

Mobile money: Lessons for West Africa



Mobile money has had a transformational impact on reaching low-income and historically unbanked households in developing countries and integrating them into the wider financial system by providing access to a range of banking services including credit, savings, and fund transfer capabilities (Kumar et al., 2010). The speed and scale of mobile money take-up in East Africa has been unprecedented and the impact considerable. Globally, mobile money platforms are now available in 93 countries, with providers processing an average of 33 million transactions a day (GSMA, 2015). As an instrument of financial inclusion, mobile money has the potential to radically alter the contractual nature of both formal and informal resource flows across much of the developing world.

Households that lack access to formal banking and financial services are forced to rely on informal networks for access to credit or risk-sharing and for insurance against income shocks (Jack & Suri, 2014). The relatively recent innovation of mobile money has expanded the frontier of financial inclusion beyond the realm of brick and mortar banks to mobile services facilitated by a network of agents. Mobile money users that were previously unbanked are now able to connect and transfer resources cheaply, securely, and over far greater distances than ever before. Importantly, they are also able to more effectively smooth risk via remittances, as evidenced by households receiving a greater number and value of remittances in the face of a negative shock (Jack & Suri, 2014).

In Kenya, the most well-known and successful example of mobile money take-up to date, an estimated 70 percent of households now have access to M-PESA, the country's largest mobile money product (Jack et al., 2013). The service is simple: once registered, a user can cash in or out, transforming their mobile device to something comparable to a bank card. Mobile money can be used to pay bills, to purchase goods and services, and to transfer money within social and family networks.

Despite the flexibility of M-PESA as an instrument for various transaction types, the evidence suggests that a majority of transactions occur within personal or family networks. Mobile money, in this way, reduces the cost-barriers faced by low-income and rural households in accessing credit and risk-sharing transfers from their networks. The growing pace of domestic migration, particularly the rural-to-urban migration that currently characterises much of the developing world, is also accelerating demand by migrants for secure, fast, and affordable ways to send remittances home (Aker & Mbiti, 2010).

Penetrating West Africa: Current constraints and challenges to take-up

While mobile phone penetration is increasing in West Africa, the region has far lower levels of financial inclusion and mobile money usage than East Africa, as shown in Table 1 and Table 2 in the Appendix. Unfortunately data for The Gambia is not available, and therefore is not included in Table 1. Across all countries, both in West Africa and East Africa, women are less likely to hold accounts (either mobile money accounts or accounts at a financial institution) than men, and mobile money usage within rural areas is greater than among the poorest 40% of the population (Global Findex, 2014). In general, mobile money usage in rural areas is only slightly lower than countries' overall mobile money usage. This mobile money usage difference is less than that between usage of accounts at financial institutions in rural areas versus countries' overall usage of accounts at financial institutions. This makes sense as the barriers to rural populations using mobile money are lower than the difficulties they may face in utilising accounts at financial institutions, which are often only located in more urban areas.

The lack of clear data on mobile penetration and utilisation rates in West Africa remains a challenge. Much of the existing data or estimates of penetration are based on sim-card ownership, mobile subscriptions, or individual internet usage rates. When evaluated together, these figures give a rather conflicted image of mobile phone access and internet usage at the household level.

The International Telecommunications Union (the United Nations specialised agency for ICTs) estimates that, in 2014, mobile subscriptions per 100 inhabitants in Ghana, Sierra Leone, and Liberia were 114.8, 76.7, and 73.4, respectively (ITU, 2015). On the face of it, this would suggest high rates of mobile phone ownership and usage. In contrast, however, data on individual internet usage, across the same countries, was only 18.9%, 2.1%, and 5.4%, respectively (ITU, 2015(a)). It is highly probable that subscription and sim card data overestimates penetration and is skewed towards households or adults who are likely to own multiple sim cards or mobile subscriptions. Better data is needed to estimate the potential market size for mobile money users in West Africa.

Regulatory lessons from East Africa

The rapid scale up of M-PESA in Kenya raises key questions for other countries of how best to regulate the mobile money sector to achieve similar success. Coordinating across a range of stakeholders, efficient regulation of the mobile banking sectors will need to address consumer protection concerns while ensuring that MNOs can effectively compete in the market (Batista et al., 2012).

Agent exclusivity or non-exclusivity?

MNOs invest heavily in recruiting, training, and monitoring their agent network, making the issue of agent exclusivity versus non-exclusivity a pressing matter. On the one hand, if agents are non-exclusive and can service more than one MNO, this disincentivises each MNO from investing in a large, high quality agent network, and MNOs may be inclined to recoup their investment costs from customers through higher service fees. Non-exclusive agents may also face liquidity constraints in keeping sufficient e-float available with each MNO they work with (Argent et al., 2013). On the other hand, to require agent exclusivity means that each MNO must develop its own agent network, resulting in there being many agents, each with less business. This arrangement erodes agent profits and undermines the agent business model.

A number of countries have prohibited agent exclusivity, including Malawi, while other countries have used non-regulatory means to encourage non-exclusivity by, for example, requiring MNOs to obtain permission from regulators to use exclusivity agreements (Greenacre, 2014). Given that this discourages MNOs from building their own large, high quality agent network, this can be problematic.

A preferable approach would be to allow MNOs to enforce agent exclusivity for a certain period of time before non-exclusivity is required, much like patents are enforceable only for a set number of years (Suri). This approach would serve to encourage MNO investment in development of their agent network, while still working towards eventual non-exclusivity. The fact that non-exclusivity has been shown to be more appropriate for mature markets further supports this approach (Argent et al., 2013). In any event, the regulatory decision of whether or not to allow agent exclusivity is a matter best resolved through discussions with MNOs.

There are important legal liability implications for MNOs depending on whether their agents act exclusively or non-exclusively. In instances of non-exclusivity, it becomes difficult to identify which MNO is responsible for monitoring agents' behaviour and enforcing discipline, or liable for agents' fraudulent or other harmful behaviour. Regulations will need to comprehensively address MNOs' monitoring responsibility and liability exposure, and if non-exclusivity is to be allowed or required, regulations must also include how MNO responsibility and liability for agent conduct is to be determined.

Reporting requirements

All MNOs, bank and telecommunication companies are required to regularly report on average transaction data, as well as any suspicious activity. Mobile money reporting requirements are focused primarily on guarding against mobile money platforms being used to launder money or finance terrorism. In this regard, two main categories of reporting are key: i) Know Your Customer (KYC) due diligence procedures, and ii) anti-money laundering (AML) and combating the financing of terrorism (CFT) regulations. In general, MNOs are required to:

- enhance their internal controls to cater specifically for AML/CFT risks;
- undertake customer due diligence procedures on all new and existing clients;
- introduce heightened surveillance of suspicious transactions and keep transaction records for future verification; and
- report suspicious transactions to national authorities (Isern et al., 2005).

Low transaction limits and close tracking of customers and transactions makes the risk of mobile money platforms being used to launder money and finance terrorism relatively low (di Castri, 2013). Any transactions attempted above the set limit are automatically flagged and reported as suspicious activity (Solin & Zerzan, 2010).

KYC due diligence procedures and AML/CFT regulations require MNOs to obtain sufficient proof of identity from customers before registering them as mobile money users. What constitutes proof of identity is critical as it may pose an obstacle to registering low-income customers if the threshold is unreasonably onerous, thereby thwarting financial inclusion efforts. In Kenya, a copy of a customer's national identification document suffices. Tanzania does not issue national identity documents, and so customers must use other forms of identification, including student cards, voter registration cards, and passports (GSMA, 2014).

In South Africa, AML/CFT regulations for opening a bank account generally require customers to furnish their income tax number and proof of residential address (evidenced by a utility bill or rental agreement, for example). However, a compliance exemption has been introduced for low-income customers, who often don't have income tax numbers or third-party verification of residential address. This exemption ensures that low-income customers can access the financial services that they would otherwise be barred from for failing to satisfy the regular KYC requirements (Isern et al., 2005). This is a good example of how controls should be flexible enough to include low-income and unbanked customers.

Efforts to keep pace with innovations such as virtual MNOs will likely centre on licensing, regulating, and supervising outlet agents, who represent the biggest vulnerability or entry point for money laundering (Chatain, et al. 2011). The growing number of virtual MNOs may also represent an emerging challenge for regulators as they could allow international transactions to bypass formal financial institutions. Regulatory measures still limit the volume and threshold of financial transactions, particularly across national borders, so risk mitigation is likely to be effective.

Financial protection

It is vital that customers' mobile money deposits are protected from the insolvency of both their MNO and the bank where the MNO keeps customers' deposits. To protect customers' deposits from the insolvency of their MNO, it is necessary to ring-fence these funds from the MNO's own funds. This invariably requires the MNO to place customers' deposits in an aggregated form of a fully prudentially regulated institution, and the MNO should not intermediate such funds at all.

In common law jurisdictions, trust law is available for this purpose and customers' deposits are placed in an aggregate trust account at a commercial bank. This ensures a separation of customers' deposits from the business accounts of the MNO (which may be held at the same commercial bank), thereby ensuring that they do not form part of the MNO's assets at any stage. The nature of the trust account protects customers' deposits from the MNO's creditors, even upon the MNO's insolvency.

In civil law jurisdictions, the MNO would enter into a contractual agreement with the bank, under which the bank is bound to manage customers' deposits for the benefit of the customers. If the bank fails to do this adequately, either the MNO or the customers can sue to enforce the contractual agreement, to seek restitution or to seek to remove and replace the bank as manager of customers' deposits (GSMA). This approach gives less protection to customers than the trust law option under common law. Alternatively, civil law jurisdictions may codify ring-fencing requirements into law, which would yield similar protection as trust law (GSMA).

Customers' deposits also need to be safeguarded against the possibility of the bank's insolvency. Regulations generally require that mobile money deposits are kept unencumbered and in liquid asset form in the bank, and lending prohibitions significantly mitigate the risk of customers' deposits being lost through the bank's insolvency. Additionally, regulations may require that MNOs keep trust accounts at a number of different commercial banks and that they split customers' deposits between the different banks to diversify risk, as done in Kenya and Tanzania (Argent et al., 2013).

Regulations similar to the Federal Deposit Insurance Corporation (FDIC) requirements in the United States, which ensure that deposits in banks are backed by the full faith and credit of the government, are not common elsewhere, particularly in Africa. However, some FDIC-equivalent arrangements have been developed in some countries. For example, in Kenya, several commercial banks have collaborated to provide limited deposit insurance for customers with funds deposited in a member institution (KDIC). This ensures that, in the event that a KDIC member bank goes insolvent, customers with funds (including mobile money funds) deposited at that bank have a right to limited restitution from the KDIC. Currently, the upper limit that customers may receive in the event that the KDIC member bank holding their deposit goes insolvent is KES 100,000 (US\$1,330) (KDIC). Deposit insurance schemes of this nature provide important (albeit limited) protection against bank insolvency. The KDIC experience shows that it's possible for commercial banks to undertake such an initiative themselves, that it is not solely within the ambit of government regulation.

Interest earned on customers' deposits

How the interest that accrues on aggregate trust account funds is to be managed must be clearly addressed in regulations. Interest only accrues on customers' deposited funds if banks are able to invest such funds so as to yield positive interest. If banks are required to hold 100% of customers' deposited funds in cash reserve, such deposits cannot generate any interest.

In Kenya, interest earned on M-PESA deposits is donated to charity, which enables Safaricom to avoid being regulated as a financial institution (Mbiti & Weil, 2014). In Tanzania, Tigo has paid customers a proportional share of the interest accrued on Tigo's trust account on a quarterly basis since September 2014, and it hopes to be able to replicate this innovation in other markets (GSMA, 2014(b)). Paying interest to customers would serve as a strong incentive for customers to use mobile money facilities to save. Generally, it is left to the MNO to determine what to do with the accrued interest. However, since the MNO is not entitled to, and cannot keep, the interest itself, the accrued interest is frequently donated to charity.

Interoperability

Interoperability refers to the ability of customers to make payments across different payment systems, and it is a key regulatory challenge. There are two types of interoperability that are relevant in the mobile money context, namely interoperability between MNO payment systems and banks (i.e. transfers between mobile money accounts and bank accounts), and interoperability across the payment systems of different MNOs (i.e. transfers from a mobile money account with one MNO to a mobile money account with another MNO) (Argent et al., 2013). While gains have been made in achieving the first of type of interoperability, the latter type poses far greater difficulties.

Interoperability is important for both convenience and competition purposes: if customers can use their mobile phones to make payments across different MNO systems, they do not need to physically visit one or more mobile money agents to make this possible, which saves both time and commuting costs. In the absence of inter-MNO interoperability, customers are likely to opt to use the MNO with the greatest number of customers in order to minimise the number of payments that require physical visits to agents. In practice, this means that an MNO becomes more popular the larger it becomes, which is damaging to competition between MNOs. Interoperability is therefore an important tool to attain greater productive efficiency, convenience, and competition in the financial sector, while it may also reduce costs through greater efficiencies in infrastructure development (CGAP, 2012).

Although the benefits of interoperability are clear, few countries have required it, as developing inter-MNO interoperability is technically complex and MNOs will be reluctant to cooperate unless they can recoup the substantial investments they have made in developing their services and related infrastructure (CGAP, 2012(a)). First movers will be particularly resistant to government efforts that will require them to give up their competitive advantage (CGAP, 2012(a)). MNOs may recoup their costs through charging customers higher service fees, and since low service costs are a big part of mobile money's appeal, mandating interoperability would undermine MNO growth and competition and be detrimental to financial inclusion efforts, particularly in newer markets. As with the agent exclusivity question, a preferable approach may be to only require interoperability after a certain period of time, to allow MNOs to benefit from their service and infrastructure investments while ultimately working towards achieving interoperability (Suri). In practice, inter-MNO interoperability will also require sophisticated contractual agreements between MNOs, and

between MNOs and banks (GSMA, 2014(a)).

Therefore, interoperability should not be mandated; rather, it should be encouraged and allowed to develop naturally as the market grows and/or technology developments make it easier to achieve (Argent et al., 2013). There is already evidence of market-led developments in interoperability in East Africa. For example, in 2015, MNOs in Tanzania voluntarily agreed to interoperate, making Tanzania the first digital financial services market in world where this has happened (CGAP, 2015). Also in 2015, Vodafone and MTN announced that they were working to interoperate MTN Mobile Money and M-PESA in East Africa. Ultimately, they are aiming for Vodacom and Safaricom users in Kenya, Tanzania, the Democratic Republic of the Congo, and Mozambique to be able to make international remittances with MTN users in Uganda, Rwanda, and Zambia, and vice versa (Techcentral, 2015). Regulation capacity and competition policy will need to develop simultaneously to these market-led gains in interoperability, which will be more challenging in countries with weaker governance capacity.

Consumer protection

Consumer protection concerns include matters of privacy and data protection, which are generally governed by financial and telecommunications regulations, privacy laws, and business practice (Ajayi, 2015). MNOs must fully disclose their prices and fees, and provide simple and easily understood contracts outlining customers' rights and obligations, both at the time of account opening and at the time of transacting. This is particularly important where the market is new and customers have low financial literacy. Simple fee structures have been shown to garner greater user trust than more complex, tiered fee structures that are confusing to new customers (Argent et al., 2013).

Where micro-credit is available via partnerships between MNOs and banks, it is vital that MNOs do not engage in reckless lending that could push low-income customers into growing indebtedness. Liability should be placed on MNOs for unauthorised transactions, if given conditions are met (Porteous, 2006). Effective complaint procedures must be adopted and customers must be made aware of these mechanisms and their recourse options (Bank of Uganda, 2013).

There is a widely held view that adopting 'enabling regulation' is key to expanding and strengthening the mobile money sector, and that a laissez-faire approach is the most effective method. But what this requires and how it is achieved is far from clear. A laissez-faire approach should not, however, be confused with a lack of regulation or regulatory capacity. For example, even though M-PESA was launched in Kenya when mobile money was in its infancy, adequate regulation was provided by, among other legal instruments, the Central Bank of Kenya Act, the Information and Communications Act, and trust law and, as the market grew, other auxiliary regulations and amendments were introduced. The same regulatory growth in response to mobile money advances has taken place in Uganda in recent years (The East African, 2013).

Regulations should focus on regulating the type of mobile money services being offered by MNOs

(i.e. payments, savings, credit, insurance) rather than the type of entity providing such services, as this will promote a more level playing field between equivalent services (di Castri, 2013). Provisions that classify mobile money services based on the other lines of business that a provider are discriminatory and undermine fair and equitable competition across the financial sector (di Castri, 2013).

While the government should be free to enact further laws and regulations to govern the sector, certainty is important and it is vital that MNOs have adequate assurances that tough regulations will not be unexpectedly introduced to stifle the sector (Argent et al., 2013). Capable institutions are also needed to regulate and protect the market, and regulatory capacity should increase commensurate to market growth in response to endogenous demand.

The fact that mobile money lies at the convergence of banking, telecommunications, anti-money laundering, and other regulations substantially raises the risk of a coordination failure arising from inconsistent or contradictory regulations (Porteous, 2006). As such, particular attention must be made to ensure harmonisation and completeness across regulations. Regard must also be paid to coordination between regulators tasked with differing responsibilities (Greenacre et al, 2014). Regulators are likely to have the capability to be more responsive and engage more effectively in the sector if the regulatory framework is developed through consultations with MNOs (Greenacre et al, 2014).

Important non-regulatory factors to consider

Agent network

Experience has shown that effectively managing an agent network is the most important post-launch success determinant for mobile money platforms (McKinsey, 2012). Agents are the face of the MNO and can either make or break customers' trust in the MNO (McKinsey, 2012). MNOs need to establish a quality agent network, and they need to grow their agent network as their customer base expands in order to continuously provide quality services.

The design and scale up plan of M-PESA's agent network in Kenya deviated distinctly from the traditional retail banking model, and it yielded rapid increases in the number and geographic spread of M-PESA customers. Retail banks tend to expand slowly by targeting a selected number of high-density areas and populating them with outlets. Over time, they may also aim to move into more rural areas. In contrast, M-PESA's approach was to roll out several thousand agents across the country and then rapidly build in density. A number of MNOs have approached roll out using the traditional retail banking model, including Vodafone in Tanzania, with the result that they struggled to rapidly increase the customer base.

Service efficiency cannot be maintained with too few agents; however, too many agents erodes agent profits. Therefore, a careful balance between agent number and customer base size needs to be maintained. In Kenya, M-PESA used the expansion of its agent network to drive the growth of

its customer base (Suri).

It is important that MNOs invest in recruiting, training, monitoring, and disciplining their agents. Enrolling agents with the right skills and who are willing to be trained, and retrained when new features are released, is crucial, as they are needed to both provide quality services and consumer education. Agents also represent the front-line for brand reputation and trust in MNO services. High levels of trust and brand reputation with M-PESA can be attributable, in part, to highly disciplined agent networks. Safaricom has invested millions of dollars in recruiting and training M-PESA agents, and making sure that they were accessible, and able to educate customers and effectively manage their cash flows (McKinsey, 2012).

To minimise the risks of fraud, Safaricom's model for recruiting and training agents combines high-power financial incentives with harsh penalties for even minor infractions. Strong deterrence reinforces trust in contract enforcement mechanisms in the local market. MNO liability for agent conduct serves as a notable incentive for MNOs to recruit strong agents and provide them with comprehensive training, while also negating the need to regulate the types of agents that may be employed (Aron, GEGP, 2016).

MNOs will need to invest more in recruiting, training, and monitoring agents in low literacy settings, and quality agents may become a limiting factor to MNO growth in such countries (Greenacre, 2014).

Product experimentation

The importance of good market research and product experimentation prior to launching mobile money products cannot be understated. M-PESA had initially been designed for use as a micro-finance tool, but through product experimentation, Safaricom realised that there was greater market demand for person-to-person remittances than for the proposed micro-finance tool. This enabled Safaricom to rebrand M-PESA as a domestic remittance platform under the banner of "send money home." M-PESA as a platform for facilitating domestic remittances was especially successful given Kenya's high internal migration, which generates much demand for these services.

In contrast, Vodafone conducted little market research or product experimentation before launching M-PESA in Tanzania as they were racing to launch before competitors and they assumed that the Tanzanian market was similar to the Kenyan market (Argent et al., 2013). However, Tanzania was dissimilar to Kenya in a number of ways that went undetected in Vodafone's limited market research. For example, the demand for a domestic remittance platform was less pronounced than the demand for mobile money to facilitate payments at retail outlets (Argent et al., 2013). Additionally, Tanzania's financial literacy rate was notably lower than Kenya's, while the technology Tanzania adopted to install mobile money capabilities in customers' mobile phones was more complex and required greater customer input than that in Kenya. This necessitated greater investment in consumer education to be successful than Vodafone had made.

Concentration of MNOs in market

In addition to managing regulatory risks, the success and take-up of mobile money products will also depend to a large extent on the availability of alternative options. Market structures and dynamics can also affect the competitiveness or concentration of providers in the market, which in the long-run will also affect the extent to which customers are willing to pay for mobile money products. In contexts where a small number of mobile network providers retain a large share of the market, achieving the economies of scale necessary for rapid scale-up may be easier than where MNOs' market share is more fragmented.

The case of Safaricom's scale-up in Kenya illustrates that widespread adoption of mobile money platforms can be successfully achieved by leveraging economies of scale. Safaricom's success is hard to replicate, however, since M-PESA was launched well in advance of other competitors and started off with Safaricom holding 80% of the market share (Argent et al., 2013). MNOs with a large share of the existing market may be better placed to overcome barriers to trust that otherwise slow down customer take-up. An additional advantage for MNOs with significant shares of the market are the network effects that might arise, particularly if, as noted above, interoperability between different payment systems does not exist. Thus, the attractiveness of a MNO may be linked in large part to the MNO's number of existing customers. Network effects can also contribute to accelerating the adoption momentum once a network achieves critical mass (Mas & Ng'weno, 2010).

Growing the customer base

Some business models are more conducive to growing customer bases than other models. Safaricom launched M-PESA on a revenue sharing model that encouraged the unhindered growth of the customer base. However, when M-PESA was launched by Vodafone in Tanzania, a license fee model was used that required Vodafone to pay a user fee to Vodacom Global Services for each registered M-PESA customer, regardless of how frequently the customer used the M-PESA product. Since Vodafone did not want to incur user fees for inactive customers, they actively limited M-PESA registration to active users, which stifled the growth of the customer base (Argent et al., 2013).

Current developments

Given the challenges associated with scaling financial access to rural and remote populations, MNOs wield a natural advantage by leveraging low-cost digital platforms to reach previously unbanked populations. Low-cost, scalable access to financial services can bridge the gap between MNOs and formal financial institutions and support a broader narrative of financial inclusion.

Savings facilities: the M-Shwari case

Launched in November of 2012, in partnership with the Commercial Bank of Africa, Safaricom rolled out M-Shwari, an innovative product providing users with a bank account that offers both savings and lending capability (Cook & McKay, 2015). Experimental evidence from western Kenya suggests that jointly expanding access to credit and savings has a much larger and transformational impact on welfare and entrepreneurship levels among poor and rural households than credit or savings products offered separately (Dupas, et al., 2012).

M-Shwari leverages the existing infrastructure and network of M-PESA, but offers an expanded package of banking services including accrued interest, deposit insurance, and access to credit. Much like M-PESA, M-Shwari gained traction quickly among rural Kenyan households, with over 12 million accounts opened to date. Recent efforts to continue expanding the roll out of the product have centred on new markets in Tanzania and Uganda. The combination of credit and savings instruments enables customers to balance demands for short-term liquidity against a longer-term desire for returns on savings (Cook & McKay, 2015).

Savings accounts pay out quarterly interest payments that range from 2-5%, depending on the deposit size, which are much higher than the interest rates currently offered by Kenyan banks. A secondary, fixed savings account was also introduced in June 2014 called a Lock Savings account. The fixed savings account offers users higher interest rates for minimum deposit values to be held for optional term lengths of one to six months (Cook & McKay, 2015).

As a lending product, M-Shwari uses a combination of savings and M-PESA transaction data to compile credit scores for customers. Once users have deposited at least KES 1, they can apply for loans, and while some users qualify immediately, others may need to build up creditworthiness over a period of at least six months and/or through completing certain identification requirements before qualifying (Cook & McKay, 2015). Typical loan periods are offered over a 30 day period, with partial repayments allowed prior to the loan end-date. Late repayments initially result in a renewal of the loan for an additional 30 day period, with any subsequent delays triggering a freeze on savings accounts and resulting in a notice to the credit bureau.

Another innovation that has been garnering interest and attention lately has been AKiba, a Kenyan treasury issued bond marketed at the more than 20 million users of mobile money. M-Akiba, which launched in September 2015, is the first of its kind to be sold exclusively over mobile phones. Mobile money customers will be able to buy bonds in increments as low as KES 3,000 (US\$28.84). The product offers low-income households access to transformative low-cost, secure savings instruments that remain highly liquid and tradable over the secondary market (Aglionby, 2015). The bonds pay interest as coupon payments every 6 months, with interest expected to be higher than market inflation rates and standard bank interest rates.

International remittance facilities

The growth of remittances, particularly international flows, is also receiving much attention in the mobile money context. The global transaction value of this market (primarily remittance flows from high to low income countries) is estimated to reach over \$600 billion in 2016 (World Bank, 2015). The value of these flows have naturally attracted the interest and attention of MNOs looking to capitalise on this emerging transaction channel.

Cross-border remittance capability is of particular importance in West Africa as it has the potential to boost regional cross-border trade. To date, however, few central banks worldwide have permitted cross-border mobile money remittances and MNOs' authorisation processes are generally not

harmonised across markets. The cross-border mobile money platforms that do currently exist tend to work through a financial institution intermediary, such as Western Union or MoneyGram. Involving a financial institution intermediary ensures greater safety and compliance with reporting requirements. However, M-PESA has recently allowed Kenyan and Tanzanian users to send cross-border payments between these two countries at the same rates as local transactions, which could reveal the beginning of cross-border remittance facilities on interoperable mobile money platforms. Funds are paid out in local currency using daily exchange rates (CIO, 2015).

Some regulatory factors to consider with cross-border remittances include the need to mitigate settlement risk, align KYC and AMT/CFT requirements, ensure that transaction limits are harmonised, and enable MNOs to settle funds directly with each other. Given that the majority of these flows remain informal and conducted through social and familial networks, greater investments in resources to monitor for suspicious activities will be needed for local regulations to keep pace (GSMA, 2013).

Key take-aways

The transformative potential of mobile money to bring access to financial services, including credit, savings, and fund transfer capabilities, to previously unbanked households in the developing world is huge. Significant impacts continue to be seen in East and Southern Africa as mobile money services reach an ever-growing number of people and the variation in mobile money products increases. With gains in mobile penetration and internet usage in West Africa, the baseline infrastructure is being laid for a similar mobile money revolution in West Africa. To ensure that mobile money continues to grow in West Africa, there are some key lessons that both regulators and MNOs may learn from the experience of other countries, particularly those in East Africa.

Key take-aways for regulators:

- A laissez-faire (or light touch) approach to regulating mobile money has been seen to be the most effective way to successfully grow the sector. A laissez-faire approach requires regulations to be adequate, but not stifling. As the sector grows in scope and complexity, regulations should be expanded and updated to keep pace.
- Certain regulatory features are best introduced only once the mobile money market has matured, in order to protect MNOs' investments while still ultimately working towards greater integration. Requiring agent non-exclusivity and MNO interoperability only after a certain period of time would be prime examples of this.
- Full compliance with reporting requirements remains vital, particularly given the rise in terrorism globally. At the same time, however, controls (especially KYC due diligence requirements) must remain flexible enough to not unduly burden low-income users or impede financial inclusion efforts.

Key take-aways for MNOs:

- Post-launching, expanding, monitoring, and disciplining a high quality agent network is the main determinant of success for mobile money platforms.

Note

March 2016



- Pre-launch product experimentation and market research is also of vital importance in order to correctly design and market mobile money services for market demands.

Additionally:

- Mobile money services that provide customers with savings accounts that yield interest (e.g. M-Shwari in Kenya) or offer customers payment of proportional shares of interest accrued on MNO trust accounts (e.g. Tigo in Tanzania) will play a crucial role in encouraging increased saving.
- While there has been some progress in rolling out international transfer facilities, this requires agreements between MNOs and interoperability across MNO platforms. Security concerns necessitate strict monitoring and reporting of all transactions, and financial institution intermediation (e.g. using Western Union or MoneyGram) should remain until MNOs are able to comply with equivalent monitoring and reporting requirements.

Appendix

Table 1: Account, mobile money account, and account at a financial institution figures for Ghana, Guinea, Liberia, Nigeria, and Sierra Leone

Indicator	Ghana	Guinea	Liberia	Nigeria	Sierra Leone
Account (% age 15+)	40.5	7.0	18.8	44.4	15.6
Account, male (% age 15+)	41.7	9.8	23.0	54.4	18.9
Account, female (% age 15+)	39.4	4.1	14.7	34.0	12.5
Account, poorest 40% (% age 15+)	30.0	2.2	7.8	34.4	7.0
Mobile money account (% age 15+)	13.0	1.5	..	2.3	4.5
Mobile money account, male (% age 15+)	14.2	2.4	..	2.5	5.4
Mobile money account, female (% age 15+)	11.8	0.6	..	2.1	3.6
Mobile money account, poorest 40% (% age 15+)	7.9	0.5	..	3.0	0.3
Mobile money account, rural (% age 15+)	10.3	1.3	..	1.8	4.6
Account at financial institution (% age 15+)	34.6	6.2	18.8	44.2	14.1
Account at financial institution, male (% age 15+)	35.3	8.5	23.0	54.3	17.5
Account at financial institution, female (% age 15+)	34.0	3.8	14.7	33.6	11.1
Account at financial institution, poorest 40% (% age 15+)	24.4	1.9	7.8	33.8	5.9
Account at financial institution, rural (% age 15+)	25.3	1.3	17.4	22.7	13.8

Table 2: Account, mobile money account, and account at a financial institution figures for Kenya, Tanzania and Uganda

Indicator	Kenya	Tanzania	Uganda
Account (% age 15+)	74.7	39.8	44.4
Account, male (% age 15+)	78.7	45.4	52.4
Account, female (% age 15+)	71.1	34.3	36.6
Account, poorest 40% (% age 15+)	63.4	24.0	27.2
Mobile money account (% age 15+)	58.4	32.4	35.1
Mobile money account, male (% age 15+)	62.4	38.4	41.2
Mobile money account, female (% age 15+)	54.9	26.6	29.0
Mobile money account, poorest 40% (% age 15+)	52.5	17.2	20.0
Mobile money account, rural (% age 15+)	56.3	28.0	35.5
Account at financial institution (% age 15+)	55.2	19.0	27.8
Account at financial institution, male (% age 15+)	58.9	21.1	32.5
Account at financial institution, female (% age 15+)	51.9	17.1	23.1
Account at financial institution, poorest 40% (% age 15+)	36.3	11.3	13.5
Account at financial institution, rural (% age 15+)	38.7	13.9	19.5

References

1. Aglionby, J. (2015). Kenya launches bond sale via mobile phone. Financial Times. Accessed: <<http://www.ft.com/cms/s/0/cd591efa-65cd-11e5-a28b-50226830d644.html#axzz42KuVVVr4>>
2. Ajayi, B. (2015). Telecommunications Law and Policy to Protect Subscribers' of Mobile Phones in Africa. J. Open Access L., 3, 121.
3. Aker, J. C., & Mbiti, I. M. (2010). Mobile phones and economic development in Africa. Center for Global Development Working Paper, (211).
4. Argent, J., Hanson, J.A., & Gomez, M.P. (2013). The regulation of mobile money in Rwanda. International Growth Centre Working Paper. Accessed: March 3, 2016. <<http://www.theigc.org/wp-content/uploads/2014/09/Argent-Et-Al-2013-Working-Paper.pdf>>
5. Bank of Uganda, Mobile Money Guidelines (2013). Accessed: March 4, 2016 <https://www.bou.or.ug/opencms/bou/bou-downloads/Financial_Inclusion/Mobile-Money-Guidelines-2013.pdf>
6. Batista, C., Simione, F., & Vicente, P. (2012). International experiences of mobile banking regulation. IGC Policy Brief 36012. Accessed: March 2, 2016. <http://www.theigc.org/wp-content/uploads/2015/03/Batista-Et-Al-2012-Policy-Brief.pdf>
7. Chatain, P. L., Zerzan, A., Noor, W., Dannaoui, N., & De Koker, L. (2011). Protecting Mobile Money Against Financial Crimes: Global Policy Challenges and Solutions. World Bank Publications.
8. CGAP (2012). Interoperability and the Pathways Towards Inclusive Retail Payments in Pakistan. Accessed: March 4, 2016 <<http://www.cgap.org/sites/default/files/CGAP-BFA-Interoperability-and-the-Pathways-Towards-Inclusive-Retail-Payments-in-Pakistan-Jun-2012.pdf>>
9. CGAP (2012(a)). Interoperability in Branchless Banking and Mobile Money. Accessed: March 6, 2016 <<http://www.cgap.org/blog/interoperability-branchless-banking-and-mobile-money-0>>
10. CGAP (2015). Tanzania: Africa's Other Mobile Money Juggernaut. Accessed: March 8, 2016 <<http://www.cgap.org/blog/tanzania-africa%E2%80%99s-other-mobile-money-juggernaut>>
11. CIO (2015). M-PESA clients can now make payments between Kenya and Tanzania. Accessed: March 10, 2016 <<http://cio.co.ke/news/top-stories/m-pesa-clients-can-now-make-transfers-between-kenya-and-tanzania>>
12. Cobert, B., Helms, B., and Parker, D. (2012). Mobile money: getting to scale in emerging markets. McKinsey. Accessed: March 3, 2016. <<http://www.mckinsey.com/industries/social-sector/our-insights/mobile-money-getting-to-scale-in-emerging-markets#0>>
13. Cook, T., & McKay, C. (2015). How M-Shwari works: The story so far. Access to finance Forum. CGAP & its Partners. Accessed: March 4, 2016. <<http://www.cgap.org/publications/how-m-shwari-works-story-so-far>>
14. Dupas, P., Green, S., Keat, A., Robinson, J. (2012). Challenges in banking the rural poor: Evidence from Kenya's Western Province. NBER Working Paper series. <<http://www.nber.org/chapters/c13363.pdf>>
15. EY (2014). Mobile Money: the Next Wave. Accessed: March 6, 2016 <[http://www.ey.com/Publication/vwLUAssets/EY_-_Mobile_money_-_the_next_wave_of_growth_in_telecoms/\\$FILE/EY-mobile-money-the-next-wave.pdf](http://www.ey.com/Publication/vwLUAssets/EY_-_Mobile_money_-_the_next_wave_of_growth_in_telecoms/$FILE/EY-mobile-money-the-next-wave.pdf)>

16. Global Findex (2014). The World Bank. <[http://databank.worldbank.org/data/reports.aspx?source=global-findex-\(global-financial-inclusion-database\)](http://databank.worldbank.org/data/reports.aspx?source=global-findex-(global-financial-inclusion-database))>
17. Greenacre, J., Malady, L. & Buckley, R. (2014). The Regulation of Mobile Money in Malawi. CIFR, UNCDF & Standard Chartered. Accessed: March 6, 2016: <http://www.uncdf.org/sites/default/files/Documents/the_regulation_of_mobile_money_in_malawi_project_report_final_version.pdf>
18. GSMA. Ringfencing and Safeguard of Customer Money. Accessed: March 10, 2016 <<http://www.gsma.com/mobilefordevelopment/programmes/mobile-money/safeguard-of-customer-money/>>
19. GSMA (2013). Mobile Money Transfer International Remittance Considerations for Mobile Network Operators. GSMA White Paper. Accessed: March 3, 2016 <<http://www.gsma.com/newsroom/wp-content/uploads/2013/02/International-Remittance-Considerations.pdf>>
20. GSMA (2014). Enabling Mobile Money Policies in Tanzania. Accessed: March 4, 2016 <<http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/03/Tanzania-Enabling-Mobile-Money-Policies.pdf>>
21. GSMA (2014(a)). A2A Interoperability: Making Mobile Money Schemes Interoperate. Accessed: March 6, 2016 <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/03/A2A-interoperability_Online.pdf>
22. GSMA (2014(b)). State of the Industry Report, 2014: Mobile Financial Services for the Unbanked. Accessed: March 9, 2016 <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/03/SOTIR_2014.pdf>
23. GSMA (2015). State of the Industry Report, 2015: Mobile Money. Accessed: March 2, 2016 <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/02/SOTIR_2015.pdf>
24. Kenya Deposit Insurance Corporation <<http://www.depositinsurance.go.ke/index.php/deposit-insurance/deposit-insurance-coverage>>
25. International Telecommunications Union (ITU) (2015). Mobile-cellular subscriptions. Accessed: 9 Mar. 2016. <http://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2015/Mobile_cellular_2000-2014.xls>
26. International Telecommunications Union (ITU) (2015(a)). Percentage of Individuals Using the Internet. Accessed: 9 Mar. 2016. <http://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2015/Individuals_Internet_2000-2014.xls>
27. Isern, J. et al. (2005). AMT/CFT Regulation. CGAP, World Bank. Accessed: March 4, 2016 <<http://www.cgap.org/sites/default/files/CGAP-Focus-Note-AML-CFT-Regulation-Implications-for-Financial-Service-Providers-That-Serve-Low-Income-People-Jul-2005.pdf>>
28. Jack, W., Ray, A., & Suri, T. (2013). Transaction Networks: Evidence from Mobile Money in Kenya. American Economic Review. Papers and Proceedings 103 (3): 356-361.
29. Jack, W., & Suri, T., (2014). Risk Sharing and Transaction Costs: Evidence from Kenya's Mobile Money Revolution. American Economic Review. 104 (1): 183-223.
30. Kumar, K., McKay C., Rotman, S. (2010) Microfinance and Mobile Banking: the story so far. CGAP: Focus Note <<http://gsmabreakfastclub.com/mobilefordevelopment/wp-content/uploads/2012/03/fn62rev2.pdf>>
31. Mas, I. & Amolo Ng'weno, A. (2010). Three keys to M-PESA's success: Branding, channel

- management and pricing. *Journal of Payments Strategy & Systems* 4, no. 4: 352-370.
32. Mbiti, I. & Weil, D.N. (2014). *Mobile Banking: the Impact of M-PESA in Kenya*. NBER Working Paper Series. Accessed: March 9, 2016 <<http://www.nber.org/chapters/c13367.pdf>>
 33. Porteous, D. (2006). *The Enabling Environment for Mobile Money in Africa*. DFID. Accessed: March 6, 2016 <http://www.cab.org.in/ICTPortal/Lists/Knowledge%20Bank/Attachments/14/Enabling%20Environment%20for%20M-banking%20-%20Porteous_16_12_200749.pdf>
 34. Shonchoy, A., Lee, J. & Morduch, J. (still in progress). *Mobile banking and remittances among garment workers in Bangladesh: an experimental study*. International Growth Centre Working Paper. Accessed: March 4, 2016 <<http://www.theigc.org/project/mobile-banking-and-remittances-among-garment-workers-in-bangladesh-an-experimental-study/>>
 35. Solin, M., & Zerzan, A. (2010). *Mobile Money: Methodology for Assessing Money Laundering and Terrorist Financing Risks*. The GSM Association, last modified January.
 36. Techcentral (2015). *M-PESA, MTN Money to Interoperate*. Accessed: March 9, 2016 <<http://www.techcentral.co.za/m-pesa-mtn-money-to-interconnect/56089/>>
 37. The East African. "New BoU Rules to Cut Fraud in Mobile Money". Accessed: March 6, 2016 <<http://www.theeastafrican.co.ke/business/New-BoU-rules-to-cut-fraud-in-mobile-money/-/2560/2075548/-/mv563oz/-/index.html>>
 38. World Bank, 2015. *Remittances Growth To Slow Sharply In 2015, As Europe And Russia Stay Weak; Pick Up Expected Next Year*. Web. Accessed: 4 Mar. 2016. <http://www.worldbank.org/en/news/press-release/2015/04/13/remittances-growth-to-slow-sharply-in-2015-as-europe-and-russia-stay-weak-pick-up-expected-next-year>

The International Growth Centre
(IGC) aims to promote sustainable
growth in developing countries
by providing demand-led policy
advice based on frontier research.

Find out more about
our work on our website
www.theigc.org

For media or communications
enquiries, please contact
mail@theigc.org

Follow us on Twitter
[@the_igc](https://twitter.com/the_igc)

International Growth Centre,
London School of Economic
and Political Science,
Houghton Street,
London WC2A 2AE