country or international levels.

Furthermore, national risk assessments and scheduled periodic reviews of the financial inclusion and integrity strategies can provide additional key opportunities to align objectives. Training and technical assistance at country level may also help navigate the complexities. Given the pervasive lack of alignment in some case study countries, it is suggested that global training facilitated by AFI be conducted more than once a year initially. It should also be strongly linked and aligned to national and regional efforts and training.

Enhance local stakeholders understanding of risks, the risk-based approach and inclusive integrity

Better understanding and capacity of risks, the risk-based approach (RBA) and inclusive integrity among public and private sector AML/CFT stakeholders, including banks and non-bank financial institutions, would address some of the KYC barriers and help accelerate adoption of KYC solutions that advance inclusive integrity. Countries could tap into and work with local and regional experts that are supporting countries (including AFI members) to increase this understanding.

In addition to collaboration between regulators and country stakeholders on RBA and inclusive integrity, countries could also consider alternative approaches to regulation such as industry-led and regulator-approved guidance. This approach has been adopted in the United Kingdom with the establishment of the Joint Money Laundering Steering Group (JMLSG). However, trust and common understanding between the regulatory/supervisory authorities and the private sector is paramount for this approach to work. The key benefit of this is that it empowers the industry to own solutions in support of integrity outcomes while freeing significant regulatory capacity. It is, however, important to emphasize that under such arrangements, authorities will still have the final say on this guidance from industry, and can either approve or disapprove it.

Ensure complete, accurate and better integrated KYC databases that can be used for KYC purposes

Integration and harmonization of KYC databases and legacy systems is possible to reduce silos and system costs. Data relating to individuals exists in various databases for different use cases, such as mobile, banking, voting, etc. This can be considered nationally, cross-country and across regions (e.g. the BCEAO identity initiative). In addition, interoperable databases make it feasible and cheaper to use technologies that enable stakeholders to dynamically monitor AML/CFT risk and support measures that strengthen financial integrity.

However, mandate issues, source code access, intellectual rights and governance frameworks need to be fully developed to guide this. Key partnerships (such as between the private sector and public sector, inter-departmental collaboration, and government and international agencies) are crucial in realizing this. In addition, complete and accurate databases are key in supporting various use cases.

Prioritize data protection and integrity of databases

The usefulness of a database is dependent on the extent to which the data is protected and how it is used, that is, not in any way that abuses consumer rights. For example, breaches of data or careless use of data have a severe impact on the level of trust in the system and ability to use the data for KYC. It is therefore important to implement legislative frameworks that ensure that the consumer's data is protected and not abused both by state actors or market players. There should be clear regulations regarding the use of data, the security measures needed and how data should be stored and managed, among others.

Strengthen use cases and enable use of electronic signatures to facilitate KYC solutions

Country stakeholders could explore new use cases and strengthen existing use cases for KYC innovations across key sectors and functions such as health, education, employment, drivers' licenses, passports, voting, and refugee needs, among others. This also requires linking databases and facilitating interoperability. Use of electronic documents including

allowing individuals to electronically verify their identity as well as use electronic signatures in court processes should be encouraged. This will enable the digitization of KYC and the use of new technologies, like biometrics, for verification services.

In addition, there should be clear legal/legislative backing for digital identity systems to be used for payments and financial transactions beyond KYC. There should also be appropriate supervisory processes relating to the enabling digital identity framework. These will enhance usage of financial services and facilitate greater financial inclusion. This would need to be further backed by regulations/rules/directives by the regulators. Without legal backing, the identity systems will not withstand judicial scrutiny.

Develop political will and implement a multi-agency approach to facilitating KYC innovations and solution adoption

Multi-agency approaches, and inter-departmental coordination have shown some success in coordinating KYC innovations. Loose agreements, MOUs, as well as joint planning, have all been successfully employed in several case countries (e.g. Eswatini, Bangladesh, Egypt, Peru) with considerable success. This reduces bureaucracy, leverages limited capacity and promotes coherence with multiple national objectives, including national development plans.

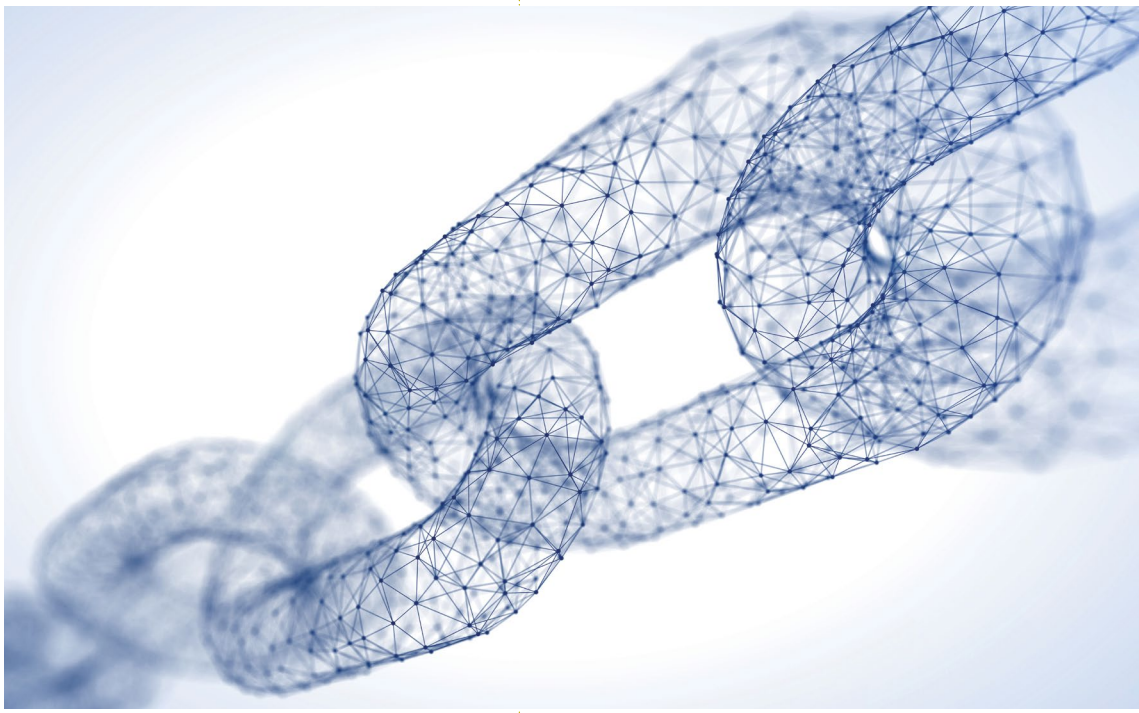
FinTech innovators have an opportunity to strengthen value propositions to align with national development priorities and customer focus

Understanding a country's inclusive integrity paths and priorities (among others) will influence FinTech innovators' operating models as well as pricing and impact on consumers of their products. This could also be a key criterion government can use when selecting various KYC solution providers. Given the pervasiveness of incomplete, and at times, inaccurate official databases, FinTech innovators could play a role in filling this gap as part of their value proposition. They should consider scalable approaches that can be implemented at regional levels. They should also ensure that their data protection and security protocols are impeccable before seeking to access official and sensitive government databases.

Develop an interactive KYC repository and facilitate information sharing

Development of an interactive KYC repository under AFI could be considered to facilitate easy access, experience sharing and cross-learning on KYC innovations, best practices and regulatory options, among members. In addition, at the country level, AFI members could create (where they do not exist) and strengthen (where they do exist) stakeholder platforms for KYC innovations.

Furthermore, local, regional and global think tanks could also work with countries or via AFI to strengthen research support for Financial Intelligence Units, central banks and other AML/CFT stakeholders of KYC innovations, and enhance opportunities for inclusive integrity.



Annexure 1: List of stakeholders

Country / Region	Organisation	Position
WAEMU	Giselle Ndoye	Director, BCEAO
Brazil	1. Adriano Sekita	Supervisor de Conduta DECON - Departamento de Supervisão de Conduta GESUP - Gerência de Execução de Inspeções da Supervisão de Conduta
	2. Moises A. F. B. Coelho	DEPEF - Departamento de Promoção da Cidadania Financeira DIMIF - Divisão de Avaliação de Impacto e Inclusão Financeira
Nigeria	Joe Obogo Acheme	Central Bank of Nigeria
Bangladesh	M.D Rashed	Joint Director Bangladesh Financial Intelligence Unit (BFIU)
Jordan	Mohammed AlDuwaik	Payment Systems and Domestic Banking Operations and Financial Inclusion Department, Central Bank of Jordan
Peru	1. Alejandro Medina Moreno 2. Fernando Javier Amorrortu Guerrero 3. Daniel Emilio Brusso Sanchez 4. Farida Saraid Paredes Falconi	Central Bank of Peru
Egypt	Mr. Mohamed Helmy	Senior Business Officer Payment Systems Department, Central Bank of Egypt (CBE)
Eswatini/Swaziland	1. Linda T. Khumalo 2. Kunene-Thobela Nomfanelo T. 3. Dlamini Phephile T. 4. Mamba Setsabile 5. Magagula Gcinile	NPSS Research and Analyst National Payments and Settlements System
South Africa	Peter Smit	Director Financial Intelligence Unit South Africa
Russia	Nadezhda Prasolova	Service for Consumers Protection and Financial Inclusion Promotion Bank of Russia
GSMA	Kennedy Kipkemboi Sawe	Regulatory Specialist, Mobile Money | M4D | GSMA
GetSlide	Alon Stern	Founder
DocFox	Josh Moritz	Founder
Trulioo	Jason Manoharan	Sales Development Representative, Trulioo
Transferto	Adrien Antoni	Head of Compliance
UID/BunkerID	JanDirk Engelbrecht	Founder, BunkerID
Inclusive Financial Technologies	Jonathan Dela Ayivor	Head, Inclusive Financial Technologies

Annexure 2:

Bangladesh options for identifying customers for mobile financial services

SL	Know Your Customer (KYC) Tools	Point 1 for yes, zero for no
A)*	Has the information stated in the account opening form been properly collected?	
B)*	Has a government-issued photo identity document been collected & verified?	
C)*	Has a recent photograph or real-time electronic photograph of the customer been collected and matched with the ID document photograph?	
D)	Has the relevant SIM registration information been verified?	
E)	Has the account been opened at the customer care point of the MFSP64 in the presence of the customer?	
F)	Has the mobile financial services MFS65 account been linked with a bank account of the customer?	
G)	Has the biometric information of the customer been collected and included in e-KYC?	
	Total Points	

Source: BFIU, 2018.

*Required

As shown in Table 1, the mobile financial services provider has various ways to identify the customer. However options A, B and C are required. One point is awarded per fulfilled criteria. If a customer earns three points, they will have a Level 1 account. Accounts with four to five points are Level 2 and accounts with six to seven points are Level 3. The respective transactions limits and account balances would then be applied per risk level. However, these have yet to implemented. According to stakeholder interviews, some issues with D) and G) are being resolved, after which the Central Bank will issue guidelines.

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Footnotes

[1] https://blogs.worldbank.org/voices/global-identification-challenge-who-are-1-billion-people-without-proof-identity

[2] Inclusive integrity therefore refers to AML/CFT implementation that advances financial inclusion.

[3] The terms "know your customer" (KYC), "customer due diligence" (CDD) and "due diligence" are used interchangeably in this document.

[4] Interview guides (attached in the Annexures) were developed to unpack the research questions. The interview guides were shared with each of the stakeholders beforehand to ensure their consultation with relevant departments and officials prior to telephone or video interviews. Follow-up interviews were organized to attain deeper perspectives and clarity on issues discussed in earlier interviews. The developed cases were sent to interviewees for fact-checking. Beyond case fact-checking, the researchers remain responsible for all the analysis done.

[5] SDG 16 concerns peace, justice and strong institutions. It forms part of the 17 SDGs, which targets universal sustainable living.

[6] http://documents.worldbank.org/curated/en/213581486378184357/pdf/112614-REVISED-English-ID4D-IdentificationPrinciples.pdf

[7] This graph reflects figures representing the percentage of 2017 Findex respondents without a financial institution account who report (as a reason for not having one) that they lack the documentation needed, such as an identity card, a wage slip, etc.

[8] An input, or rules-based, KYC/CDD regime refers to a regulatory framework that requires an extensive list of documents to validate the identity of individuals and manage AML/CFT risks. Submission of these documents further imply arduous processes of verification through several resources and knowledge. An output (or outcomes-based) KYC/CDD regime alternatively places importance on risks themselves and derives bespoke methods to mitigate identified risks. This regime therefore does not define stringent rules to specify exactly what constitutes CDD. Rather, principles are set relating to identity and what is required to verify identity.

[9] https://data.worldbank.org/

[10] "RG" stands for Registro Geral in Portuguese, or General Registry in English. This term is used interchangeably with identity card in certain parts of Brazil.

[11] According to stakeholder discussion, near universal coverage of ID cards in Brazil is due to the ability of maternity wards to immediately issue birth certificates to newly born infants (stakeholder interview, 2018).

[12] For more information about the BCB BC+ agenda please see https://www.bcb.gov.br/pt-br/#!/c/BCMAIS/

[13] According to the 2010 Mutual Evaluation report by the Financial Task Force on Money Laundering in South America (GAFISUD). For more information please see the full report at the following link: http://www.fatf-gafi.org/media/fatf/documents/reports/mer/MER%20Brazil%20full.pdf

[14] This portal can be accessed at https://opendata.bcb.gov.br/

[14] Resolution no. 4,480, issued in April 2016, allows customers to open and close deposit accounts using electronic channels, if financial institutions have in place sound controls and adequate safeguards

[15] This cost-saving is salient for non-face-to-face digital account holders given the rise in account membership from 10,000 to 80,000 between March and December of 2016 for *Intermedium* bank (Apolitical, 2017).

[16] These threshold-bound accounts are free of charge and allow onboarding using simplified and alternative forms of identity documentation. An example of alternative identification documentation is the national record on welfare recipients (BCB, 2004; GAP, 2010).

[17] Lift describes a virtual collaboration hub aimed at encouraging technological innovations and knowledge exchange between the regulator, academia, market providers, FinTech innovators and other interested stakeholders on the topic of financial inclusion. More information on Lift can be found here: https://www.liftlab.com.br/

[18] Details on proof of concept research can be found in the BCB position report entitled "Distributed ledger technical research in Central Bank of Brazil"

[19] Pier describes a centralized platform for regulators to share data and information among one another regarding authorization processes by financial institutions. More information on Pier can be found on the BCB website at: https://www.bcb.gov.br/en/#!/c/news/1853

[21] This potential is however conditioned on the application of robust verification techniques by institutions such as FinTech innovators offering digital banking.

[22] National Demand Survey of Financial Services and Financial Literacy in Peru (2016) http://sbs.gob.pe/inclusion-financiera/Cifras/Encuestas

[23] RENIEC is the National Registry of Identification and Civil Status. It is an autonomous constitutional body of the state of Peru.

[24] Alternative forms of identification include a passport or drivers' license.

[25] The latest version of the 2018 draft NFIS is a plan to refresh the 2012 NFIS. A final version of the 2018 NFIS is yet to be released with updated objectives and targets.

[26] The first principles-based approach referred to by the 2018 Draft NFIS defines an approach towards financial inclusion that is based on the achievement of several core overarching principles. Core principles are to be understood as an inseparable set, collectively important to drive financial inclusion in the Nigerian context. The first overarching principle of the NFIS is the achievement of an appropriately regulated level playing field that supports the building and growth of a services market. The second principle refers to the importance of ensuring that all financial actors focus on activities that best suit their individual capacities while maintaining an inclusive lens.

[27] This target is described by the 2018 NFIS as "dashboard indicators…to track progress towards the outcome indicator – but are not to be treated as objectives in and of themselves." This is in line with the first-principles based approach taken by the CBN towards financial inclusion.

[28] This benefit is however restricted to bank customers who are over the age of 14 with stabilized biometrics.

[29] Factors underpinning slow harmonization include protracted NIN generation using BVN data, inadequate internet bandwidth to deliver big data to NIMC, manual processes to review false positives, and the inability to update existing BVN with new KYC information (Fatokun, 2018).

[30] This has highlighted a need by the CBN for biometric information to be gathered via cheaper hand-held data capturing devices as opposed to brick-and-mortar structures (CBN, 2018).

[31] Wavering political support further stems from its potential to silo bank customers' identification from the wider national identity system. This, in effect, may reinforce Nigeria's existing lack of a centralized national identity system.

[32] Other non-bank institutions include deposit money banks, microfinance institutions, payment service providers, credit bureaus and other entities as applicable. For more information see the Regulatory framework for BVN operations and watch-list for the Nigerian Financial System.

[33] The BVN is specifically used by participant farmers of the state Anchor Borrower Program (Fatokun, 2018).

[34] A recently piloted Financial Services map by the CBN is, however, aiming to address this challenge by using its expansive network of rural agents to identify and capture the biometric and geographic locations of excluded populations for storage in the centralized BVN system (stakeholder interview, 2018). A provisional target of 40 million individuals is set for this program (stakeholder interview, 2018).

[35] http://www.itu.int/ITU-D/projects/ITU_EC_ACP/hipssa/Activities/SA/docs/SA-1_Legislations/Swaziland/ECA.PDF

[36] The countries in WAEMU are: Benin, Burkina Faso, Cote Di Voire, Guinea-Bissau, Mali, Niger, Senegal, Togo.

[37] Birth registration is used by the World Bank to estimate unregistered population below the national cut-off age.

[38] This relates to the inability of national authorities to monitor informal payments and the identities of respective senders.

[39] Alimony mobile payment services have been developed in collaboration with the Egyptian Ministry of Social Solidarity (stakeholder interviews, 2018). Over 20,000 women have benefited from the alimony initiative to date and over 18,000 women have benefited from the VSLA initiative (stakeholder Interviews, 2018; AFI, 2018).

[40] The WCI is a collaborative effort between the United Nations (UN) Women, the United Nation Development Program (UNDP), the Ministry of State for Administrative Development, the Ministry of Foreign Affairs, Civil Status Organisation and the Social Fund for Development.

[41] Egyptian pounds

[42] Simplified mobile accounts were formally introduced in 2016 with the CBE issuance of a new regulation, "Customer Due DiligenceProcedures for Mobile Payments". Simplified KYC requirements under this regulation include the provision of a scanned copy of one's identity card and a formal signature claiming ownership for a mobile money account. Full KYC requirements include name, address and date of birth, ideally from government-issued documents such as government identification, passports and weapon licenses that include the customer's full name and photograph, and either address or date of birth. Proof of address is notably only requested when it differs from the address specified on an individual's identity card (stakeholder interview, 2018).

[43] JoMoPay is a national centralized payment switch that connects users to a payment ecosystem consisting of telcos, banks, transfer companies and other financial payment intermediaries. (Hawkins and Wilson, 2017). As a result, the mobile application can facilitate P2P, P2B transfers, bill paymentsG2P, B2B, merchant payments, international remittances and cash-in and cash-out. JoMoPay is fully interoperable with other payment systems in Jordan, including: eFAWATEERcom, Jordan's bill presentment and payment switch solution; the RTGS (Real Time Gross Settlement System), and JoNet, the national ATM switch.

[44] Syrians are required to present their Syrian identity document, a UNHCR asylum seeker certificate, a health certificate and proof of a Jordanian address at a local police station (NRC and IHRC, 2016).

[45] Syrian refugees can provide proof of address in Jordan in 3 ways: 1) via a certified lease contract and a copy of the landlord's identity document, 2) a verbal contract or agreement that is validated by the landlord's physical presence at the police station, or a proof of address document issued by the UNHCR for the purposes of the Urban Verification Exercise in Jordan.

[46] Further information on this forum can be found on the Central Bank of Jordan website: http://www.cbj.gov.jo/DetailsPage/CBJEn/NewsDetails.aspx?ID=214

[47] Progress reports on the status of these projects are currently available publicly. For more information, please see the CBJ circular: http://www.cbj.gov.jo/EchoBusv3.0/SystemAssets/PDFs/2018/May/%D8%A5%D8%B7%D9%84%D8%A7%D9%82%20%D8%A7%D9%84%D9%85%D8%AE%D8%AA%D8%A8%D8%B1%20%D8%A7%D9%84%D8%AA%D9%86%D8%B8%D9%8A%D9%85%D9%8A.pdf

[48] These instructions pertain in particular to the collection, processing, maintenance, protection, risk management and sharing of personal data.

[49] See https://www.finextra.com/pressarticle/72675/russian-banks-demo-beta-version-of-unified-biometrics-system; https://www.biometricupdate.com/201809/all-russian-banks-to-connect-to-unified-biometric-system-by-end-of-2019; https://www.bloomberg.com/news/articles/2017-12-26/russia-plans-national-biometric-database-starting-next-year

[50] This included information such as name, national identity number, date of birth, residential address and contact details.

[51] In line with specific and detailed regulatory requirements, verification was achieved by comparing identity profiles to acceptable identity documents and to documents detailing the name, surname and the residential address of clients.

[52] The country could also specify standards that institutions should consider in their compliance responses to the principles level requirements that are imposed.

[53] Each member state would have the freedom to develop their own specific identification requirements and databases for KYC compliance, but would also have the opportunity to develop a regional understanding relating to identity standards and the importance of regional harmonization.

[54] FATF requires that customers be identified and verified. Recommendation 11 gives an idea of official documentation that can be used. However, in most of the developing world (most of Africa and Asia) proof of address is not part of official documentation. A passport, national ID or driver's licenses are the dominant official documents.

[56] Financial Intelligence Centre (FIC) Amendment Act, 2017.

[57] Particularly in Guideline Note 7.

[58] Examples of this Regtech include Veriff and Inclusive Financial Technologies

[59] See Inclusive Financial Technologies

[60] See TransferTo

[61] See BanQu

[62] See IrisGuard

[63] In this context, "provenance" refers to the detailed history of the data.

[64] Mobile financial services provider

[65] Mobile financial services

> Innovations in KYC processes and requirements entail advances that make it easier to identify and verify customers and citizens, thereby facilitating access to and use of financial services. These advances include regulatory adjustments such as exempting certain marginalized groups up to a certain transaction or value limit (tiered KYC), and other changes such as allowing the use of electronic documents and signatures to effect transactions (eKYC), using sophisticated technology such as data analytics to monitor customer behavior, place of residence etc.

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