Market Guide: Mobile Money

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There is academic evidence that financial inclusion models can support overall economic growth and the achievement of broader development goals. Digital finance alone could benefit billions of people by spurring inclusive growth that adds $3.7 trillion to the GDP of emerging economies within a decade, according to a recent report by the McKinsey Global Institute. The results of a long-term impact study on a mobile money service in Kenya, M-PESA, found that mobile money has lifted as many as 194,000 households – 2% of the Kenyan population – out of poverty, and has been effective in improving the economic lives of poor women and of female-headed households. There is also growing evidence of financial inclusion creating more stable financial systems and economies, mobilizing domestic resources through national savings and helping to boost government revenue.

This market guide has been developed for new and existing renewable energy companies looking to operate in Africa and Southern Asia. It aims to provide a broad overview of the basic concepts, challenges and opportunities concerning mobile money.

Sector background

Mobile money is a service in which the mobile phone is used to access financial services. This is the definition according to the GSM Association (GSMA), which represents the interests of mobile operators worldwide, uniting more than 750 operators with almost 400 companies in the broader mobile ecosystem.

Mobile money is novel: it was barely heard of two decades ago. The first mobile money system was launched in the Philippines in 2001, and M-Pesa was launched in 2007. Yet it has transformed the landscape of financial inclusion, spreading rapidly in developing and emerging market countries (see Figure 2), and “leapfrogging” the provision of formal banking services. The poor are especially vulnerable to risk (e.g. from illness, unemployment, death of family members or natural disasters). Enhancing financial inclusion of the unbanked urban and rural poor—a goal of the G20 group of countries—can help to diversify risk. Traditionally, financial inclusion policies focus on extending access to formal banking services, but progress has been thwarted by cost and market failure challenges.

The new technology helps overcome problems from weak institutional infrastructure to the cost structure of conventional banking. Small size, volatility, informality, and poor governance place constraints on the commercial viability of financial institutions in developing countries. The poor mostly cannot afford the minimum balance requirements and regular charges of typical bank accounts. Mobile phone technology has the advantage that consumers themselves invest in a mobile phone handset, while the (scalable) infrastructure is already in place for the widespread distribution of airtime through secure network channels. By adopting mobile money, under-served citizens gain a secure means of transfer and

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Figure 1 Photo by Benjamin Dada on Unsplash
payment at a lower cost, and safe and private storage of funds. Mobile money has filled a lacuna and has changed the economics of small accounts.

**Figure 2 Evolution of the global mobile money landscape, 2001 to 2019, Source: GSMA, 2019.**

**Insights**

- Mobile money is a recent innovation that provides financial transaction services via mobile phones, including to the unbanked global poor.
- The technology has spread rapidly in the developing world, “leapfrogging” the provision of formal banking services by solving the problems of weak institutional infrastructure and the cost structure of conventional banking.
- Evidence convincingly suggests that mobile money fosters risk-sharing, but direct evidence of the promotion of welfare and saving is mostly still rather less robust.

The movement of cash into electronic accounts gives, for the first time, a record for the unbanked, of the history of their financial transactions in real time. By using algorithms, these records can provide evolving individual credit scores for the unbanked. After a designated period of usage and once a score is available, registered users of mobile money may obtain a pathway to formal banking services accessed only through a mobile phone, to interest-bearing savings accounts that can protect assets, to credit extension to invest in livelihoods, and insurance products that reduce risk.

Apart from reducing asymmetric information, the impact of enhancing transparency through electronic records is far-reaching. Tax collection could be improved by the rise of more visible spending, as well as the greater ease of tax collection via mobile money payments. The increased transparency of records protects customers’ rights and fosters trust in business, promoting the growth of efficient payment networks. Mobile money should make international transactions more readily traceable and therefore facilitate identification and better control of money laundering. If the high cost of remittances were reduced by
mobile money, this could attract more official remittances, and re-channel “informal” remittances through official channels, raising recorded remittances. In essence, mature mobile money systems and the records they produce help foster the “formalisation” of the economy, integrating informal sector users into business networks, formal banking and insurance, and linking them to governments through social security, tax and secure wages payments. However, there are legal data privacy considerations concerning access to and use of mobile money records, which have barely begun to be addressed.

The channels through which mobile money can affect the economy are many and complex, and not necessarily well-understood. There have been attempts to quantify the possible economic gains for different countries of access to secure financial services through mobile money (e.g. improved risk sharing, food security, consumption, business profitability, saving, and use of cash transfers), and the factors driving the adoption of mobile money. Demonstrating welfare and risk-sharing gains from mobile money across countries could bolster the case for significant government and donor support, as well as investment.

**Sector trends**

In 2019, the number of registered mobile money accounts reached 1.04 billion. Sub-Saharan Africa (SSA) is the enduring epicentre of mobile money, adding over 50 million registered accounts in 2019. This was driven by strong growth in Western Africa (21 million new accounts) and Central Africa (six million new accounts), as well as steady growth in Eastern Africa (22 million new accounts). The GSMA forecasts that account adoption across Sub-Saharan Africa will remain strong and that the region will surpass the half billion mark by the end of 2020.

Mobile money adoption in Asia made a significant contribution to global growth. East Asia and Asia-Pacific added 30 million accounts in 2019, driven primarily by growth in Southeast Asia, where new entrants and innovation continue to push boundaries. Overall, growth in Asia was hampered by the Indian market where several players closed operations due to an increasingly burdensome regulatory and operating environment. Despite this, South Asia added 14.1 million accounts in 2019.

Ease of access to mobile money is still key to account adoption and deepening financial inclusion, and mobile money agents are being used to provide a convenient and trusted way to convert cash to digital value and vice versa. They are also the face of mobile money services around the world, performing crucial tasks like onboarding, supporting and educating millions of customers. In 2019, $176 billion (total value of cash-in transactions) was digitised by mobile money agents globally. This is more than the total value of formal international remittance flows to Sub-Saharan Africa, Latin America and the Caribbean combined in the same year — evidence that agents are the main gateway to digital financial inclusion in markets where cash is still king.

The number of agent outlets has almost tripled over the past five years, reaching 7.7 million. The proportion of agents active on a 30-day basis increased to 54% during this period. Mobile money agents in rural and hard-to-reach areas have been instrumental in expanding financial inclusion as they provide wider geographical coverage than other channels. A mobile money agent has seven times the reach of ATMs and 20 times the reach of bank branches. The density of the agent network is approximated to

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**Insights**

- 2019 was a momentous year for the mobile money industry: with over a billion registered accounts and close to $2 billion in daily transactions, mobile money is evolving like never before
- Originally a product for a few select markets, mobile money is now a global phenomenon, recording astonishing growth in emerging markets and reaching a broad range of customers
- Thanks to the dramatic rise in internet and smartphone adoption, increased interoperability and new business models, customers can now choose from a suite of tailored products. For customers, this marks a shift away from cash towards digital payments — for school fees, e-commerce, international remittances, savings, credit, pay-as-you-go utilities and more
reach an average of 228 active mobile money agents per 100,000 adults, tripling since 2014. Meanwhile, the density of commercial bank branches in the same markets did not change substantially between 2014 and 2018, averaging 11 per 100,000 adults.

More customers are using their mobile money accounts more often and as part of their daily activities. In East Africa, the cradle of mobile money, the number of active mobile money accounts has exceeded 100 million. The success of mobile money is no longer limited to a few markets and regions. There are now over 77 deployments with over a million active accounts (90-day) compared to 27 in 2014. 21 of these services have surpassed the five million active accounts mark.

In most low-income countries, the path to financial inclusion is primarily through mobile money. This is evident by the spread of mobile money services and the share of active accounts as a proportion of the adult population.

The total transaction of mobile money is estimated at $690 billion, which means the industry is now processing $2 billion a day. The GSMA forecasts that this strong growth in transaction values will endure, and by 2023 over $1 trillion will be transacted via mobile money platforms on an annual basis, translating to over $2.8 billion a day. This growth and scale are a positive signal for the industry, as they demonstrate higher levels of customer trust, greater relevance for users and the capacity of mobile money to digitise an increasing amount of capital.

Sub-Saharan Africa remains the epicentre of mobile money, as it is host to almost half of all mobile money registered accounts globally.

Since 2010, customer distribution across Sub-Saharan Africa has become more diverse, with sub-regions such as Western and Middle Africa growing their market shares.
The key trends identified in Southern Asia and Africa’s mobile money sector identified include:

- A growing number of providers are becoming commercially sustainable. Not all mobile money deployments are profitable, but a growing number of mobile money services crossed the threshold to become commercially sustainable: 60% of providers reported a positive EBITDA. Direct revenues from mobile money are supporting investment in innovative products and services, network expansion, and healthy and sustainable agent commissions.

- The industry continues to invest in distribution networks and sustainable agent income. The mobile money industry has created opportunities for entrepreneurs in emerging markets to become agents. In rural and hard-to-reach areas, mobile money agents have had a transformative impact on financial inclusion. Meanwhile, agents are seeing their monthly incomes rise substantially with commissions that are not deterring from investment in other areas of the mobile money business.

- Providers are shifting to a ‘payments as a platform’ model. More providers had a significant drop in reliance on revenue from customer fees and rising revenue from business fees. This is a clear indication that providers are focusing more on expanding the digital ecosystem and adjacent services like mobile money-enabled credit, insurance and savings.

- The digitisation of payments has reached new heights. Over the past five years, there has been a gradual shift from cash to digital payments, and more recently, digital transactions accounted for most mobile money flows. This is a signal that providers have taken major steps to ensure digital transactions become a part of their customers’ everyday lives.

- More value is circulating in the mobile money system than exiting. The total value in circulation – person to person (P2P) and merchant payments – reached $22 billion in December 2019, more than doubling over the past two years and significantly surpassing the total value of outgoing transactions ($18 billion).

- The industry has clearly zeroed in on what keeps value circulating. It does so, for example, by creating more compelling value propositions for MSMEs with business management tools like customer analytics and inventory management and offering credit lines to agents and merchants.

- The industry is increasingly interoperable and integrated. Interoperability with banks and account-to-account (A2A) interoperability is meeting the needs of entirely new customer segments, including

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*Figure 4 Sub-Saharan Africa total active accounts 2010/2018, Source: GSMA, 2019.*
traditionally underserved and cash reliant customers. Mobile money-enabled international remittances have flourished as the industry has become more integrated with international financial system players. Integration via APIs with organisations ranging from government agencies and utility companies to online businesses and local entrepreneurs is also on the rise.

- The regulatory landscape is evolving. Regulation that enables low-cost services for the financially excluded has been crucial to the success of mobile money, and there is a clear correlation between high mobile money adoption rates and enabling regulatory environments. However, certain policy interventions, such as sector-specific taxation and data localisation requirements, are putting pressure on the industry and may have long-term negative impacts on financial inclusion gains, innovation and achieving the SDGs.

GSMA has been instrumental in the growth and development of mobile money and has a dedicated programme – Mobile Money for Development – whose mission is to support its members and industry stakeholders to increase the utility and sustainability of mobile money services and increase financial inclusion. This is one of the focus areas of the GSMA Mobile for Development Foundation, which was created in 2007 to demonstrate the positive social impact of mobile technology and develop and engage in projects that utilise mobile communications to relieve the poor, distressed and underprivileged. It brings together mobile operators, donors and the international development community.

The other principal area of focus for the foundation is sustainability leadership. The foundation works with a group of GSMA member CEOs and their companies on developing the necessary insights and tools to act as ‘change agents’ within their own companies at a sector level, and more widely on the world stage.

**Sector challenges and opportunities**

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<tr>
<th>Challenge</th>
<th>Mitigation</th>
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<tr>
<td>Licensing &amp; Regulation - Bank-Led Model vs Telco-Led Model - Telco regulation vs Central Bank regulation</td>
<td>Government and stakeholders in the industry are constantly developing policies to safeguard the consumers and regulate the industry as mobile money is mainstreamed into national payments infrastructure</td>
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<td>Agent/Distributor Distribution and Capitalisation - Urban vs Rural agent spread</td>
<td>Agent distribution is still skewed towards the urban areas, given their higher income and populations. Mobile Network Operators (MNOs) are seeking ways to boost agent outreach in rural areas.</td>
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<td>Low Literacy levels - Low levels of financial literacy especially in the rural population</td>
<td>Mobile money agents are being used as the face of mobile money services around the world, performing crucial tasks like on-boarding, supporting and educating millions of customers.</td>
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<td>Insecurity and lack of insurance cover - For agents and distributors</td>
<td>Insurance companies are assessing and developing products to cater for the needs of the mobile money sector to cover various risks.</td>
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<td>Reliance on GSM network - System uptime - Mobile money as a value-added-service</td>
<td>MNOs are improving their infrastructure to handle more capacity in terms of customer base and number of transactions per second.</td>
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<td>Political interference - Case in point is the system shutdown during Uganda elections</td>
<td>MNOs work together with independent lobby groups such as GSMA to regulate the sector and avoid interference from the political class.</td>
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<td>Data breach or compromise - Identity theft, impersonation of provider status</td>
<td>Investment in up-to-date IT security software and consumer education.</td>
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<td>Taxation - Continuous imposing of new taxes on the product</td>
<td>Governments identifying policies to spur the sector and increase its revenue stream for provision of other essential services to the population.</td>
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<td>Pricing (cost of transaction) - In a bid to break even and meet high operational costs</td>
<td>MNOs are providing different service offerings to diversify their revenue streams such as short term lending or saving capabilities.</td>
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Case studies

Case Study 1: India: a battleground for tech giants and payments banks

Digital payments in India are booming and have become a battleground for tech giants like Google Pay, Paytm, PhonePe and, most recently, AmazonPay. With the backing of US and Chinese investors, the market has become exceptionally competitive and digital payments are expected to reach $1 trillion in value by 2023. Fintech players are vying to survive in a market that is bound to consolidate and concentrate as it matures.

Despite a massive account opening effort led by the government since 2014 (through Pradhan Mantri Jan Dhan Yojana, known as PMJDY), India still has the second largest unbanked population in the world (191 million). Also, a considerable proportion of account owners (48%, or 326 million) are inactive. However, these figures are based on the latest Findex report (2017) and might not reflect recent changes in the market, including the launch of new payment banks and new entrants like the tech giants mentioned earlier.

To reach the country’s poorest customers, the Reserve Bank of India (RBI) issued guidelines for payments banks in November 2014. The most prominent payments banks in India are currently Paytm, Airtel, and Fino. Despite challenges with the payments bank model, Paytm managed to reach profitability and break even in 2019.

India’s diversity and sizeable banked and underbanked population (518 million) provide an opportunity for a variety of models and players to thrive. As the market matures, it will be interesting to see how the payments landscape evolves and what innovative models emerge that will successfully reach the underserved.

Case Study 2: Fuliza: an overdraft service removing frictions in completing payments

One of the most ground-breaking innovations in the digital credit space is Fuliza, Safaricom’s M-PESA transactional overdraft service, launched in January 2019 in conjunction with NCBA Bank in Kenya. For M-PESA users that opt in, Fuliza automatically takes effect if they fall short of funds when completing P2P, merchant or bill payments, but not withdrawals. The overdraft is repaid automatically once funds are in the user’s mobile money account.
Despite the service being available to everyone, the awarding of limits depends on a customer’s creditworthiness and how long they have been using M-PESA. Fuliza is already transforming Kenya’s financial landscape. By Q3 2019, the sum of Fuliza overdrafts amounted to 140 billion Kenyan shillings (about $1.4 billion). In fact, one in two M-PESA subscribers opted into the service within three months of its launch.

**Case Study 3: The GSMA Instant Payment Notification (IPN) Hub**

The GSMA Mobile for Development Foundation set out to address a major barrier to energy access by helping off-grid solar companies to easily integrate with mobile money platforms. To achieve this, the GSMA was supported by the MasterCard Foundation and the UK Department for International Development (DFID) to create the Instant Payment Notification (IPN) Hub.

This is a gateway that enables small service providers – primarily pay-as-you-go (PAYG) solar providers, but also other entities, such as water and transport service providers – to serve their customers more efficiently by receiving and validating real-time notifications of payments. The IPN Hub currently connects 14 companies to six mobile money providers in five countries in Sub-Saharan Africa. The Hub has demonstrated strong value in helping the industry to grow faster and proving that this kind of solution is still needed for further growth in the PAYG industry, where real-time notifications of payments are essential.

The GSMA is now in the process of transitioning the IPN Hub to Beyonic Inc. To scale and sustain this service in the long term, it would need to transition to an industry player.

**Case Study 4: Nigeria: A sleeping giant awakens**

Nigeria has long been identified as one of Africa’s sleeping mobile money giants. Home to the continent’s largest adult (114 million) and unbanked populations (60%), Nigeria shows potential for the roll-out and adoption of mobile money services.

In 2019, there was notable traction in Nigeria’s payment space, primarily through the emergence of app-based wallets. Growing investment in this area has been complemented by significant strides in smartphone penetration, which has increased from 12 to 40% in just five years.

Nigerian-based Interswitch is now one of Africa’s most valuable fintechs after Visa joined a host of investors to take a minority stake in the company, which is now valued at one billion dollars. Nigeria also has a strategic partnership between online payment company Flutterwave and China’s Alipay, which is effectively connecting African entrepreneurs to over one billion Chinese customers.

As these and other new fintechs scale, the question remains whether they will acquire customer segments outside Nigeria’s urban and tech-savvy hubs like Lagos. Over-indexing on the country’s smartphone users will continue to exclude the unbanked, many of whom are more likely to have access to feature phones.

With the recent introduction of Payment Service Banks (PSB), there is growing appetite from local mobile network operators and their subsidiaries to launch mobile money services. Recently, the Central Bank of Nigeria granted Approvals in Principle (AIP) to two local mobile operators, 9Mobile (9PSB) and Glo (Money Master PSB).

A subsidiary of MTN Nigeria has also began offering mobile money transfers through its agent network weeks after receiving a super-agent licence. The current foothold and subscriber base of these MNOs put them in a strong position to rapidly scale mobile money services, including in underserved parts of the country and among feature phone users.

Meanwhile, players such as OPay and PalmPay have entered the market with strategies focused on both tech-savvy and underserved consumers. OPay raised $170 million, founded by Chinese-owned consumer internet company Opera, and backed by nine Chinese investors. After launching a super app strategy very similar to GoJek in Indonesia, OPay is now expanding its services to offer payments via a USSD channel and target feature phone users.
users. In addition, PalmPay has raised $40 million in capital from China-based device maker Tecno, as well as NetEase and MediaTek. This partnership provides PalmPay access to Tecno’s online and offline distribution networks, through pre-installing the app on all Tecno phones and converting Tecno retail stores to agents.

Nigeria’s payment landscape has seen big-ticket investments and new entrants. Ultimately, the question is which platform — fintechs or mobile money — will take the lead in acquiring and serving Nigeria’s vast unbanked population sustainably.

Industry associations

**GSMA** represents the interests of mobile operators worldwide, uniting more than 750 operators with almost 400 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as MWC Barcelona, MWC Shanghai, MWC Los Angeles and the Mobile 360 conference series.

GSMA also runs the GSMA Mobile Money Certification, the only global certification scheme that is designed specifically for mobile money. Fundamentally, the Certification is about enhancing trust and empowering consumers to make more informed choices about their financial services. This encourages mobile money adoption and advances financial inclusion. It gives assurances to potential financial partners that robust controls are in place, facilitating interoperability and encouraging integration into the financial ecosystem. The Certification also aims to build trust with regulators and encourage the implementation of appropriate and proportional regulatory standards.
References and further reading

Pay-As-You-Go Market Attractiveness Index 2019

Mobile-enabled energy for humanitarian contexts

Mobile for Development Utilities Annual Report

State of the Industry Report on Mobile Money 2018


Mobile Money for the Unbanked: Mobile Money Definitions

Mobile Money Services - Design and Development for Financial Inclusion
https://www.hbs.edu/faculty/Publication%20Files/15-083_e7db671b-12b2-47e7-9692-31808ee92bf1.pdf

Embracing payments as a platform for the future of mobile money

Mobile Money and the Economy: A Review of the Evidence

Digital Financial Services: Challenges and Opportunities for Emerging Market Banks

IFC Mobile Money Study 2011
https://openknowledge.worldbank.org/bitstream/handle/10986/21743/947350WP0Box380eMoneyReport05summary.pdf?sequence=1&isAllowed=y

Mobile Money Policy and Regulatory Handbook

Risk management in Mobile Money: Observed Risks and Proposed Mitigants for Mobile Money Operators
Mobile Money for the Unbanked – Mobile money profitability: A digital ecosystem to drive healthy margins

Developing Mobile Money Ecosystems
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