

## REGULATING MOBILE-PAYMENTS. LEARNING FROM THE GLOBAL EXPERIENCE

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*Regulatory restrictions and/or regulatory uncertainty are the most formidable barriers to expanding mobile-payments (hereinafter “m-payments”) to the mass market. Pioneering regulatory models, Brazil, Kenya, the Philippines and South Africa - where mobile banking is really attractive to unbanked and under-banked people because of the lack of bank branches - provide clues worldwide. The European Union Directive on Payment Services (PSD), introduced in 2007, may also serve as a benchmark. The Directive, which provides the legal foundation for the creation of an EU-wide single market for payments, seeks to improve competition by opening up payment markets to non-banks, thus fostering greater efficiency and cost-reduction. One lesson from the global experience so far is that it is too early for regulators and practitioners to assume that there is an established or ‘orthodox’ method of regulating m-payments. There is still a need to experiment with different business approaches to learn how each performs in different market circumstances.*

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## 1. Introduction

Mobile payments (hereinafter “m-payments”) have attracted sustained attention in recent years. Their rise has the potential to generate economic and social benefits, by extending access to financial services and fostering growth in sector liquidity.<sup>1</sup>

M-payments often link players in the banking, wireless communications and retail payments sectors. The provisioning of these payments can go from the extreme of being provided by telecommunications operators without any direct involvement of a bank, through being provided in strict cooperation with the banking sector (at least for clearing and settlement), up to situations where banks outsource such services to a telecommunications operator or even use the operator as nothing more than a communication channel, with the service fully provided by banks.

The level of regulatory tinkering needed for the m-payments market has become the subject of intense debate, in advanced as well as less developed economies. Regulators are feeling pressure to develop strategies that will enable and support innovative models of m-payments and dedicated to pursuing a more open and competitive market environment. At the same time, regulators are charged with developing policies to protect consumers, with particular emphasis on those who are considered financially vulnerable. The tension between the desire to innovate and the need to protect has left many regulators without a clear understanding of the most prudent path to take.

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<sup>1</sup> The high potential of m-payments for financial inclusions depends on various factors: 1) the ever growing ubiquity of mobile phones: on a world population of 7 billion, there are 5 billion mobile phones, but only 2 billion people have a bank account; 2) consumers are using their mobile phones to make payments in over 130 deployments with a 100 more planned and several new initiatives announced each week; 3) it is a growing market predicted to increase to 900 million users and USD1 trillion in transaction value by 2015. The volume of payments made through mobile phones is currently the fastest growing of all payment methods. The rapid proliferation of smart phones with the option of installing sophisticated payment applications has fuelled this development. SWIFT, *Mobile payments. Three winning strategies for banks*, White Paper, 2012, 1; SUNIL GUPTA, *The Mobile Banking and Payment Revolution*, in *The European Financial Review*, February – March 2013, 2.

## 2. M-payments

### 2.1. Overview

M-payments cover all payments made with a mobile phone.<sup>2</sup> These could be either proximity m-payments or remote m-payments. Proximity m-payments occur at the point-of-sale (hereinafter “POS”), like stores, public transport, parking spaces, where customers use a mobile phone with built-in near field communication (hereinafter “NFC”) technology to make a purchase at an NFC-equipped POS terminal. Customers can make proximity m-payments at either manned (e.g., checkout registers) or unmanned (e.g., vending machines) POS.

Remote m-payments do not require NFC technology or a POS terminal. Rather, customers use mobile phones equipped with either short-messaging-service (hereinafter “SMS”), i.e., text messaging, or wireless-application-protocol (WAP) technology to make payments any time, any place to either other individuals or to businesses/merchants.

Technology in m-payments is accelerating: smartphones<sup>3</sup>, NFC<sup>4</sup> and biometric identification technologies are growing in use around the world. Consumers are then using their mobile phones to conduct many types of transactions. For example, Starbucks and Target provide mobile gift card applications that customers can load onto their phones to make in-store purchases (these gift cards and coupons are displayed as 2-D bar codes on a phone’s screen, which are then scanned at the checkout register); mobile ticketing platforms, like the one currently being used by the Bay Area Rapid Transit system, allows consumers to pay for and validate tickets displayed on their mobile phone; Obopay allows customers to transfer funds directly to one another using a mobile application (similar technology is being used in developing countries to facilitate transfers where few physical banks exist).

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<sup>2</sup> M-payments are payments for which the payment data and the payment instruction are initiated, transmitted or confirmed via a mobile phone or device. This can apply to online or offline purchases of services, digital or physical goods.

<sup>3</sup> Application designers have more freedom to build appealing, easy-to-use, and differentiated customer payment experiences. They can integrate payments data with other data streams such as check-out baskets, gaming, or budget visualization services.

<sup>4</sup> M-payments based on NFC technology will be deployed on a larger scale in Italy. For example, Telecom Italia, after holding a trial for proximity payments in Milan where users could buy tickets on public transport, pay at retail outlets and interact with smart advertising posters, in 2014 introduced TIM SmartPAY, a prepaid card for m-payments. Poste Italiane, Italy’s state-owned postal service, has introduced NFC technology in post offices to allow clients to pay for bills, letters or parcels through their mobile phones.

A wide range of players have entered the m-payments market: banks (such as Barclays with its Pingit m-payment service), but also many non-banks, often with innovative solutions.

Mobile network operators (hereinafter “MNOs”), like Vodafone, MTN and Orange, have deployed m-payments services in several countries. Money transfer operators (hereinafter “MTOs”), like Western Union and MoneyGram, as well as card companies, like Visa, MasterCard and Amex, all underpin multiple m-payment initiatives. Payment services providers, like Paypal, are deeply present into m-payments.

MNOs have set up joint ventures between them, like the Isis consortium in the US or project Oscar in the UK. Other examples of joint ventures include Equity Bank with M-PESA, State Bank of India with Airtel, Banamex with America Movil, Alfa-Bank with VimpelCom, Garanti Bank with Turkcell and Avea. However, there is a need for further cooperation and partnerships.

## 2.2. M-payments and Financial Inclusion

The spread of mobile phones and the recent growth of m-payment services have been contributing to the focus on their potential for financial inclusion<sup>5</sup>. M-payments have allowed millions of people, who are otherwise excluded from the formal financial system, to perform financial transactions relatively cheaply, securely and reliably.

By the later part of the 2000s, the main action in m-payments was occurring in developing and less developed countries - from Kenya, to Brazil, the Philippines, South Africa - where m-payments are really attractive to unbanked and under-banked people because of the lack of bank branches. It has been proved that innovation often occurs where the need for change is greatest. In addition, in microfinance it is well known that the poor have limited liability since they do not have the possibility to lose anything. Thus, in poor

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<sup>5</sup> Financial inclusion has become a subject of growing interest for researchers, policymakers and other financial sector stakeholders (*see* DEMIRGUC-KUNT- BECK - HONOHAN, *Finance for all? Policies and pitfalls in expanding access*, Washington, DC, World Bank, 2008). Without inclusive financial systems, individuals and firms need to rely on their own resources to meet their financial needs. Lack of access to finance can lead to poverty traps and inequality. Recent survey data from the World Bank (*see* WORLD BANK, *Remittance Prices Worldwide*, in *World Bank Policy Notes*, 2012), suggest that the costs of sending remittances through a traditional mode such as a commercial bank, is still substantial --about 12 percent on average. Alternative means for remitting money, especially those based on m-payments are relatively cheaper. Although not widely available, pre-paid card services and mobile services were the cheapest product types, with average costs of about 6 percent for both.

countries loss aversion may be slow and they may be more open to experimenting with new models of m-payments, as in Africa, for example, where there are few banks, poor physical infrastructures and a rural population often dependent on remittances from the city.<sup>6</sup>

Innovation is sometimes preceding legislation. The Central Bank of Kenya permitted experimentation (a “test-and-see” approach) which led to the M-PESA m-payments service. The success of M-PESA is a story of both innovative private sector investment as well as early stage commitment – through financing and appropriate oversight – of public sector actors<sup>7</sup>.

There is a striking difference in attitude towards financial innovation among central banks. Instead of a “test-and-see” approach, some central banks have followed a more traditional path of legislation-regulation-innovation. The drawback is that this regulatory attitude can discourage innovation in the financial sector (and may help to explain the slow adoption of m-payments in regions where banking penetration rates remain low while cell phones become ubiquitous). The case of Philippines highlights the tradeoffs involved in creating an adequate regulatory framework for new credit market technologies. In the Philippines there is the presence of an adequate legal framework allowing alternative financial products/ services and e-money. In the Philippines, GCash is a highly successful mobile wallet service enabling cashless and cardless micro-transactions, including payments to shops and utilities and transfers to other people.

In other countries m-payments remain either governed by the same legal framework that applies to traditional banking services, which limits the ability of m-payments to reach previously financially excluded groups, or outside the scope of banking regulation, which potentially exposes mobile banking clients to significant risks.

While in many countries the financial inclusion policy is led by the central bank, this is not always the case. In Kenya, for example, the central bank was aided by the Department for International Development supported by Financial Sector Deepening Trusts and by survey research conducted by Finmark Trust. In Colombia, a government-created independent trust fund (Banca de Desarrollo) has led efforts on financial access. At the global level, the Alliance

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<sup>6</sup> ASHTA, *Evolution of Mobile Banking Regulations*, April 1, 2010, available at SSRN: <http://ssrn.com/abstract=1583080> or <http://dx.doi.org/10.2139/ssrn.1583080>, 4.

<sup>7</sup> A recent study estimates that M-PESA has reached at least 40 percent of the adult population after five years of operation and used by more than two-thirds of the households (JACK-SURI, *Mobile Money: The Economics of M-PESA*, in *NBER Working Papers*, No. 16721, 2011).

for Financial Inclusion (AFI), a non-government organization, has a policy program to promote dissemination of good practices.

### **2.3. M-Pesa in Kenya: Is It a Replicable Model?**

There are a large number of potential business models for m-payment services, which may be led by either banks or operators. In some cases, the bank is the main driver of the business. In others, it is the MNOs by itself or in partnership with other banks and third party providers.

The model with a dominant player is exemplified by Kenya, the Philippines, Nigeria, Malaysia, Thailand and Indonesia.

The biggest success to-date is Safaricom's M-PESA in Kenya. The rapid growth of M-PESA caught everyone by surprise. In just one year M-PESA had 1 million clients. By early 2012 M-PESA had 15 million registered users, a network of over 35,000 cash-in and cash-out agents, and a transaction volume of US\$665 million per month<sup>8</sup>.

When M-PESA began in Kenya, it had no association with the formal banking sector and mobile banking customers there were exempt from the documentation requirements imposed by banks.

M-PESA started off as a popular platform on which people could send domestic remittances across distances at a low cost. As its popularity grew, its functionality also broadened as users began to leave funds in reserve on the platform, creating a kind of short-term savings device. With the success of Safaricom, many players quickly entered the field: as of Dec 2010, there were at least seven systems offering some type of bank account access via mobile phone. Most of these function on partially integrated mobile systems, where customers are first required to establish a traditional account in a physical bank, through which they could gain access via a mobile phone. On the other hand, M-KESHO, a joint-venture between Safaricom and Equity Bank, currently offers a fully integrated mobile savings system, where customers can sign up directly via Safaricom agents.

This model calls for a big player with a dominant market share and capacity to attract together the ecosystem (banks, cash in/out points and managers of such points) and aggregate transaction volumes. Big players, especially mobile operators, already have the majority of customers, a widely recognized

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<sup>8</sup> OKUTTAH, *M-PESA Drives Safaricom as Profit Declines to Sh12.8bn*, in *Business Daily*, 2012, available at <http://www.businessdailyafrica.com/Corporate+News/MPesa+drives+Safaricom+as+profit+declines+/-/539550/1403606/-/35h11b/-/index.html>.

brand and a distribution network which includes a large number of retail outlets in their territory.

Generally, though not always, the largest mobile operator in a country is in the strongest position to become the dominant player in m-payments. Incumbent mobile operators have brands with mass-market appeal, established retail channels and experience with a high volume transactional business model. Thus, from a regulatory stand-point, enabling the dominant player model hinges on permitting mobile operators to issue e-money and manage cash in/out points.

The dominant player model, such as M-PESA, has been less successful elsewhere. It is hard to create and more so to replicate. Big corporations with dominant market shares and high margins are not generally known for innovation and speed. Furthermore, this model requires authorities to closely monitor the competitive implications of a dominated model for potential abuses of market power. Correcting anti-competitive behavior is not an easy matter once a player has established dominance.

The discussion of M-PESA needs to consider its relative uniqueness - in terms of favorable regulatory and market conditions and of the prominent role of a telecommunication company in providing financial services - that allowed a single provider to capture significant economies of scale in a way that might be difficult to replicate (or not desirable) in other settings.

### **3. Toward a Flexible Decentralized Approach**

#### **3.1. Unbundling the M-payments system**

In many other countries other than Kenya - such as in South Africa, India, Bangladesh, Tanzania and Uganda - financial regulators have been more conservative and insisted on a bank-led approach.

Established banks can embark on m-payment services with relatively low risk and cost. Unlike mobile operators, banks can exploit the arrangement of cash in/out points incrementally, since they already have an existing product range, a branch network and marketing channels. A bank could start by signing up a few cash in/out points around a few branches and over time build a

substantial base.<sup>9</sup> Above all, banks are already fully prudentially regulated and supervised.

However, a bank-based path can often be slow to develop.

Learning from more integrated approaches, which are easier to supervise, regulators may then develop a gradual approach towards a decentralized model. To develop such ecosystem, a sequence of coordinated actions by multiple and diverse players, without any single player emerging as the leader, are necessary.

M-payments should be understood as three entirely separable activities. *First*, there are the real-time transactional platforms which perform the fairly mechanical functions of account management and transaction authorization. *Second*, there is the intermediation of funds, which consists of the investment of the funds that are backing those accounts, channeling the resources back to productive opportunities in the wider economy. *Third*, there is the cash in/cash out business, which consists of helping customers exchange between two forms of money (cash and electronic value) against the store's own inventory of the same two forms of money.

The more these three businesses are bound into one by regulation, the harder it could be to create a m-payment network.

Regulators bind the account management and intermediation businesses whenever they require that payment platforms be operated (directly or indirectly) only by banks. Allowing non-banks to be e-money issuers is a good way of unbundling these two businesses. A growing number of regulators around the world are permitting non-bank e-money issuers, allowing non-banks to engage in the accounts management business as long as the banks retain the higher-risk intermediation business.

While regulators are increasingly unbinding account management from intermediation, regulators commonly continue to bind the account management and cash in/out businesses by requiring a tight contractual relationship between the retail cash in/out outlets and the account issuer. This is often compounded by a requirement that the account issuer assume responsibility for the actions of the retailers.

Such a flexible, decentralized approach is exemplified by the European Union, the United States and Japan.

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<sup>9</sup> For mobile operators, m-payments need to reach scale quickly for them to have any chance of success. Money transfers require substantial network effects (in terms of number of customers in the system) and density of cash in/out points.

### 3.2. The Case of the European Union: the Directive on Payment Services (PSD)

M-payments constitute a new channel in which existing payment instruments in the EU, i.e. the so called “Single Euro Payments Area (hereinafter “SEPA”) schemes” and “SEPA cards”, can be utilized. The main focus is in the area of initiation and receipt of credit and debit payments (including card payments) through mobile phones. M-payments will then have to comply with the Payment Services Directive (hereinafter “PSD”)<sup>10</sup> as well as with the existing rules for underlying SEPA instruments.

The PSD introduces a prudential framework for any entity or person, unregulated before the enactment of the Directive, who provides or wishes to provide payment services.

This requirement essentially aims to support the global fight against terrorist financing and money laundering, while at the same time having the potential side effect of stimulating further competition in the European payments market. Any person or business can decide to obtain a license under the PSD, which permits the provision of payment services as a payment institution (hereinafter “PI”).

While a number of existing businesses will have to be regulated as a PI due to their core business activity (for example, money remitters), any other company that does not provide payment services at this point in time will have the choice under the PSD to obtain a PI license in addition to their core business allowing them to become a “hybrid payment institution”.

The fact that PIs are enabled by the PSD to access open payment systems on a non-discriminatory basis (for example, no banking license requirement can be stipulated by those systems as an entry barrier) is likely to have a significant impact on what used to be the bank’s remit only. Open payment systems will have to open their doors to PIs including “hybrid PIs” where the latter could pose specific risk issues that could emanate from their “other” business activity. However, an important concern remain with the “access to payment systems” provision,<sup>11</sup> as the exemption of closed-loop systems<sup>12</sup>

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<sup>10</sup> Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC.

<sup>11</sup> Article 3(b) PSD.

<sup>12</sup> Closed-loops systems are systems in which the movement of funds from a payer’s account to a payee’s account does not necessarily require connections with banks, although banks may be used to fund or redeem end user accounts with the end-to-end provider.

from these access provisions appears not to be in line with the goal of enhancing competition.

Compared to other countries around the world, the European Union has long lagged behind the emerging m-payment market.<sup>13</sup> As with m-payments, the lack of a concrete framework addressing main concerns, such as technical standards, security, inter-operability and the cooperation between market participants, risks perpetuating a fragmented m-payments market in Europe. The key market actors (MNOs, payment service providers, mobile phone manufacturers) have not yet agreed on a viable business model enabling inter-operable payment solutions.

## **4. An Enabling Policy and Regulatory Environment**

### **4.1. Developing the case for Interoperability**

M-payments users will fully benefit from competition, freedom of choice and more efficient payment operations if interoperability and some level of interconnection between competing m-payments schemes is achieved.

Some of the uncompetitive habits developed in the cards sector over the years must be prevented from spreading to m-payments. The lack of common standards in the domains relating to card payment's data exchanges between the merchant and the acquiring payment service provider and card payment's data exchanges between the acquiring and issuing payment service provider, as well as the different certification criteria and procedures in different member states, are illustrative examples of the present state of the market, despite efforts at integration.

Interoperability between m-payment solutions should be ensured by standardization, not regulation. The ideal option seems to be standardization through technical requirements and 'best practices' that are not too prescriptive. Regulatory enforcement of interoperability remains a risk because the business model is highly market-specific and still nascent in most countries. Following the regulatory route risks stifling innovation and is not appropriate for keeping pace with technology, fraud and market developments.

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<sup>13</sup> Recently, however, Apple, Google and Visa have all announced major drives to enter the m-payment business. Visa Europe and MasterCard Europe are taking steps to convince consumers to embrace m-payments, including a commitment to encourage merchants and banks to install the necessary software to handle mobile transactions.

The standards in question should be preferably open standards (that are freely available and are developed and maintained via a collaborative and consensus-driven process) and not proprietary standards (that are privately owned and generally not approved standard-setting bodies). Private players controlling the standards and, hence interoperability, will dominate the whole payment chain (the device itself, the application platform and security management) and there is a serious risk of fragmentation through proprietary solutions. In addition, the importance of other sectors potentially involved in interoperability without playing a leading role in the standardization strategy should not be overlooked, such as public transport (payments for ticketing) or health (health insurance card-based payments) sectors. However, standard setting bodies can take a long time to establish a standard, and often develop standards on the heels of the leader that has successfully imposed a proprietary platform.

While the existing standardized payment instruments could be used as a basis, we may request for the establishment of new and more neutral common standards, primarily due to the fact that the new payment channels in question amount to a new market, whose complexity is not comparable to the traditional bank-dominated markets. Given the specificity of m-payments, standardization should address the issue of portability of m-payment applications (i.e. how payment applications follow consumers when they change MNOs). Standardization of the various components (e.g. protocols, interfaces, applications, services) needs to be carried out thoroughly in order to minimize the risk of foreclosure of potential competitors or innovation.

At the heart of this issue lies a growing diffidence among incumbents to fully embrace open platform tactics. Carriers in particular seem hesitant to exploit the tactic of open collaboration through co-opetition to explore growth opportunities beyond traditional network assets above the level of the mobile operating-system (hereinafter “OS”). Trust in partnering on a collaborative, open-basis is lagging, and concerns that new products and services developed at the OS level will harm traditional network revenues, seem to be lingering.

This needs to change if incumbents want to avoid a long, arduous road to maintaining their dominance. Mobilizing and managing new open ecosystems becomes crucial to business model innovation, especially in light of recent sector events that are rapidly redrawing the competitive landscape.

At the end, m-payments providers should consider that, if they don't interconnect their schemes, users will do it themselves: m-payments customers of the incumbent operator will most probably seek to transact beyond the relatively small closed loop of people who are on the same m-payments scheme and will do so by acquiring SIM cards from other operators; similarly, cash

merchants will seek to sign up with all competing m-payments schemes independently. Exclusivity will be hard to enforce, unless an operator has a very high market share, like Safaricom in Kenya had.

What m-payments providers should be focusing on is how to maximize the lock-in of their customers to their m-payments service: *on one hand*, interoperability augments the probability that customers will join the scheme by increasing the incentives to join; *on the other hand*, interoperability may reduce lock-in by making it easier for customers to leave, if they feel that other schemes can deliver on an equally large network. Providers should then focus on the probability that their customers will choose not to leave.

It usually comes down to whether the players involved opt to maximize the total size of the pie or just their slice of the pie. In networked businesses, in general, the more the players work together to enlarge the pie, the larger the slice each one will get. MNOs have a tradition of interconnecting their voice and data bearer services, allowing their customers to send and receive messages to/from anyone, even if they are on a different network. However, we haven't yet seen this logic extend to m-payments.

We can cite three recent examples to illustrate the impact of unbundling and interoperability on service take-up.

*First*, usage of SMS services in the United Kingdom ascended following the introduction of interoperability in 1999 – two years after the service was first launched (a 70-fold increase in messages per month was reported by 2002).

*Second*, a similar example can be cited for credit card use. The growth of credit card services mirrored that of m-payments, whereby an initial rapid deployment slowed in the face of low usage. This was followed by an exponential growth immediately after interoperability was introduced.

*Third*, in India the government introduced regulations in 2008 requiring that m-payments schemes be operated by banks, making it difficult for an M-PESA-type market entrant to lead the nascent m-payment movement. This has probably contributed to the slow growth of m-payments in India. *However*, recently the National Payments Corporation of India (NPCI) has created a micro-switch enabling m-payments between accounts of participating banks. According to Ignacio Mas, if all the banks and any licensed nonbank account issuers join and set the interchange fee low enough, then any retailer could in principle declare itself a cash in/out point for any bank simply by virtue of having an account with one participating bank. In such situation, banks would not need to build and manage their own cash in/out networks because they would have access to the emerging network of cash in/out points. In addition, non-banks would have the opportunity to offer services to a wide range of

their customers (not only the customers of one bank) by maintaining a single bank account.<sup>14</sup>

#### 4.2. A Functional Approach to Regulation

The full potential of m-payments for financial inclusion is yet to be realized. Few policy and regulatory environments are genuinely enabling. In many countries, significant regulatory barriers persist that constrain an operator's ability to build sustainable m-payments services.

*First*, against the evidence coming from a number of countries where m-payments has been successfully deployed, some financial sector authorities refuse to license nonbank payment providers or e-money issuers.

*Second*, several financial regulators still impose account-opening requirements that the poor cannot meet, a conservative approach to interpreting the standards of the Financial Action Task Force (hereinafter "FATF") that doesn't take into account the risk-based approach recommended by the FATF, the FATF guidelines on financial inclusion and the experience of progressive countries that have adopted alternative and simplified opening procedures to overcome the obstacle represented by traditional identification criteria.

*Third*, there is a lack of understanding with the risks of moving financial transactions outside of bank branches. In a number of countries it is still difficult, if not impossible, for MNOs to appoint cash merchants without which the m-payments business case and potential for financial inclusion is substantially degraded. Specifically, the regulations that prohibit banks, e-money issuers and remittance operators from engaging third party agents to carry out customer acquisition functions and cash services create a significant barrier to commercially viable implementation models.

These regulations have prohibited the first movers from performing roles or creating partnerships that are required to build a compelling customer value proposition as well as a commercially viable service channel for mass market m-payments. An unbundled m-payments system should not be viewed, however, as a deregulated one. Governments can play an important role in facilitating access to m-payments.

For example, governments can support financial inclusion through increasing the extent to which Government payments are channeled through the financial sector. The discussion of the potential role of government payments

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<sup>14</sup> MAS, *Enabling different paths to the development of Mobile Money ecosystems, Mobile Money for the Unbanked*, in *Annual Report 2011*, 3.

in expanding financial inclusion of both households and firms could be further sharpened to focus on those specific features of electronic government payment systems which play a pivotal role in determining whether the new government payment mechanisms are financial-inclusion friendly, neutral, or actually impede the emergence of a more inclusive financial system.

Government measures to limit cash payments<sup>15</sup> will also be one of the main drivers to speed the adoption of electronic payments through mobile phones.

One of the main steps is introducing risk-based regulations.<sup>16</sup> The providers of retail payment services (which can be banks, e-money issuers, telecom operators, etc.) should not be regulated differently, depending on whether they are a bank or not. A more appropriate approach may be a functional one i.e. the provision of payment services should be regulated the same way independently of the status of the provider (i.e. whether it is a bank or not). This approach has been followed, for example, in the EU, with the adoption of the PSD and the E-money Directive.

In an unbundled regulatory framework, there would not be a central party assuming all responsibilities. Instead, all risks would need to be carefully thought through and assigned to the right player. The bank intermediating the funds should be subject to all the prudential requirements that Basel and governments impose. The entity managing the accounts (whether a bank or non-bank) should be fully responsible for the operational and technological integrity of their platform in all its aspects. Cash in/out outlets would be responsible for implementing all the necessary consumer protection measures.

Adopting a risk-based approach to the so called “know your customer (hereinafter “KYC”) rules”, would simplify the KYC requirements for basic, no frill-type accounts. The strict KYC rules employed in some markets place a prohibitive cost on service providers that will ultimately reduce the risk profile of a country by decreasing the amount of cash used. Cash is the least-favorable of all payment options from this perspective because it is anonymous, untraceable and can easily be damaged, forged and transported across borders. Among the solutions regulators should favor is a tiered approach to KYC, where small amounts of money may be paid and transferred with only minimal formal identification provided. Such an approach has already been

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<sup>15</sup> Prime Minister Mario Monti in 2011 banned cash payments of over 1,000 euros (\$1,300) as he sought to crack down on tax evasion. Italy loses more than 100 billion euros in unpaid taxes every year.

<sup>16</sup> LYMAN-PICKENS- PORTEOUS, *Regulating Transformational Branchless Banking: Mobile Phones and Other Technology to Increase Access to Finance*, in *CGAP Focus Note*, No. 43, 2008.

adopted in Mexico, where providers placed a limit of USD 24 per day on transactions before requiring increased identification.

### **4.3. The Access Dilemma**

A significant aspect of regulating m-payments relates, at least in the EU, to the question of whether non-bank actors should be allowed access to bank account information in order to check whether such accounts contain adequate funds. Information on the availability of funds is necessary for obtaining the requisite authorisations and payment guarantees that are essential for the business model of most payment services. Banks have a “gateway function” to such information.

In the EU, the European Commission is of the view that this access should be opened up to more actors, in order to minimise barriers to entry, subject to certain safeguards, for example, obtaining the agreement of the customer so as to ensure that the new system is "at least as safe and as confidential as the present one". *However*, the scope of these safeguards and the question of how the access in question will operate in practice are the source of various complications. The current legal and regulatory framework does not consistently meet the challenges that arise relating to access to payment accounts required by non-bank unregulated entities. For example, as these entities do not clearly fall within one of the categories of the PSD, they are not subject to its provisions on duties and liabilities.

To address this issue is necessary to consider how to balance the request for access by unregulated actors without unduly burdening banks from a liability or cost perspective (in the form, for example, of investments in security) and without undermining consumer confidence, data security, data protection and bank secrecy. Moreover, it will be essential to ensure that there is a level playing field between the actors in question, by bringing the relevant non-bank entities within the scope of regulation and prudential supervision and by ensuring that in the event of fraud or information misappropriation, the liabilities are correctly apportioned between the actors. Resolving the access dilemma will most probably entail regulatory change in the EU. This is aimed at ensuring that technological evolution and market needs are met.

## **5. Conclusions**

The full potential of m-payments for financial inclusion is yet to be realized in the current regulatory regime, but likely to flourish if specific barriers

and/or regulatory uncertainty are removed from existing regulations in many countries. Policy makers and regulators should build the capacity to engage and maintain an active, experimental approach, shaping the regulatory environment so as to enable experimentation and eventually increase their control and oversight through different phases of market development, carefully sequencing their proportionate response to risks.

By the later part of the 2000s, the main action in m-payments was occurring in developing and less-developed countries: from Kenya, to Brazil, the Philippines, South Africa, where m-payments are really attractive to unbanked and under-banked people because of the lack of bank branches. It has been proved that innovation often occurs where the need for change is greatest. In addition, in less-developed countries loss aversion may be slow and they may be more open to experimenting with new model of m-payments.

While M-PESA in Kenya is a brilliant story about the significant potential of m-payments, it remains the single story that we always cite when discussing this issue. After several years of citing this extremely good case study, it begins to beg the question as to whether this is really a replicable model. Several other up and coming examples may provide confidence that there really is potential beyond M-PESA.

Today, the PSD may serve as a benchmark. The Directive, which provides the legal foundation for the creation of an EU-wide single market for payments, seeks to improve competition by opening up payment markets to new entrants, differing from banks, thus fostering greater efficiency and cost-reduction. The draft revised PSD (PSD II)<sup>17</sup> would further extend the scope of the PSD to cover new services and service providers enabling access to consumer accounts, thus aiming at bringing the legislation up to speed with developments in m-payments.

Regulators should understand and encourage non-bank providers. While banks continue to have an essential role, non-banks also have vital roles (e.g. as hosts of payment platforms, providers of retail payment instruments, managers of agent networks). The inability of the industry to conceive of small operators as providers of payment services of the same kind as banks, although under different business schemes, has led to dangerous misconceptions, which do not individually benefit either the traditional operators or the new entrants, but above all seriously damage final users, who lacked adequate protection and paid the price of closed markets. Final users pay the cost of oligopolies

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<sup>17</sup> Proposal for a Directive of the European Parliament and of the Council on payment services in the internal market and amending Directives 2002/65/EC, 2013/36/EU and 2009/110/EC and repealing Directive 2007/64/EC, COM(2013) 547 final, 2013/0264 (COD).

generated by the often-imposed cooperation between banks and new services providers.

The degree to which m-payments is capturing the non-banked market clearly differs across economies and it will depend on the market as to which is more suitable. Socio-economic factors (e.g. urbanization, emigration, computer literacy, availability and penetration of banking infrastructures as well as on how the identified drivers for and barriers to innovations will work in the specific context) strongly differ across countries. This may reflect the varied and quickly evolving public policies surrounding m-payments.

It is still too early to know which path is most likely to succeed in the long run. An m-payments scheme may be successful in one country, but will not necessarily perform as well in other countries. The industry as a whole is still working to demonstrate the viability of different models and partnership arrangements. Players are competing and partnering with each other in hard-to-figure-out ways.

Today, however, technology is accelerating. Furthermore, new entrants raise questions on standardization and interoperability at both domestic and global level. This will lead to more convergence in m-payments at the global level. Ongoing sharing with peer regulators about emerging experiences will then help the learning process. This article supports a policy roadmap that focuses on specific regulatory changes, and parallel development of appropriate oversight capacity, based on mutual regulatory learning.