Regulating Innovation for Financial Inclusion: Lessons from Nigeria

Nwanneka V. Ezechukwu*

Birmingham City University, England

nwanneka.ezechukwu@bcu.ac.uk

Abstract: *Innovative services like mobile payments are potentially transformative because they can increase access to financial services, especially in developing countries. However, such innovations can disrupt the financial services ecosystem which prompts regulators to respond in different ways. These regulatory responses often have a significant impact on the take-off of such innovative services. Using Nigeria's regulatory approach as a case study, this article highlights specific lessons which should inform future attempts at regulating mobile payments.*

Keywords
Mobile Payments, Financial inclusion, Central Bank of Nigeria, Regulation, Mobile Network Operators, M-pesa, Payment Service Banks

INTRODUCTION

Dormont-Naert identifies basic financial services to include access to a bank account, payment services, credit, insurance and protection against over-indebtedness.[1] Where persons cannot access these financial services, they are said to be financially excluded. In many developing countries, financial exclusion is a problem. Banks traditionally provide services through branch networks often situated in profitable urban areas.[2] However, a significant populace resides in rural areas where poverty rates are high. For economic reasons, establishing bank branches and Automated Teller Machines (ATMs) to cover rural areas is expensive.[3] Hence, many rural dwellers have either no access or limited access to bank services.

The implication is that financially excluded persons cannot save or access credit and, thus, cannot insure themselves against unexpected economic shocks like illness or unemployment.[4] Hence, such consumers remain vulnerable in circumstances that exacerbate poverty.[5] Consequently, financial inclusion, which denotes the provision of basic financial services to excluded and underserved persons at affordable costs, increasingly feature as a development priority.[6] Many financial services regimes now include matters about "financial inclusion, equity or accessibility of regimes" as core policy considerations[7] functioning alongside their core responsibilities

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* Lecturer, School of Law, Birmingham City University, UK.

[1] F Dormont-Naert "The right to basic financial services: opening the discussion" (2000) CLJ 63, 67-9 cited in P Cartwright "The vulnerable consumer of financial services: law, policy and regulation" https://www.nottingham.ac.uk/business/businesscentres/gcbfi/documents/researchreports/paper78.pdf at 39.

[2] E Gibson, F Lupo-Pasini, RP Buckley "Regulating digital financial services agents in developing countries to promoted financial inclusion" (2015) *Sing. J. Legal Stud*. 26 at 26

[3] C Alexandre, I Mas & D Radcliffe "Regulating new banking models to bring financial services to all" (2011) 54(3) Challenge, 116 at 117

[4] RP Buckley, J Greenacre, L Malady "The regulation of mobile money in Malawi' (2015) 4 *Wash. U. Global Stud. L. Rev*. 435 at 440.

[5] Cartwright above at note 1 at 37.

[6] E Lee "Financial inclusion: a challenge to the new paradigm of financial technology, regulatory technology and anti-money laundering law" (2017) 6 JBL 473 at 473; RP Buckley, DW Arner, M Panton "Financial innovation in east Asia" (2014) 37 *Seattle U. L. Rev*. 307 at 347. This policy focus is reflected in key documents emanating from international policy standard setting bodies. See, for instance, Global Partnership for Financial Inclusion (GPFI), "Global standard-setting bodies and financial inclusion for the poor" (2011) https://www.gpfi.org/sites/gpfi/files/documents/White-Paper-Global-Standard-Setting-Bodies-Oct-2011.pdf ; GPFI, "Global standard-setting bodies and financial inclusion: the evolving landscape" (2016) https://www.gpfi.org/publications/global-standard-setting-bodies-and-financial-inclusion-evolving-landscape; The G-20 Principles for Innovative Financial Inclusion https://www.gpfi.org/sites/gpfi/files/documents/G20%20Principles%20for%20Innovative%20Financial%20Inclusion%20-%20AFI%20brochure.pdf

[7] R Bollen "A Discussion of Best Practice in the Regulation of Payment Services: Part 2" (2010) 25/9 *JIBLR* 429 at 432.

of promoting financial stability, integrity and protecting consumers.[8] This is informed by the belief that in the absence of intervention, the financial services sector is unlikely to serve persons who are underprivileged due to disability, poverty and geographic disadvantage.[9]

Technological innovations that present opportunities for expanding access to financial services have boosted financial inclusion agendas. These innovations cover a range of activities like offering credit, processing payments, issuing currencies and managing assets, to name a few.[10] One such innovation is mobile payments (m-payments).[11] Belonging to a bouquet of mobile-based financial services, m-payments cover payment transactions in which a mobile device is used to initiate, authorize and confirm an exchange of financial value.[12]

M-payments have generated attention in the financial inclusion discourse for several reasons. First, statistics show that the number of mobile phones in circulation exceeds any other technical device that could be used to market, sell, or deliver products and services to consumers.[13] In many developing countries, there has been a direct implementation of mobile infrastructures rather than a progression from landline to mobile technology which has facilitated the growth in mobile phone ownership.[14] Being ubiquitous, mobile phones present a practical and cost-effective channel for extending financial services to unbanked persons.[15] Moreover, in these countries, the adoption of mobile-based financial services has been accelerated by the need to address infrastructure gaps which arise when mobile penetration is high, but physical banking infrastructure is deficient.[16]

Second, certain success stories lend credence to m-payments' potential in driving financial inclusion. Particularly, Kenya's success with its m-payment product 'm-pesa' remains a reference point in this regard. Introduced in 2007, m-pesa is a low-cost SMS-based person-to-person money transfer platform which supports the deposit, transfer and withdrawal of funds using mobile phones.[17] Since its introduction, m-pesa has assisted in improving access to payment services in Kenya. Total account ownership[18] in Kenya grew from 42 per cent in 2011 to 81 per cent in 2018.[19] More adults have mobile money accounts (72.9 per cent) in comparison to accounts with traditional institutions (55.7 per cent).[20]

[8] These are collectively described as I-SIP objectives: O Tomilova & M Valenzuela "Financial inclusion + stability, integrity, and protection (I-SIP): Policy making for an inclusive financial system" (2018) https://www.cgap.org/sites/default/files/publications/Toolkit-ISIP-Nov-2018_1.pdf at 1-2

[9] Bollen n 7 at 432; Other considerations drive financial inclusion policies. E.g., regulatory interest in financial inclusion may be fuelled by the concern that a country's financial integrity objectives will be undermined if a large percentage of transactions occur outside the scope of the regulated formal financial sector. L De Koker "Aligning Anti-Money Laundering, Combatting of Financing of Terror and Financial Inclusion" (2011) 18/4 *JFC* 361 at 363.

[10] R Van Loo "Making innovation more competitive: the case of fintech" (2018) 65 *UCLA L. Rev.* 232 at 238.

[11] In some literature, broader terms like "branchless banking" are used to describe m-payments. see G Ivatury & I Mas "The early experience with branchless banking" (2008) https://www.cgap.org/sites/default/files/researches/documents/CGAP-Focus-Note-The-Early-Experience-with-Branchless-Banking-Apr-2008.pdf

[12] YA. Au, RJ Kauffman 'The economics of mobile payments: understanding stakeholder issues for an emerging financial technology application" (2007) 7 *Electronic Commerce Research and Applications* 141 at141.

[13] T Dahlberg, N Mallat, J Ondrus, A Zmijewska "Past, present and future of mobile payments research: a literature review" (2008) 7 *ECRA* 165 at 165.

[14] S Rosenberg "Better than cash? global proliferation of payment cards and consumer protection policy" (2006) 60 *Consumer FinLQ Rep*, 426 at 437 cited in A Angelovska-Wilson, J Fetault "M-payments: the next payments frontier - current developments and challenges in the international implementation of m-payments" (2007) *JIBLR* 575 at 585.

[15] JK Winn, L De Koker "Introduction to mobile money in developing countries: Financial inclusion and financial integrity" (2013) 8/3 *Wash.JLT & A* 155 at 162.

[16] F Arner, W Douglas, J Barberis, RP Buckey "FinTech, regtech, and the reconceptualization of financial regulation" (2017) 37 *Nw. J. Int'l L. & Bus*. 371 at 380.

[17] MW Buku, MW Meredith, "Safaricom and m-pesa in Kenya: financial inclusion and financial integrity" (2013) 8 *Wash. J. L. Tech. & Arts* 375 at 378;

[18] The World Bank defines account ownership to include accounts held at a financial institution and those held with a mobile money provider. Available at: < https://globalfindex.worldbank.org/sites/globalfindex/files/chapters/2017%20Findex%20full%20report_chapter1.pdf> (last accessed 14 March 2020)

[19] The World Bank "The little data book on financial inclusion" available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/29654/LDB-FinInclusion2018.pdf?sequence=1&isAllowed=y> (last accessed 14 March 2020) at 84.

[20] Ibid.

M-pesa's success has inspired regulators prioritising financial inclusion. In 2009, two years after m-pesa's launch, the Central Bank of Nigeria (CBN) designed a regulatory framework for m-payment services in Nigeria.[21] Despite this effort, Nigeria has failed to replicate m-pesa's success. Reflecting on Nigeria's approach to regulating m-payments, this article aims to highlight specific regulatory lessons which can inform future attempts at regulating m-payments. To this end, this article is structured as follows: Following this introduction, the next part of the article will review key aspects of the regulatory framework for m-payments in Nigeria. Building on this, the article then highlights specific lessons that can be extracted from Nigeria's regulatory experience. The next section puts forward alternative considerations that should inform the regulation of m-payments before concluding the discussion.

THE REGULATORY FRAMEWORK FOR MOBILE PAYMENTS IN NIGERIA

In 2010, 46.3 per cent of Nigerian adults were financially excluded.[22] With such numbers, it was unsurprising that in 2011, CBN committed to reducing exclusion under the "Maya Declaration" spearheaded by the Alliance for Financial Inclusion at its Global Policy Forum in Mexico.[23] The Maya Declaration represents "the first global commitment by policymakers from developing and emerging countries to unlock the economic and social potential of the poor through greater financial inclusion".[24] In line with its commitments under the declaration, CBN launched a National Financial Inclusion Strategy (NFIS) in 2012.[25] A principal goal identified in the NFIS was to increase access to payment services from 21.6 per cent in 2010 to 70 per cent in 2020.[26] To achieve this, CBN identified m-payments as one of the key drivers in meeting its target.[27] M-payments were singled out because of the high mobile penetration rates at the time.[28] The article divides the key aspects of CBN's regulatory response into two phases discussed below.

Phase I: 2009 – 2014

This phase reflects initial attempts at regulating m-payments primarily through the introduction of a licensing regime. Before releasing the NFIS, CBN issued key regulatory documents applying to m-payments. First, in 2009, it released a document entitled "The Regulatory Framework for Mobile Payments in Nigeria" ('the Framework').[29] In 2014, it released a second document entitled "Guidelines on Mobile Payment Services in Nigeria" ('the Guidelines') which updated the Framework.[30]

The Guidelines outline the three objectives informing CBN's intervention. First, the intervention aimed to 'ensure a structured and orderly development of mobile payment services in Nigeria, with clear definition of various participants and their expected roles and responsibilities.'[31] Second, it aimed to specify the minimum

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[21] CBN "Regulatory framework for mobile payment services" (2009) available at: <https://www.cbn.gov.ng/OUT/CIRCULARS/BOD/2009/REGULATORY%20FRAMEWORK%20%20FOR%20MOBILE%20PAYMENTS%20SERVICES%20IN%20NIGERIA.PDF (last accessed 14 March 2020).

[22] CBN "National financial inclusion strategy" (2012) available at: <https://www.cbn.gov.ng/Out/2013/CCD/NFIS.pdf> (last accessed 14 March 2020).

[23] Available at: <https://www.afi-global.org/maya-declaration> (last accessed 14 March 2020).

[24] CBN *National Financial Inclusion Strategy,* above at note 22 at 23.

[25] Ibid.

[26] Id at vi, 1, 29.

[27] CBN *National financial inclusion strategy,* above at note 22 at ix, 24, 34, 45.

[28] Id at 12.

[29] Ibid.

[30] CBN "Guidelines on mobile money services in Nigeria" available at <https://www.cbn.gov.ng/out/2015/bpsd/guidelines%20on%20mobile%20money%20services%20in%20nigeria.pdf> (last accessed 14 March 2020).

[31] CBN *Guidelines on mobile money services,* above at note 30 at paragraph 3.0(a).

technical and business requirements for the various participants in the recognized m-payments industry. Third, it sought to promote the safety and effectiveness of m-payments services to enhance user confidence.[32]

Under the Guidelines, only licensed entities designated as 'mobile money operators' (MMOs) may provide m-payment services.[33] The Guidelines permit two business models which MMOs can adopt in providing the service. These models are described as the bank-led model and the non-bank led model.[34] The Bank-led model represents one in which the service provider is a bank either alone or in a consortium with other banks. In this model, banks may choose to partner with other approved organizations but remain principally responsible for delivering the service.[35] In the non-bank model, a corporate organization, other than a bank, may be licensed to deliver m-payments. While not defining which organisations qualify to lead a non-bank model, the Guidelines expressly exclude mobile network operators (MNOs) from the model's scope.[36] CBN justified this exclusion on the basis that MNOs would pose a threat to the stability of the financial system. This is because MNOs lack the experience of implementing financial regulations and would expose the financial system to systemic risks.[37]

The Guidelines limited the role of MNOs to providing the telecommunication network infrastructure for the use of MMOs.[38] To this end, MNOs are required to implement a secure communication channel which is compliant with the technology standard stipulated in the Guideline.[39] To encourage competition, MNOs are precluded from giving preferential treatments to any specific MMO in terms of price and traffic.[40] Furthermore, MNOs must ensure that their subscribers can freely use any m-payment service of their choice.[41] Reiterating their exclusion from providing payment services, the Guideline enjoins MNOs not to receive deposits from the public except for their subscribers' airtime billing.[42] They are also precluded from allowing the use of prepaid airtime value loaded by their subscribers to transfer monetary value or for payment purposes.[43]

Although CBN released the Framework in 2009, it only began to receive applications for licenses in 2010. By 2014, CBN had issued licenses to 21 MMOs.[44] In this period, some banks began to include m-payment services as part of the suite of services available on their mobile banking platforms. Many non-banks that received a license were unable to commence operations due to limited funds to build the required infrastructure and agent networks.[45] The few non-bank platforms that were operational[46] did not gain the traction comparable to counterparts like m-pesa. This was likely because they were not recognisable brands that could inspire consumer trust, and they did not have extensive agent networks.

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[32] CBN *Guidelines on mobile money services,* above at note 30 at paragraph 3.0.
[33] Id at paragraph 7.1.
[34] Id at paragraph 5.0
[35] Id at paragraph 5.0(a).
[36] Id at paragraph 5.0(b).
[37] GSMA "What could we learn from Nigeria barring MNOs from participating in the mobile money market?" available at: <https://www.gsma.com/mobilefordevelopment/region/sub-saharan-africa-region/what-could-we-learn-from-nigeria-barring-mnos-from-participating-in-the-mobile-money-market/> (last accessed 20 March 2020)
[38] CBN *Guidelines on mobile money services in Nigeria,* above at note 30 at at paragraph 8.4. See also CBN *Regulatory framework for mobile payments* above at note 20 at paragraph 2.1.
[39] CBN *Guidelines on mobile money services,* above at note 30 at paragraph 8.4(b).
[40] Id at para 8.4 (c) & (h).
[41] Id at paragraph 8.4 (d).
[42] Id at paragraph 8.4(e).
[43] Id at paragraph 8.4.
[44] Available at: <https://www.cbn.gov.ng/FinInc/finservproviders.asp> (last accessed 14 March 2020).
[45] J Agumagu "Mobile money: boosting financial inclusion via recapitalization" (8 February 2018) *New Telegraph*, available at: <https://www.newtelegraphng.com/mobile-money-boosting-financial-inclusion-via-recapitalisation/> (last accessed 20 April 2020).
[46] E.g. Pagatech and Etranzact.

Phase II: 2015 – date

Despite the number of licenses issued in the first phase, the m-payments market failed to record significant success in Nigeria. A 2016 survey revealed that 76 per cent of Nigerians were unfamiliar with mobile money and 98.7 per cent had never registered for or used a mobile money service.[47] Owing to this failure, CBN began to embrace regulatory shifts most of which focused on ensuring that MMOs could access agent networks of other stakeholders like MNOs. The CBN's focus is explained by its admission that:

> "agent networks present an opportunity to service people in areas that lack bank branches or other physical financial access points like ATMs. Consequently, a functional agent network is imperative for extending financial services to the unbanked. However, deficit of fixed location agents has been a challenge".[48]

In comparison to banks and other firms permitted to provide m-payments, MNOs have a well-dispersed network of existing outlets across Nigeria. In 2015, a Geospatial Mapping Survey of MNO access points captured about 8,533 operational outlets in Nigeria's 36 states and Federal Capital Territory.[49] CBN, thus, recognized that the networks and recognisable brands of MNOs could be leveraged in driving the market.

Accordingly, in 2015, CBN released the Regulatory Framework for Licensing Super Agents in Nigeria.[50] Super-agents are parties contracted to act on behalf of financial institutions. The framework aims to encourage stakeholders like MNOs to share their agent networks with financial services providers like MMOs.[51] MNOs licensed under this framework are granted 'Super-Agent' status and are permitted to sub-contract other agents who they will be responsible for.[52] The scope of banking-related activities that super-agents or agents can undertake is defined under CBN's Guidelines for the Regulation of Agent Banking and Agent Banking Relationships in Nigeria.[53] Agents can assist with functions like accepting cash deposits and withdrawals, bills and salaries, local funds transfer, etc.[54] Super-agents can only use their platform to manage their agents' activities and are precluded from holding electronic money value.[55] Only licensed financial institutions remain permitted to provide and operate mobile money platforms and to hold electronic money value.[56]

CBN, in collaboration with relevant stakeholders also launched the Shared Agent Network Expansion Facility (SANEF) programme to encourage the development and sharing of agent networks.[57] Under this programme, participating institutions can share agents in rolling out financial services. Under the Super Agents licensing regime and the SANEF initiative, MNOs were viewed as "distribution actors"[58] whose agent networks could be exploited. They remained excluded from taking the lead in providing services like m-payments.

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[47] Enhancing Financial Innovation and Access "EFInA access to financial services in Nigeria 2016 survey" <https://www.efina.org.ng/wp-content/uploads/2019/03/Key-Findings-A2F-2016.pdf> (last accessed 14 March 2020) at 32 & 35.

[48] CBN "Exposure draft of the national financial inclusion strategy refresh" available at: <https://www.cbn.gov.ng/Out/2018/CCD/Exposure%20Draft%20of%20the%20National%20Financial%20Inclusion%20Strategy%20Refresh_July%206%202018.pdf> (last accessed 14 March 2020) at 27.

[49] CBN "2016 annual report: national financial inclusion strategy implementation" available at: https://www.cbn.gov.ng/Out/2018/CCD/Exposure%20Draft%20of%20the%20National%20Financial%20Inclusion%20Strategy%20Refresh_July%206%202018.pdf> (last accessed 14 March 2020) at 64.

[50] Available at: <https://www.cbn.gov.ng/out/2015/bpsd/regulatory%20framework%20for%20licensing%20super-agents%20in%20nigeria.pdf> (last accessed 14 March 2020).

[51] Alliance for Financial Inclusion "Central bank of Nigeria approves first licenses for super-agent banking" available at: <https://www.afi-global.org/news/2016/08/central-bank-nigeria-approves-first-licenses-super-agent-banking> (last accessed 14 March 2020).

[52] CBN *Super Agents Licensing Framework,* above at note 50 at paragraph 4.0.

[53] CBN "Guidelines for the regulation of agent banking and agent relationships in Nigeria" available at: <https://www.cbn.gov.ng/out/2013/ccd/guidelines%20for%20the%20regulation%20of%20agent%20banking%20and%20agent%20banking%20relationships%20in%20nigeria.pdf> (last accessed 14 March 2020).

[54] Id at paragraph 6.2.

[55] CBN *Super Agents Licensing Framework,* above at note 50 at paragraph 6(a)(ii).

[56] Ibid.

[57] Available at: <https://www.sanefng.com/about-sanef> (last accessed 14 March 2020).

[58] CBN *NFIS refresh,* above at note 48 at 5.

In 2018, CBN revised the NFIS.[59] A key issue recognized in the implementation of the 2012 NFIS was that mobile money had failed to take off owing to restrictive policies.[60] The revised NFIS highlighted overarching policy principles which would inform its implementation. The first principle hinges on the adoption of an appropriate risk-based regulatory level playing field which ensures that the same set of regulatory requirements and conditions apply to all potential providers of a particular service regardless of their background or type of operation.[61] The second principle focuses on encouraging relevant actors to play to their areas of core strength to achieve high impact.

These principles appear to have set the tone for the policy change heralded by the introduction of Guidelines for the Licensing and Regulation of Payment Service Banks (PSB guidelines).[62] The PSB guidelines provide the framework for licensing niche banking institutions called payment service banks (PSBs). The main objective for setting up PSBs is to "enhance financial inclusion in rural areas by increasing access to deposit products and payment/remittance services…through high-volume low value transactions in a secured technology-driven environment".[63] PSBs are permitted to maintain savings accounts and to accept deposits. They can also provide payments and remittance services and may operate an electronic purse.[64] They cannot, however, grant any loans, advances or guarantees.[65]

In what appears to be a significant departure from its previous policy stance, the PSB guidelines permit MNOs, through subsidiaries, to register as PSBs. Under this framework, MNOs may provide payment services if they meet the licensing requirements and are granted Approvals-In -Principle.[66] In September 2019, CBN issued approvals in-principle to three entities, two of which are controlled by MNOs.[67] While it is still early to assess whether the inclusion of MNOs as eligible promoters of PSBs will drive the m-payment market, Nigeria's experience so far and this policy u-turn provides some lessons which can inform future attempts at regulating m-payments.

MATTERS ARISING – WHAT LESSONS CAN WE LEARN?

The participation of mobile network operators may be decisive in the successful roll-out of mobile payments

CBN's evolving position on MNOs directly providing m-payments raises questions about their (MNOs) role in driving the market. This article takes the position that CBN's initial exclusion of MNOSs from direct participation was detrimental to the growth of the m-payments market. This view is held for several reasons. First, it is

[59]CBN "National Financial Inclusion Strategy (Revised)" available at: <https://www.cbn.gov.ng/out/2019/ccd/national%20financial%20inclusion%20strategy.pdf> (last accessed 14 March 2020)
[60] Id at vi.
[61] Id at vii.
[62]CBN "Guidelines for licensing and regulation of payment service banks in Nigeria" available at: <https://www.cbn.gov.ng/Out/2018/FPRD/OCTOBER%202018%20EXPOSURE%20PAYMENT%20BANK.pdf> (last accessed 15 March 2020) This was further revised in August 2020 https://www.cbn.gov.ng/Out/2020/CCD/APPROVED%20REVIEWED%20GUIDELINES%20FOR%20LICENSING%20AND%20REGULATION%20OF%20PAYMENT%20SERVICE%20BANKS%20IN%20NIGERIA-27AUG2020.pdf
[63] Id at paragraph 2.
[64] Id at paragraph 4.1.
[65] Id at paragraph 4.2.
[66] Id at paragraph 6.1.
[67] F Eleanya "CBN issues 'approval-in-principle' to glo, 9mobile, up subsidiaries for psb services" (19 September 2019) *Business Day*, available at: <https://businessday.ng/technology/article/cbn-issues-approval-in-principle-to-glo-9mobile-up-subsidiaries-for-psb-services/> (last accessed 15 March 2020).

supported by inferences that can be made from empirical research carried out by Evans and Pircho.[68] Their study focused on discovering why m-payments succeeded in some countries and failed in others. The study identified eight countries in which m-payments recorded explosive growth.[69] One common characteristic in these countries, save for one,[70] was that there was no regulatory restriction on the parties that could provide m-payments. In identifying the factors that could stimulate success, the study asserts that "the regulatory framework adopted by the government, in particular, the extent to which regulations restrict potential players, in particular mobile network operators (MNOs), from operating mobile money schemes … could facilitate or restrain success".[71]

Amongst 22 countries investigated by Evans and Pircho, there was only one success story that was not driven by an MNO-led scheme. The service, 'bKash', is sponsored by the BRAC bank in Bangladesh. The service is reportedly successful because it is supported by the MNOs that account for most subscribers in the country.[72] However, the service has been mostly useful in providing a platform that allows people to pay bills. Unlike with services that are MNO-led, it has not been successful as a platform for person-to-person transfers.[73] Pakistan also has a successful bank-led platform, but their experience has been unique. In Pakistan, MNOs are not allowed to directly provide m-payments. To circumvent this, Telenor Pakistan, Pakistan's largest telecom operator acquired a 51 per cent stake in Tameer Bank to launch its m-payment service Easypaisa,[74] Easypaisa enjoys an extensive agent network backed by Telenor Pakistan's distribution networks.[75]

Evans and Pircho's study appears to confirm that the key to unlocking m-payments rests with flexible regulations that permit direct participation by stakeholders like MNOs. Their conclusions are supported by a 2017 study carried out by Riley and Kulathunga investigating four jurisdictions that successfully leveraged electronic money and digital financial services in driving financial inclusion.[76] They found that the involvement of the private sector and non-bank entities, who were supported by flexibly designed policies, positively impacted financial inclusion statistics.[77] MNOs are singled out as important stakeholders for several reasons. First, they have the communications network that allows for transactions to be performed in real-time.[78] Second, they operate the subscriber identity module (SIM) cards which provide the technology to support SMS-based payment services like m-pesa. Third, they have easily recognisable brands and a vast retail distribution network of airtime sellers even in rural areas.[79] They are also well-experienced in running high-volume, real-time prepaid platforms to a high standard of availability and reliability.[80]

Regulatory shifts occurring in several countries, including Nigeria, is the second factor supporting the conclusion that the participation of MNOs is critical in driving the m-payments market. Evans and Pircho's study

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[68] DS Evans and A Pircho "An empirical examination of why mobile money schemes ignite in some developing countries but flounder in most" (2015) available at: <https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=2413&context=law_and_economics> (last accessed 15 March 2020).
[69] Bangladesh, Cote d'Ivoire, Kenya, Rwanda, Somaliland, Tanzania, Uganda, Zimbabwe: Id at 6.
[70] Bangladesh's case is considered later in this section.
[71] Evans & Pircho *An empirical examination,* above at note 68 at 10.
[72] Id at 17.
[73] Ibid.
[74] SE Senthe "Transformative technology in microfinance: delivering hope electronically" (2012) 13 *Pitt. J. Tech. L. & Pol'y*, I at 19.
[75] Evans & Pircho *An empirical examination,* above at note 68 at 19.
[76] TA Riley and A Kulathunga "Bringing e-money to the poor: successes and failures" <http://documents.worldbank.org/curated/en/340701503568346911/pdf/119070-PUB-PUBLIC-PUB-DATE-8-22-17.pdf> (last accessed 15 March 2020)
[77] Ibid.
[78] C Alexandre, I Mas and D Radcliffe "Regulating new banking models to bring financial services to all" (2011) 54/3 *Challenge* 116 at 119–120.
[79] Ibid.
[80] Ibid.

identified eight countries in which m-payments have failed to ignite.[81] The study found that all eight (including Nigeria) adopted a heavy-handed approach to regulating m-payments. Of the eight, seven required that banks take the lead or significantly participate in providing the service.[82] Since the study was published, regulatory shifts have occurred in at least three countries: Ghana, India and Nigeria.[83] In Nigeria and India, as we shall see subsequently, central bank authorities have moved from policies prohibiting the direct involvement of MNOs, to policies allowing MNOs to participate in the provision of m-payments through niche financial institutions (payment banks).

In Ghana, the 2008 Guidelines for Branchless Banking favoured a bank-led business model for the provision of m-payments and required that at least three banks be involved in any service.[84] This approach was described as 'many to many' and aimed to encourage interoperability which would allow the m-payments market to take off swiftly.[85] MNOs were excluded from independently applying for licenses and were required to partner with banks. The m-payments market did not take off as expected. The Consultative Group to Assist the Poor (CGAP)'s research found that banks had little incentives to make significant investments under these arrangements.[86] MNOs made most of the investments and felt disadvantaged because the regulations did not permit them to independently lead in providing the service.[87] The failure to record success prompted regulatory reform which saw the passing of new guidelines for e-money issuers in 2015. The 2015 guidelines permit MNOs to apply to Ghana's Central Bank for licenses.[88] These regulatory shifts lend credence to the proposition that MNOs are critical in driving the m-payments market.

Clues from Kenya: Flexible regulatory approaches may be more appropriate for innovative financial services like mobile payments

Nigeria's experience also raises questions about the impact of a chosen regulatory approach in the growth of innovative financial services like m-payments. This issue is significant because a regulator's approach may provide either the right conditions that encourage innovation or may hinder its growth by compounding the risk already inherent in the acceptance of a novel product.[89] Further light can be shed on this issue by juxtaposing CBN's and CBK's approach in Nigeria and Kenya, respectively. Safaricom, an MNO, provides Kenya's leading m-payment product, m-pesa. When m-pesa was launched in 2007, there were no regulations dedicated to m-payments. As financial inclusion was a policy priority for CBK, it was interested in the success of m-pesa.[90] The regulatory approach involved continuous dialogue between CBK and Safaricom before the product's launch.

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[81] Burkina Faso, Haiti, India, Indonesia, Madagascar, Mexico, Nigeria and South Africa: Evans & Pircho *An empirical examination,* above at note 68 at 6.

[82] Ibid.

[83] Sri Lanka also moved from a bank-centric model, permitting non-banks to provide m-payments subject to capital requirements. Evans & Pircho *An empirical examination,* above at note 68 at 28.

[84] Bank of Ghana "Guidelines for Branchless Banking" (2008) available at: <https://dfsobservatory.com/sites/default/files/Bank%20of%20Ghana%20-%20Notice%20No.%20BG-GOV-SEC-2008-21%20-%20Regulatory%20Framework%20for%20Branchless%20Banking.pdf> (last accessed 14 March 2020).

[85] C Mckay, P Zetterli "Unintentional consequences: branchless banking in Ghana" (2013) available at: <http://www.cgap.org/blog/unintentional-consequences-branchless-banking-ghana> (last accessed 14 March 2020).

[86] Ibid.

[87] Ibid.

[88] Bank of Ghana "Guidelines for e-money issuers" <https://dfsobservatory.com/sites/default/files/Bank%20of%20Ghana%20-%20Guidelines%20for%20E-Money%20Issuers%20in%20Ghana.pdf> (last accessed 6 March 2020) at paragraph 7.

[89] E Gutierrez, S Singh "What regulatory frameworks are more conducive to mobile banking? empirical evidence from findex data" (2013) Policy Research working paper; no.WPS 6652. (World Bank), available at: <http://documents.worldbank.org/curated/en/208411468151504563/pdf/WPS6652.pdf> (last accessed 14 April 2020) at 3.

[90] AA Lashitew, R Van Tulder, Y Liasse "Mobile Phones for financial inclusion: what explains the diffusion of mobile money innovations?" (2019) 48/5 *Research Policy* 1201 at 1210.

When Safaricom submitted its proposal, CBK conducted an internal review which focused on clarifying specific areas of concern.[91] First, CBK was concerned about the legal status of m-pesa: it needed to decide whether to classify it as a banking business. Second, it was concerned about the money laundering risks introduced by the product. Third, CBK sought to understand the operational risks associated with the service.

Following legal advice, CBK reached several conclusions that informed its regulatory stance.[92] First, it decided that m-pesa was not a banking service as defined under Kenya's Banking Act.[93] This was because the cash exchanged for electronic value was not repaid on demand and remained in the customer's control.[94] Second, it concluded that there was no credit risk for customers or Safaricom because m-pesa agents were required to make upfront deposits of cash in m-pesa accounts held by local banks.[95] Third, CBK established that there was no intermediation.[96] Customer funds were not lent in the pursuit of other business, interest or income, and all funds were held in a trust account and could not be accessed by Safaricom to fund other parts of its business.[97] Fourth, CBK found that m-pesa was developed with anti-money laundering (AML) measures in mind. There were functions supporting the generation of electronic trails and suspicious transaction monitoring. Transaction caps were also set on individual and aggregate daily transactions and international remittances.[98] Finally, CBK concluded that m-pesa's operational risk was minimized as there was end-to-end encryption of the SIM card to ensure security and live back-up. CBK requested that Safaricom undertake comprehensive technical assessments carried out by Consult Hyperion[99] to evaluate the operational risks of the m-pesa platform.[100] The service passed Consult Hyperion's tests for operational capacity.[101] It was found that there were reporting and monitoring mechanisms that ensured that CBK could request information concerning the firm's audit trail, AML procedures, liquidity management and clearing/settlement.[102]

CBK also held consultations with the Communications Authority of Kenya (CAK), Safaricom's primary regulator.[103] These consultations revealed that CAK considered m-pesa to be a value-added service that Safaricom was licensed to offer.[104] Based on these findings, m-pesa was not regulated as a financial service. CBK concluded that m-pesa had adequate controls in areas that could affect financial stability and issued it a Letter of No Objection.[105]

M-pesa's success has partly been attributed to CBK 's liberal regulatory approach[106] which has been described as a 'test and learn' method that is implemented on a case-by-case basis.[107] In this approach, non-bank

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[91] Alliance for Financial Inclusion "Enabling mobile money transfer: the central bank of Kenya's treatment of m-pesa" (2010) available at: <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/09/enablingmobilemoneytransfer92.pdf> (last accessed 15 March 2020) at 4.
[92] Ibid.
[93] 1999 (as amended).
[94] AFI *Enabling mobile money transfer* above at note 91 at 4.
[95] Ibid.
[96] This is the process where banks take in funds from a depositor at low-interest rates and lend them out at higher interest rates to make some profit. Available at <http://www.businessdictionary.com/definition/financial-intermediation.html> (last accessed 10 March 2020).
[97] AFI *Enabling mobile money transfer* above at note 91 at 4.
[98] Ibid.
[99] This is a specialized consultancy specialising in secure electronic transactions. <http://www.chyp.com/> (last accessed 10 March 2020).
[100] Riley & Kalathunga *Bringing e-money to the poor,* above at note 76 at 66.
[101] Ibid.
[102] Ibid.
[103] At Safaricom's launch the regulator was known as the Communications Commission of Kenya.
[104] AFI *Enabling mobile money transfer,* above at note 91 at 6.
[105] CBK released a public statement in 2009 outlining their position on m-pesa. Ibid at 7.
[106] DER Goncalves "Financial inclusion in Peru: lessons from Kenya's regulatory approach on e-money" (2013) 21 *U.Miami Int'l & Comp. L. Rev.* 31 at 33.
[107] DA Zetzsche, RP Buckley, JN Barberis and DW Arner "Regulating a revolution: from regulatory sandboxes to smart regulation" (2018) 23 *Fordham J.Corp. & Fin. L.* 31 at 58.

providers can benefit from regulatory forbearance like the Letter of No Objection granted by CBK or restricted licenses or special charters.[108] In such circumstances:

> 'In return for the regulator's "clarification" that the FinTech firm's activity is outside the scope of certain rules which are viewed as unnecessary or inappropriate under the circumstances or in the specific context, the no-action letter or restricted license may be supplemented with conditions seeking to ensure that even if certain rules do not apply, the principles underlying the regulation are still upheld. The practical effect of forbearance through no-action letters, restricted licensing, or special charters is that of partial exemptions or dispensation within a broader regulatory framework'.[109]

This approach's advantage is that it encourages communication between regulators and innovators. Regulators can study business models and risk assessments and request clarifications where needed.[110] This allows regulators to obtain sufficient data and experience that informs their regulatory response.[111] However, the main drawback with this approach is that it is more suitable where the number of firms requesting exemptions is small. Where more firms request bespoke exemptions, this will increase costs and put a strain on regulatory capacity.[112] It may also be challenging to ensure that equal treatment is extended to each participant.[113] This can lead to unintended consequences. For instance, from a competition perspective, Kenya's approach provided Safaricom with a dominant market position. Safaricom's dominance attracted criticism which forced regulators to call for the implementation of interoperability between m-pesa and other mobile money services.[114] Such dominance can negatively impact competition, leaving consumers with limited choices since providers have little incentives to improve the quality of their services or to preserve their reputation.[115] It can also lead to the creation of "too big to fail" providers which invites serious consequences. The failure of a large provider like Safaricom can lead to a system-wide disruption in the economy and can have serious reputational consequences for regulators.[116] Such disruptions can also discourage potential users of similar services which can jeopardize financial inclusion gains.

Zetzsche et al also point out that this approach may lead to long term uncertainty for businesses.[117] This suggests that the flexible case-by-case assessment is more appropriate in the early stages of regulating a new product. This approach in the early stages of regulation allows regulators to gather the information and experience required to issue rules that will apply to future innovators. Again, Kenya's experience fits with this. Despite its success, m-pesa highlighted a gap in the regulation of payment services in Kenya.[118] Consequently, the National Payment Systems Regulations (NPSRs) was passed in 2014. The NPSRs introduced new regulatory rules for the payment sector and identified CBK as the primary supervisory authority for payment service providers (PSPs).[119]

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[108] Ibid.
[109] Id at 59.
[110] Id at 62
[111] Id at 61–62; DW Arner, DA Zetzsche, et al "FinTech and regtech: enabling innovation while preserving financial stability" (2017) 18 *Geo. J. Int'l Aff.* 47 at 52.
[112] Zetzsche et al *Regulating a Revolution,* above at note 107 at 62.
[113] Ibid.
[114] Ibid.
[115] AB Kernan "Sustaining the growth of mobile money services in developing nations: lessons from overregulation in the United States' (2018) 51 *Vand J Transnat'l L* 1109 at 1148.
[116] B Fung, M Molico and G Stuber "Electronic money and payments: recent developments and issues' (2014) available at: <https://www.bankofcanada.ca/wp-content/uploads/2014/04/dp2014-2.pdf> (last accessed 18 September 2020) at 2
[117] Zetzsche et al *Regulating a Revolution,* above at note 107 at 63–64.
[118] AFI *Enabling mobile money transfer,* above at note 91 at 6.
[119] Regulation 30. Section 2 of Kenya's National Payment System Act (2011) defines a "payment service provider" as -

> "i. a person, company or organisation acting as provider in relation to sending, receiving, storing or processing of payments or the provision of other services in relation to payment services through any electronic system;
> ii. a person, company or organisation which owns, possesses, operates, manages or controls a public switched network for the provision of payment services; or
> iii. any other person, company or organisation that processes or stores data on behalf of such payment service providers or users of such payment services"

The NPSRs set out basic e-money rules and require interested firms to apply for authorization/ registration.[120] MNOs may be designated as PSPs or e-money issuers.[121]

Unlike Kenya, Nigeria adopted a less-flexible approach to regulating m-payments. CBN released the Framework document in 2009 before any m-payment service was launched and only began to receive applications for licenses in 2010. Out of about 40 applicants, only 18 received approvals-in-principle with a requirement to build m-payments platforms and run pilots within three months.[122] Certain problems are associated with CBN's approach. First, the 2009 Framework contained prescriptive requirements dictating the acceptable business models, technology, the methods through which m-payments could be carried out and the operational arrangements for delivering m-payments. By designing regulations before any m-payment service was launched and before considering any approvals-in-principle, CBN did not have the opportunity to understand the service before it issued regulations. Second, CBN failed to take advantage of the chance to gather relevant information during the mandated pilots. CBN required applicants to build and pilot m-payments platforms within three months. This pilot period was short, and only two applicants met CBN's deadline.[123] This contrasts with Kenya, where m-pesa was piloted with CBK's support two years before its launch.[124] This period gave sufficient time for Safaricom to adjust its product offering to reflect market needs and also gave CBK more time to gather information on the product.[125] CBN's short mandatory pilot period arguably failed to give applicants enough time to adjust their product offering. It does not also appear that the pilots enabled CBN to gather further information that would influence regulations. This is because the regulatory framework was not updated until four years after the pilots.

Kenya and Nigeria's contrasting experience highlights the dilemma that authorities face in deciding what regulatory approach is more appropriate for innovative products. No consensus exists on the most suitable regulatory strategy. While some writers suggest full regulation that resembles prudential banking regulations, others call for a "tailored regime" and warn against "unnecessary or over-reactive" regulation.[126] Although Nigeria's early adoption of full regulations can be interpreted as heavy-handed, it can be justified on the basis that maintaining the safety of the financial system is at the core of the mandate of central banks.[127] However, the problem rests in the inability to draw a balance between protecting the financial system and encouraging innovation, which in turn can increase inclusion. Since innovation can positively impact financial inclusion, it is reasonable to embrace a flexible regulatory approach like Kenya's which can adapt to changes in the financial services landscape.[128]

Regulators can implement Kenya's test and learn approach in ways that best fit their jurisdictions. An increasingly popular and more structured option is the use of regulatory sandboxes.[129] A regulatory sandbox is a "safe space in which businesses can test innovative products, services, business models and delivery mechanisms

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[120] Regulation 4.
[121] This is a payment service provider authorized to issue electronic money under the NPSRs: Regulation 2.
[122] P Shrivastava "The Hold-up with Mobile Money in Nigeria" available at <https://cfi-blog.org/2015/08/13/the-hold-up-with-mobile-money-in-nigeria/> (last accessed 10 April 2020).
[123] Ibid.
[124] M-pesa's pilot ran from October 2005 to October 2006. N Hughes, S Lonie "M-pesa: mobile money for the 'unbanked' turning cellphones into 24-hour tellers in Kenya" (2007) 2/1 *ITGG* 63 at 74 & 77.
[125] International Finance Corporation "M-money channel distribution case – Kenya: safaricom m-pesa" available at: <http://documents.worldbank.org/curated/en/832831500443778267/pdf/117403-WP-KE-Tool-6-7-Case-Study-M-PESA-Kenya-Series-IFC-mobile-money-toolkit-PUBLIC.pdf> (last accessed 14 April 2020) at 4.
[126] M Crowe, M Kepler, C Merritt "The U.S. regulatory landscape for mobile payments" (2012) available at <https://www.frbatlanta.org/-/media/documents/rprf/rprf_pubs/120730wp.pdf> (last accessed 14 April 2020) at 11; R Bollen "A discussion of best practice in the regulation of payment services: part 1" (2010) 25/8 *JIBLR* 370 at 373.
[127] O Bar-Gill, E Warren "Making Credit Safer" (2009)157 *U. Pa. L. Rev.* 1 at 90.
[128] E. Eraker, C Hector, C Hoofnagle "Mobile payments: the challenge of protecting consumers and innovation" (2011) 10 *PSLR* 212 at 216.
[129] L de Koker, N Morris, S Jaffer "Regulating financial services in an era of technological disruption" (2020) 36/2 *Law in Context* 90 at 95.

without immediately incurring all the normal regulatory consequences of engaging in the activity in question."[130] With standardised eligibility requirements, sandboxes aim to encourage competitive innovation while enhancing the open and transparent exchange of information between regulators and innovators.[131] Such flow of information can inform future regulatory policies. In our context, sandboxes can be useful for emphasising financial inclusion objectives. Where this is a policy priority, regulators can implement thematic sandboxes where preference is given to innovation that supports inclusion.[132]

As a recent approach to regulating financial services innovation, there is not enough empirical evidence yet of the impact of sandboxes.[133] However, early research suggests that while sandboxes can contribute to developing evidence-based policy, they are insufficient in themselves in promoting innovation or financial inclusion.[134] Hence regulators must engage in implementing broader reforms which support innovation, regulatory capacity, market engagement and financial inclusion.[135] As sandboxes are not a 'one-size-fits-all' solution, some researchers call for a focus on broader alternatives that reflect the priorities and capacity of regulators as well as encourages the general development of innovation ecosystems.[136] These alternatives could focus on providing dedicated spaces (e.g. innovation hubs) or institutions (e.g. innovation offices) aimed at supporting innovators.

Niche financial institutions may present an attractive compromise but do not guarantee results

As indicated earlier, the latest regulatory update in Nigeria has seen the introduction of niche financial institutions (PSBs) which are permitted to provide m-payments. Under the new framework, MNOs through their subsidiaries can directly participate providing m-payments. This appears to be a compromise between two policy positions, i.e. excluding MNOs from providing the service and allowing them to directly participate but within the regulatory control of CBN. The idea of PSBs is not novel and Nigeria may have been inspired by India. Like Nigeria, India's initial response to regulating m-payments was to exclude MNOs from providing the service. Only licensed banks with a physical presence in India were initially permitted to offer m-payments.[137] These services were also restricted to existing bank customers and/or credit and debit cardholders.[138] Justifying its initial strict bank-led approach, the then Deputy Governor of the Reserve Bank of India (RBI) declared that RBI believed that

[130] Financial Conduct Authority "Regulatory Sandbox" (2015) available at: <https://www.fca.org.uk/publication/research/regulatory-sandbox.pdf > (last accessed 18 September 2020) at paragraph 1.2.

[131] M Wechsler, L Perlman, and N Gurung "The state of regulatory sandboxes in developing countries (2018). available at: <https://ssrn.com/abstract=3285938> (last accessed 18 September 2020) at 24.

[132] Central Banks in Sierra Leone and Malaysia have adopted this approach. S Duff, A growing trend in financial regulation: thematic sandboxes" (2019) available at: <https://www.cgap.org/blog/growing-trend-financial-regulation-thematic-sandboxes> (last accessed 18 September 2020).

[133] UNSGSA FinTech Working Group and CCAF "Early lessons on regulatory innovations to enable inclusive fintech: innovation offices, regulatory sandboxes, and regtech" (2019) available at: <https://www.unsgsa.org/files/2915/5016/4448/Early_Lessons_on_Regulatory_Innovations_to_Enable_Inclusive_FinTech.pdf> (last accessed 18 September 2020) at 29.

[134] Id at 30.

[135] Ibid.

[136] RP Buckley, D Arner et al "Building fintech ecosystems: regulatory sandboxes, innovation hubs and beyond" (2020) 61 *Wash. U L. & Pol'y* 55 at 58; UNSGSA FinTech Working Group *Early Lessons,* above at note 133 at 20; I Jenik and K Lauer "Regulatory sandboxes and financial inclusion" (2017) available at: <https://www.cgap.org/sites/default/files/Working-Paper-Regulatory-Sandboxes-Oct-2017.pdf> (last accessed 18 September 2020) at10

[137] Reserve Bank of India "Mobile Banking Transactions in India - Operative Guidelines for Banks" available at: <https://www.rbi.org.in/scripts/FS_Notification.aspx?Id=10509&fn=9&Mode=0#6 > (last accessed 15 April 2020) at paragraph 6.1.

[138] Id at paragraph 6.2.

"sustainable financial inclusion is achievable only through mainstream financial institutions, i.e. banks."[139] He further explained that:

> "In India, we have adopted a bank-led model for financial inclusion, which seeks to leverage on technology…. Our experience shows that the goal of financial inclusion is better served through mainstream banking institutions as only they have the ability to offer the suite of products required to bring in effective/meaningful financial inclusion".[140]

In 2014, RBI adjusted its stance by opening the playing field to non-banks.[141] However, it held on to its initial belief that banking institutions were better placed to drive inclusion. Hence, RBI permitted non-banks to provide payment services only if they registered as newly created banking institutions (payments banks) offering a range of financial services. Accordingly, it issued Guidelines for the licensing of payments banks (Licensing Guidelines).[142] RBI stated that the primary objective for introducing payment banks is to further financial inclusion.[143] MNOs, supermarket chains, non-banking finance companies (NBFCs) and public sector companies are amongst the classes of persons eligible to apply for licenses.[144] The regulatory change provided a leeway for MNOs to participate in the provision of m-payments. Like Nigeria, payment banks may provide savings accounts and payment/remittance services but cannot offer credit.[145]

The justification for payment banks is that they offer a broad suite of services beyond m-payments. Providing additional services reflects RBI's belief that a superior model for improving inclusion is one that supports additional banking services alongside m-payments.[146] While this is an important consideration, if there is no demand for the additional services, then the introduction of payment banks may be strategically poor. This is because for innovation to succeed, it should be designed to respond to an unmet need expressed by consumers and should not be based on assumptions of what consumers want.[147] Some examples buttress this point. M-pesa is partly successful because the product's design addressed the existing need for low cost person-to-person transfers.[148] Although the initial product proposal focused on microfinance transactions, consumer feedback during the pilot prompted changes that made the product functionally relevant.[149] Reflecting the market need at its launch, Safaricom focused on providing a convenient and cost-effective domestic platform for sending money from urban areas to rural communities.[150] This can be contrasted with unsuccessful attempts in other jurisdictions. In South Africa, for instance, a product called WIZZIT was introduced to provide a full suite of banking services to the unbanked. Besides stiff regulatory roadblocks faced by WIZZIT's founders, a Harvard study suggests that

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[139] KC Chakrabarty "The first mile walk into financial inclusion -thinking differently" Address by the Deputy Governor, Reserve Bank of India, at the Financial Inclusion Conference (2012) available at: <http://www.agloc.org/pdf/august_07_2012.pdf> at paragraph 14.

[140] Id at paragraph 12.

[141] Reserve Bank of India "Guidelines for Licensing of Payments Banks" available at: https://rbi.org.in/scripts/bs_viewcontent.aspx?Id=2900 (last accessed 13 April 2020).

[142] This approach is described as the "Narrow banking" model where banking licences are granted to non-banking firms to carry out deposit and payment services but not credit services. See Mobile Money Association of India (MMAI) and the GSM Association (GSMA) "Mobile money: the opportunity for India" (2013) available at: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/12/MMAI-GSMA-on-Mobile-Money-in-India-for-RBI-Financial-Inclusion-Committee_Dec13.pdf> (last accessed 13 April 2020) at 19.

[143] RBI *Licensing Guidelines,* above at note 141 at paragraph 2.

[144] Ibid.

[145] Id at paragraph 4.

[146] KC Chakrabarty "M-banking in India - regulations and rationale" Address by Deputy Governor, Reserve Bank of India at the International Banking Summit on Regulation of Cross-Border Mobile Payments and Regional Financial Integration (2012) available at: <http://www.bis.org/review/r120330f.pdf> (last accessed 13 April 2020).

[147] Riley & Kalathunga *Bringing e-money to the poor,* above at note 76 at 57.

[148] Lashitew et al *Mobile phones for financial inclusion*, above at note 90 at1209.

[149] Ibid.

[150] ES Kobor "The role of anti-money laundering law in mobile money systems in developing countries" (2013) 8 *Wash. J L.Tech. & Arts* 303, at 307–308.

one of the reasons behind the product's failure was that it was launched without much consideration of the market demand for services offered.[151]

So far, payments banks have not made a substantial impact in India. While 11 in-principle approvals were granted to applicants in 2015, by 2018 only four of the 11 payments banks remained operational.[152] These banks registered weak performances incurring net losses in the 2016-2017 and 2017-2018 financial year.[153] Their lacklustre performance has been attributed to limited revenue streams.[154] This is a direct consequence of stringent regulations which dictate the business model that they can adopt.[155] Although registered as banks, they are prohibited from engaging in any lending activity and cannot make any profit from interests. The revenue margins from deposits are also small as there is a cap on the deposits that they can accept.[156] At the same time, they must offer attractive interests on deposits if they wish to compete with traditional banks.[157]

Although it is too early to fully assess the impact of niche institutions like payment banks, two points must be made. First, while it is important that excluded persons can access a wide range of financial products in the long run, it may be more sustainable to allow providers to organically develop products that reflect market needs. Hence, user-driven extensions of essential payment services may be more viable in the long term. Understanding the needs of the underserved and building their trust and familiarity with basic digital financial services will likely convert them to account holders in the long term.[158] M-pesa continues to stay relevant because it constantly adapted and extended its functionalities based on customer feedback and changing market trends.[159] From focusing on basic services like facilitating person-to-person payments, airtime purchases and cash withdrawals from agents, m-pesa has expanded its services over the years to include transfers to and from regular bank accounts, international remittances, and microinsurance. [160] It also went on to partner with the Commercial Bank of Africa to offer M-Shwari, a micro-credit service.[161]

Second, India's experience raises questions about whether niche banking institutions will encourage MNO involvement in driving the m-payments market. India's experience may suggest that such institutions can disincentivize MNOs from investing. MNOs are not financial institutions but will be subject to stringent banking regulations if they register as niche banking institutions. With restrictions on their activities which limits the profits that they can make, they may decide that investing in the market is not entirely justified.

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[151] V Kasturi Rangan & K Lee "Mobile banking for the unbanked" (2012) available at https://www.hbs.edu/faculty/Pages/item.aspx?num=39405 (last accessed 27 July 2020)
[152] SK Reddy, SA Sarat "Announcement of payment banks and stock performance of commercial banks in India" (2018) 23/1 *JIBC* 1 at 4.
[153] Reserve Bank of India "Report on Trend and Progress of Banking in India 2017-18" available at: <https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/0RTP2018_FE9E97E7AF7024A4B94321734CD76DD4F.PDF> (last accessed 10 April 2020)
[154] R Merwin "Why five out of the 11 payment banks have shut shop" (10 September 2019) *The Hindu BusinessLine* available, at: <https://www.thehindubusinessline.com/money-and-banking/five-out-of-the-11-payments-banks-have-shut-operations-why/article29381134.ece> (last accessed 13 April 2020)
[155] State Bank of India "Payments banks: a case of near yet too far" (2019) <https://sbi.co.in/documents/13958/126691/Ecowrap_20190722.pdf> last accessed 15 April 2020.
[156] They cannot accept deposits over 1 lakh: Ibid.
[157] Merwin *Why five out of the 11 payment banks have shut shop*, above at note 155.
[158] Riley & Kalathunga *Bringing e-money to the poor,* above at note 76 at 57.
[159] Lashitew et al *Mobile phones for financial inclusion,* above at note 90 at 1209.
[160] Id at 1208; Hughes & Lonie *M-pesa: mobile money for the 'unbanked'*, above at note 124 at 78.
[161] P Ondiege "Regulatory impact on mobile money and financial inclusion in African countries - Kenya, Nigeria, Tanzania and Uganda" available at:< https://www.cgdev.org/sites/default/files/Background-Paper-Financial-Inclusion-Ondiege.pdf> (last accessed 12 March 2020) at 22.

Regulators must carefully consider which mobile payment models will best achieve identified policy goals

M-payments can be provided using several business models. There are divergent views on which model is best suited for driving the market. For instance, Rajan argues that the best model for m-payments is one where MNOs only act as intermediaries between consumers and financial institutions.[162] This view is justified on the basis that financial regulations are onerous and limiting the role of MNOs to intermediaries will ensure that the cost of extending financial regulations to MNOs is avoided.[163] Moreover, while innovation like m-payments can increase financial inclusion, it is disruptive and can introduce negative externalities.[164] These externalities may include prudential risks which can negatively affect the safety of the financial system. Non-banking institutions are not traditionally saddled with managing financial transactions, and, therefore, have a limited understanding of the prudential risks involved. Their limited experience further suggests that they will also have limited risk management abilities.[165] Arguments in favour of bank-led models are often justified based on the above points.

In contrast, commentators like Alexandre et al argue that in jurisdictions where banks cannot profitably serve a significant number of people, regulators should allow a broader range of participants who face different cost structures and economic incentives to contest the market directly.[166] Supporting this view, Porteous argues that given the weakness of the retail banking sector in many developing countries, it is necessary that non-bank players, particularly MNOs with their strong retail brands and established networks, be able to issue e-money.[167] He further argues that even if non-banks decide not to invest, the threat of possible entry may galvanize a response from banks.[168] Under this approach, non-bank players like MNOs may be permitted to directly provide m-payments in different ways. One method may allow MNOs to acquire direct licenses to provide the service without any substantial changes to their structure. This was the case with Kenya's m-pesa. Another method may require that they participate through niche banking institutions, as is the case in India and Nigeria.

While banks and MNOs remain critical to providing fund settlement and mobile network facilities respectively, m-payments can be provided by other electronic money firms that are neither banks nor MNOs.[169] The involvement of such firms promises a more competitive market which will leave consumers with increased choices. While promising, this model can face certain difficulties. First, initial investment costs will be high as such providers will need to enter separate agreements with participating banks and MNOs to run their service. Second, where such providers are new, they may not be popular enough to inspire consumer trust, and many excluded persons may refrain from embracing their services. Third, such providers may have limited agent networks due to the high costs of establishing them. If this is the case, they will struggle to achieve the coverage that MNOs and banks, to a lesser extent, enjoy. This will mean that in many developing countries, they may not gain traction outside urban areas. Finally, owing to the scale of the services that they provide, MNOs and banks

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[162] MA Rajan "The future of wallets: a look at the privacy implications of mobile payments" (2012) 20 *Commercial Law Conspectus* 445 at 468–9.

[163] Ibid.

[164] Riley & Kalathunga *Bringing e-money to the poor,* above at note 76 at 64.

[165] Id at 47.

[166] Alexandre et al *Regulating new banking models,* above at note 78 at 116–134.

[167] D Porteous "The enabling environment for mobile banking in Africa" available at: <https://www.microfinancegateway.org/sites/default/files/mfg-en-paper-the-enabling-environment-for-mobile-banking-in-africa-may-2006_0.pdf> (last accessed 15 April 2020) at 50.

[168] Ibid.

[169] PL Chatain, A Zerzan, W Noor, et al *Protecting Mobile Money against Financial Crimes: Global Policy Challenges and Solutions* (2011) available at: <http://documents1.worldbank.org/curated/en/854951468337169489/pdf/600600PUB0ID181Mobile09780821386699.pdf> (last accessed 19 September 2020) at 10, 19, 66.

are well-experienced in operations management which other providers may lack. Where providers lack such capacity, their inexperience can lead to operational challenges which may run them out of business.[170]

Some writers argue for hybrid models which involve alliances between the two crucial parties in the m-payments transaction process: banks and MNOs. This model is thought to represent the most beneficial model for all parties involved because it allows them to retain their core functions.[171] Where a collaboration occurs, banks will leverage their experience in settling payments while MNOs will leverage the extensive reach of their agent networks. While this model has its advantages, a collaboration between key stakeholders can be challenging to achieve. For example, despite m-pesa's success, Safaricom's[172] early attempts to collaborate with a bank (Equity Bank) in introducing another platform "M-kesho" was unsuccessful. This failure was partly attributed to the difficulty associated with managing complex issues like the division of responsibilities and the sharing of revenue which led to friction.[173] Despite these challenges, this model may be the most sustainable in the long term since it combines the advantages of the bank-led and MNO-led models. A model which allows parties to focus on their core competencies will likely make the most economic sense to competing participants. Hence, in the long run, it is anticipated that participants may voluntarily choose to collaborate in offering m-payments. As Alexander et al point out-

> "Product development will remain the preserve of banks, as telecom companies have no expertise and likely no desire to develop financial products beyond basic transactional services. This difference in aspirations and comparative advantages should establish a strong basis for partnerships between mobile operators that will be motivated by the growth in transaction volume and banks that will be more interested in accessing float and cross-selling and up-selling products to clients".[174]

While agreeing that a hybrid may be the most useful model, it is submitted that such collaborative partnerships ought to occur organically, based on voluntary terms agreed between participants. If regulators mandate hybrids, participants may be reluctant to invest if they are unready to make necessary commitments. Affirming this argument, in many countries where providing m-payments is not restricted to banks, MNOs have chosen to partner with them.[175] Although the Kenyan Bankers Association initially resisted m-pesa, many Kenyan banks incorporated m-pesa with their own core applications to cut down their operational costs, setting the stage for further collaboration. Since 2010, Safaricom, the MNO behind m-pesa, has formed partnerships with several banks to offer other products like savings accounts, micro-credit and insurance.[176]

In deciding what model to promote, regulators must consider how the merits and demerits of the different arrangements highlighted above can impact identified policy objectives. Porteous argues that enabling regulatory environments should allow for the development of business models that meet a defined policy objective.[177] Hence, if a regulator's objective is to increase financial inclusion using m-payments, then it ought to support the models

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[170] E.g., in 2013, the Bank of Zambia revoked the mobile money license granted to Celpay, a payment services provider, due to operational challenges it faced coupled with allegations of mismanagement and fraud. B Cooper, A Esser, N Hlophe et al "Zambia payments diagnostic" (2019) available at: <https://cenfri.org/wp-content/uploads/Zambia-payments-diagnostic_Cenfri_BankServAfrica.pdf> (last accessed 20 September 2020) at 20.

[171] L Chaix, D Torre "Four models of mobile payments" (2011) available at: <https://www.researchgate.net/profile/Dominique_Torre/publication/267917243_Four_models_for_mobile_payments/links/547486d00cf2778985abe525/Four-models-for-mobile-payments.pdf?origin=publication_detail> (last accessed 5 March 2020).

[172] The MNO behind m-pesa.

[173] G Demombynes, A.Thegya "Kenya's mobile revolution and the promise of mobile savings" (2012) available at: <http://documents.worldbank.org/curated/en/900911468047101453/pdf/WPS5988.pdf> at 15.

[174] Alexandre et al *Regulating new banking models,* above at note 78 at 121.

[175] Cote d'Ivoire, Kenya, Rwanda, Tanzania, Uganda: Evans & Pircho *An empirical examination*, above at note 68 at 14.

[176] In 2010, it launched a product called M-kesho with Equity bank; in 2012, it launched M-Shwari with the Commercial bank of Africa and KCB m-pesa with the Kenyan Commercial Bank: Lashitew et al *Mobile phones for financial inclusion,* above at note 90 at 1211.

[177] D Porteous "Mobilizing money through enabling regulation" (2009) 4/1 *ITGG* 75 at 77.

that can make this possible. If a significant percentage of a country's populace cannot access formal financial services due to limited bank branches or service channels, then regulators should embrace models which encourage the participation of actors who have good agent networks in underserved areas. This suggests that MNO-led models or hybrid models will likely record transformative success in comparison to bank-led models. This is because if a primary reason for exclusion is poor bank branch penetration, addressing this problem by introducing a bank-centric solution only leads back to the origin of the problem. If regulation places banks at the centre of driving the m-payments market, it indirectly makes a relationship with a bank a prerequisite for m-payments which in effect shuts out already excluded consumers.

In many countries where mobile money services have contributed to increasing inclusion, regulations have permitted flexible models which support the participation of the stakeholders with extensive agent networks. Apart from Kenya, another example may be seen in Bangladesh. Bangladesh has taken advantage of the extensive reach of its post office network to encourage models that allow for the delivery of digital financial services. The post office department has an extensive network of 9,886 post offices across the country, which has proved vital in providing a mobile money order service.[178] This department provides a mobile money order service in partnership with the second largest MNO in Bangladesh (Banglalink Mobile Company) which has an extensive network coverage area. This partnership allows for the service to be accessible at numerous postal outlets, including areas with little or no internet connectivity.[179]

LOOKING AHEAD: THINKING BEYOND THE PLAYERS AND FOCUSING ON THE REGULATORY RISKS

M-payments raise several regulatory concerns which may include the potential abuse of the financial system, data protection risks, and consumer protection challenges, to name a few. For regulators wishing to leverage m-payments in driving financial inclusion, the key consideration should be how they can design appropriate responses which address these risks. This is because the positive impact of any form of innovation, including m-payments, will only remain credible in the long term if regulators can identify and address the specific risks that attract negative externalities. Accordingly, regulatory resources are best channelled towards analysing trends in the m-payments market to identify and understand risks and to design safeguards to address them.[180]

For instance, where regulators permit non-banking institutions to provide m-payments, such institutions are unlikely to have the sophisticated experience required for asset and liquidity management. This inexperience can introduce systemic risks which requires that regulators adopt mechanisms which can lessen such risks. In Kenya for example, the NPSRs introduce a core capital requirement for authorized PSPs.[181] PSPs are also prohibited from engaging in any lending or investment activity other than those permitted under the NPSRs.[182] Where a PSP is involved in other unrelated ventures, it must keep its payment service in a separate business unit and must maintain a separate management structure and books of account.[183] PSPs are consequently mandated to

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[178] N Kachingwe, A Berthaud "Bangladesh: An unexpected source of branchless banking innovation?" (2013) available at: <http://www.upu.int/uploads/tx_sbdownloader/caseStudyBangladeshEn.pdf> (last accessed 11 March 2020) at 7.
[179] Id at 9.
[180] Riley & Kalathunga *Bringing e-money to the poor,* above at note 76 at 55; S di Castri "Mobile money: enabling regulatory solutions"(2013) available at: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/02/MMU-Enabling-Regulatory-Solutions-di-Castri-2013.pdf> (last accessed 20 March 2020).
[181] Regulation 11.
[182] Regulation 45.
[183] Regulation 28(2)(d).

create a trust to cover consumer funds.[184] They are also obliged to adopt appropriate risk mitigation strategies which ensure that consumer funds are placed in commercial banks and diversified.[185]

Similarly, in India, payments banks are required to invest 75 per cent of their demand deposit balances in government securities/treasury bills with maturity up to one year.[186] They must also hold a maximum of 25 per cent in current and time/fixed deposits with other scheduled commercial banks.[187] All other financial and non-financial activities of its promoters must be ring-fenced and should not be mingled with the banking and financial services business of the payments bank.[188] To provide a buffer against operational risks, RBI requires that a minimum paid-up equity capital of one hundred crores must be maintained.[189]

Another critical concern for regulators is ensuring that innovation does not leave the financial system open to abuse. To achieve this, regulators must impose arrangements which seek to maintain financial integrity. For instance, the potential misuse of the financial system may be mitigated by requiring that providers adopt customer registration and verification measures which ensure that persons using the services can be identified. In reality, balancing such arrangements with financial inclusion policies can be a difficult task. This is because regulators and regulated institutions are often cautious about breaching international standards aimed at combating the abuse of the financial system. This can lead to inflexible and inappropriate measures which may prevent people from accessing formal financial services.[190] For instance, in many developing countries, some persons find themselves financially excluded because they cannot satisfy regulatory requirements like those mandated for customer identification and verification purposes.[191] To address this, the Financial Action Taskforce (FATF), the lead inter-governmental body that sets standards aimed at combating money laundering (ML) and terrorist financing (TF), has released several guidance documents to support regulators.[192] Central to the FATF's advice is a call for regulators to apply a risk-based approach.[193] This means that regulators ought to develop flexible and proportionate responses that address actual risks flagged up in their risk assessment. The understanding is that if regulators take advantage of the flexibility allowed by the risk-based approach, they can tailor measures that are attuned to their jurisdictions which will not negatively impact financial inclusion.

The FATF also requires that financial institutions develop internal policies that address ML and TF risks[194] and encourages the inclusion of AML/CFT[195] risk assessments in the development of new products.[196] M-pesa's

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[184] Regulation 25(3).
[185] Regulation 28(2)(d).
[186] Such securities must be ones recognized by RBI as eligible securities for the maintenance of Statutory Liquidity Ratio (SLR); Licensing Guidelines paragraph 5
[187] These are for operational purposes and liquidity management: RBI *Licensing Guidelines,* above at note 141, paragraph 5.
[188] Ibid.
[189] Ibid.
[190] J Isern and L De Koker "AML/CFT: strengthening financial inclusion and integrity" (2009) available at: <https://www.cgap.org/sites/default/files/researches/documents/CGAP-Focus-Note-AML-CFT-Strengthening-Financial-Inclusion-and-Integrity-Aug-2009.pdf> (last accessed 19 September 2020) at 4.
[191] L De Koker *Aligning anti-money* above at note 8; L De Koker 'Money laundering control and suppression of financing of terrorism: some thoughts on the impact of customer due diligence on financial exclusion' (2006) 13/1 *JFC* 26.
[192] FATF "Guidance for a Risk-Based Approach, Prepaid Cards, Mobile Payments and Internet-Based Payment Services" (2013) available at: <https://www.fatf-gafi.org/media/fatf/documents/recommendations/Guidance-RBA-NPPS.pdf>; FATF, Anti-money laundering and terrorist financing measures and financial inclusion (2011) available at: <https://www.fatf-gafi.org/media/fatf/content/images/AML%20CFT%20measures%20and%20financial%20inclusion.pdf>; FATF, Guidance on the risk-based approach to combating money laundering and terrorist financing" (2007) available at: <https://www.fatf-gafi.org/media/fatf/documents/reports/High%20Level%20Principles%20and%20Procedures.pdf> (last accessed 19 September 2020)
[193] Recommendation 1, FATF "International standards on combating money laundering and the financing of terrorism & proliferation" (2012-2019) available at: <http://www.fatf-gafi.org/media/fatf/documents/recommendations/pdfs/FATF%20Recommendations%202012.pdf> (last accessed 19 September 2020)
[194] Id, Recommendation 18.
[195] CFT is an acronym for combatting the financing of terrorism.
[196] FATF *International standards,* above at note 194 at Recommendation 15

development process exemplifies adherence to this.[197] As discussed earlier, CBK satisfied itself that the product was designed to mitigate ML/TF risks and that Safaricom's internal AML/CFT policy was sufficient. This was reflected in functionalities which supported transaction caps,[198] suspicious transaction reporting[199] and the generation of electronic transactional trails.[200]

Practical implementation of the FATF's guidance will require that regulators also implement other broader reforms. For example, to ensure that customer identification and verification processes are not exclusionary, regulators must develop national identification systems which will make it easier for excluded persons to satisfy such requirements. Beyond Kenya's regulatory flexibility, m-pesa's success has also been attributed to the fact that Kenya already had a workable national identification system when it was launched. This helped to lessen the customer registration and verification requirements needed to open an m-pesa account.[201]

De Koker and Jentzsch point out that while adherence to the FATF standards promises increased transparency in the financial system, it can introduce other considerations from a privacy perspective.[202] AML procedures require that personal information about customers as well as their transaction trails are collected and stored. In developing countries with weak data protection frameworks, this can be problematic. The potential for unremedied data breaches and the likelihood that personal and transaction information can be misused even by government authorities may discourage people from transacting within the formal financial sector.[203] To alleviate these concerns, regulators and lawmakers must design robust privacy and data protection laws.

Excluded persons are usually the target of innovative products seeking to drive inclusion. Because these persons are often vulnerable due to their circumstance, regulators must design measures which ensure that they are no worse off in adopting such services.[204] Such efforts will cover issues like protecting consumer funds which can be addressed by the prudential measures discussed earlier. These efforts should also address other consumer protection concerns which may lead to personal consumer detriment.[205] With m-payments, for instance, consumers may be subjected to unfair commercial practices like the use of unfair contract terms. M-payment services will be offered to consumers on standard form contracts which will be available on a take it or leave it basis. Such contracts are prone to abuse as they are one-sided and do not permit negotiations. This problem is exacerbated in many developing countries where illiteracy levels are high making it near impossible for consumers to understand the consequences of the terms on which they contract.

Tackling the use of unfair commercial practices will require wider legislative reforms that are broadly drafted to accommodate technological innovation. A stated earlier, m-pesa's success highlighted regulatory gaps which spurred legislative reforms in several areas, including its consumer protection frameworks. In 2012, the

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[197] Chatain,et al *Protecting Mobile Money* above at note 170 at 126.
[198] Reflecting FATF guidance at the time that value limits were lower risk: see FATF "Report on new payment methods" (2006) available at: <https://www.fatf-gafi.org/media/fatf/documents/reports/Report%20on%20New%20Payment%20Methods.pdf> (last accessed 19 September 2020) at 10. This guidance remains in the FAT's updated report available at <https://www.fatf-gafi.org/media/fatf/documents/reports/ML%20using%20New%20Payment%20Methods.pdf> (last accessed 19 September 2020)
[199] In line with the FATF recommendation 20. FATF *International standards,* above at note 194.
[200] In line with the FATF's recommendation 11. Id.
[201] C Alexandre, M Almazan "From cash to electronic money: enabling new business models to promote financial inclusion and financial integrity' in J Osikena (ed), *The Financial Revolution in Africa: Mobile Payment Services in a New Global Age* (2012 Foreign Policy Centre) at 12.
[202] L De Koker and N Jentzsch "Financial inclusion and financial integrity: aligned incentives?" (2013) 44 *World Development* 267 at 270.
[203] Ibid.
[204] K McKee, M. Kaffenberger, and JM. Zimmerman. "Doing digital finance right: the case for stronger mitigation on customer risks" (2015) available at: <https://www.cgap.org/sites/default/files/Focus-Note-Doing-Digital-Finance-Right-Jun-2015.pdf> (last accessed 10 April 2020)
[205] This represents the "negative outcomes for individual consumers that they become aware of following the purchase or use of a good or service, measured relative to what would reasonably have been expected given the type of transaction": European Commission "Study on measuring consumer detriment in the European Union" available at <https://ec.europa.eu/info/sites/info/files/consumer-detriment-study-final-report_en.pdf> (last accessed 27 April 2020) at 28.

Kenyan Consumer Protection Act was passed with one of its aims being to protect "consumers from all forms and means of unconscionable, unfair, unreasonable, unjust or otherwise improper trade practices including deceptive, misleading, unfair or fraudulent conduct".[206] Such regulatory intervention is necessary to protect consumers, especially those who may be more susceptible to certain unfair practices owing to reasons like age, illiteracy, mental disability and poverty.

To ensure that regulators can understand and respond adequately to the different risks associated with innovation, they will need to step up their supervision and oversight capabilities.[207] This will require that they work with participants in the ecosystem to understand the products being offered as well as the attendant risks. This approach ensures that regulators retain access to critical information in a fast-changing innovative marketplace which allows them to adjust their regulatory policies where required.[208] In many cases, regulators will also need to work closely with legislative authorities to design appropriate legislative responses where necessary.

CONCLUSION

In developing countries with high mobile penetration rates, m-payments can assist in extending financial services to the unbanked populace. Consequently, the service has drawn the attention of regulators. While regulatory responses to innovation must be country-specific and tailored to suit local realities, policymakers seeking to leverage innovation for financial inclusion should learn from the experiences of other countries. Reflecting on Nigeria's experience, the article concludes that while high mobile penetration rates are a strong indicator that m-payments may flourish in a given jurisdiction, much depends on the regulatory environment for their successful take-off.

More specifically, the article first argued that one reason for the dismal success of m-payments in Nigeria is the CBN's initial decision to exclude MNOs from directly providing m-payments services. Given their extensive agent networks, the paper argued that the direct participation of MNOs in m-payments is crucial in driving efforts at improving inclusion. Recent regulatory changes support this view. Second, contrasting CBN and CBK's approach to the early regulation of m-payments in their respective jurisdictions, the article highlights the importance of flexible regulatory approaches that encourage communication between regulators and innovators. Such approaches may better achieve the balance between protecting the financial system and leveraging innovation to drive inclusion. Third, while acknowledging policy shifts in Nigeria which allow MNOs to participate in the market through niche banking institutions, the paper highlights the difficulties associated with this approach by drawing on India's experience.

Fourth, the article suggests that if financial inclusion is a policy priority, regulators should embrace models that encourage investment by providers with good agent networks in underserved areas. Accordingly, it was argued that MNO-led models or hybrid models are more likely to record transformative success. Finally, the article proposes that a pragmatic approach to regulating innovation is one that seeks to understand and identify associated risks to enable regulators design proportionate responses.

[206] S.3(4)(d) KCPA.
[207] Riley & Kalathunga *Bringing e-money to the poor,* above at note 76 at 55.
[208] Zetzsche et al *Regulating a revolution*, above at note 107 at 61–62.