



Sub-Saharan Africa: A major potential revenue opportunity for digital payments

Mobile financial services—often called *mobile money*—are a high priority for many mobile operators, financial institutions, technology firms and governments. In regions where financial inclusion is limited, such as sub-Saharan Africa (SSA), mobile money promises a lower-cost, more scalable alternative to traditional banking. Yet, despite high interest levels in SSA markets, there have been few success stories to date. This is partly due to uncertainty about whether Kenya—where M-Pesa has become one of the few mobile money success stories—is unique, or whether the potential for mobile payments in other markets is similarly robust. To cast some light on the opportunity, this article attempts to quantify some of the many high-potential payments flows in this rapidly evolving region, and to estimate the associated revenue pools.

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Primed for mobile payments

In most of SSA, only a small percentage of upper-income households enjoy the convenience of card-based, online and mobile banking and payments, while most consumers still pay with cash. One study shows that more than 90 percent of retail transactions in parts of Kenya are still cash-based, and Gallup's survey of 11 SSA countries found that more than 80 percent of adults there have made bill payments or remittances with

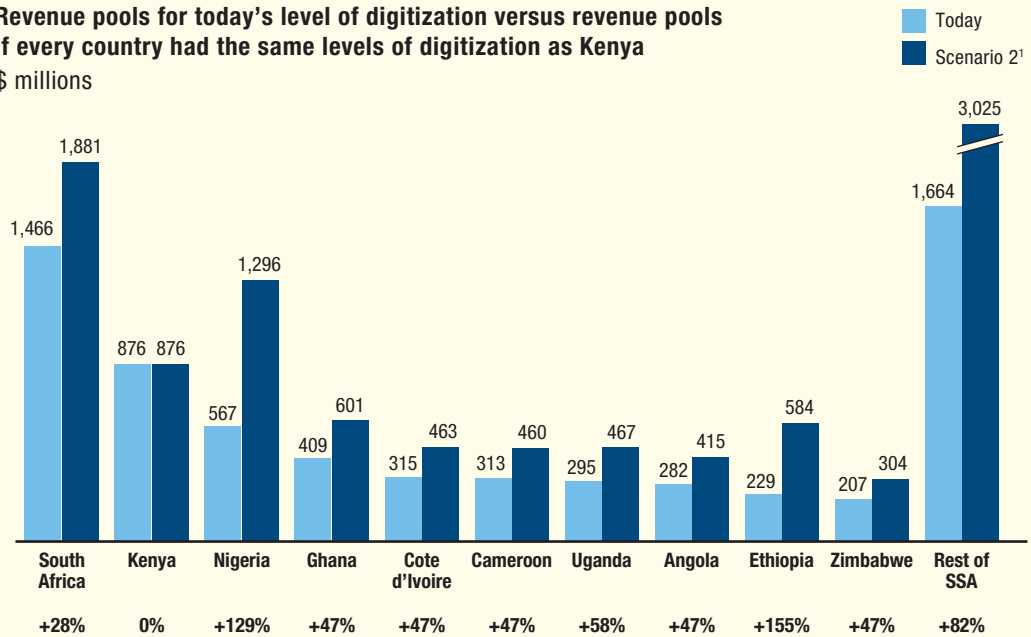
cash. Given the lack of digital payments penetration, SSA consumers, banks and governments are still bearing the high cost of cash payments—costs associated with manual acceptance, record-keeping, counting, storage, security and transportation.

Lack of mobile technology is not the major obstacle to increasing mobile money penetration in the region: Two-thirds of SSA adults currently use mobile phones. And in Kenya, mobile payments penetration is at 86

Exhibit 1

The gap between current levels of digitization and what countries would look like if they were at Kenya's current levels vary widely

Revenue pools for today's level of digitization versus revenue pools if every country had the same levels of digitization as Kenya
\$ millions



¹ Please see description of Scenario 2 on page 5 for details on this analysis. Simplifying assumption that revenues are 2% of volume.

Source: The Bill & Melinda Gates Foundation; McKinsey

percent of households. However, the payments digitization gaps between Kenya and other SSA nations still vary widely (Exhibit 1). Nonetheless, regulators in many markets are paving the way for e-money and the entry of nonbank operators. And business models and systems for electronic remittances—both domestic and international—have already been well tested in other markets around the globe. Together, these factors should make it easier for digital payments to leapfrog the costly development of formal banking by introducing advanced mobile systems. Why then have many payments players hesitated to venture into these seemingly high-potential markets?

As with most new business ventures, limited information is available about the nature and size of markets, the investment required, the risks involved and, most importantly, the nature of customer needs and

preferences. New research and market analyses can help in reducing that knowledge gap. The findings presented here are the result of a new study that looks at 44 SSA nations and incorporates data recently collected by Gallup with support from the Bill & Melinda Gates Foundation. The analysis examines remote domestic consumer payments in individual SSA markets to identify significant cash payment volumes made through informal channels. These transaction flows represent a large untapped market for mobile providers. And they are especially relevant because it is easier and less costly to make those payments electronically than with cash.

Market potential

To better understand the region's market status and opportunities in digital payments, the research team closely examined new data for several major payments categories,

including person-to-person (P2P) payments, government-to-public payments, bill and formal-obligation payments, wages, and payments for goods and services. These represent early use cases in which the benefits of digital payments considerably outweigh those of cash, thus making it likely that digital payments will rapidly win consumer acceptance. Unsurprisingly, P2P payments are the largest category, given the many migrant workers and informal networks of families and friends who are often the primary source of family financing.

A key feature of the Gallup survey was that it did not just focus on formal payments options (such as bank, money transfer or mobile), but also asked about payments made in cash through informal channels. This allows us to estimate latent market demand for digital services.

To estimate market potential on a national basis, the researchers first examined the trends underlying Kenya's rapid transition to mobile payments. These were then applied to each country's raw data to create baseline reference points that were subsequently used to develop individual market projections. Those projections were made assuming the following scenarios:

1. Consumers in all countries adopt remote, digital and P2P payments at the same rate as did Kenya.
2. All payments types migrate to digital at the same adoption rate as P2P payments in Kenya.
3. All consumer payment types migrate to digital (as in 2, above), and the number of P2P payments grows at the same rate as seen in Kenya between 2006 and 2009.

We consider these scenarios conservative relative to overall market potential. Scenarios 1 and 2 assume no growth in P2P payments (despite better options likely becoming available). Moreover, all of the scenarios ignore incremental revenue from other types of payments flows, such as retail and revenue generated through new business models that a more ubiquitous and robust digital payments system would enable.

The Gallup data shows that currently an average of 54 percent of SSA adults makes one or more long-distance payments in a given month, totaling approximately 5 billion transactions annually. The total volume of these flows is approximately \$760 billion, with 50 to 60 percent of transactions being in cash. Conservatively estimating revenues at 2 percent of volume, this results in annual revenues of about \$6.6 billion from electronic payments.

Scenario 1 assumes that overall payments demand remains static, but consumers shift their P2P transactions from cash to digital payments at the same rate as Kenya, where 68 percent of remote P2P transactions are currently electronic. Similar growth in all SSA countries would increase region-wide P2P payments revenue by 60 to 70 percent, from \$1.6 billion to \$2.7 billion. Corresponding digital payments revenues would rise from \$6.6 billion to \$7.7 billion. Importantly, this only represents an initial step toward payments digitization, and only focuses on a single use case.

Looking beyond P2P payments, Scenario 2 extends the Kenya profile to include other types of payments—primarily wages and payments for goods and services made by business and government entities. In this

case, total revenue for electronic payments in the region would grow by 50 to 60 percent, to between \$10 billion and \$11 billion annually. This implies, for example, that combined payments revenue in Nigeria would grow from \$0.6 billion to \$1.3 billion, and in South Africa from \$1.5 billion to \$1.9 billion.

Scenario 3 goes a step further by assuming that the number of P2P payments will also grow as a result of economic growth, lower transaction costs and the added conven-

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ience of digital payments. In Kenya, survey data shows the number of P2P remittance senders grew 215 percent between 2006 and 2009, probably the result of M-Pesa's rapid deployment. If the region's P2P electronic payments were to grow similarly, its electronic payments revenue would exceed its baseline by about 50 percent, reaching \$15 billion to \$16 billion. In Nigeria, for example, the analysis estimates revenues would climb to approximately \$1.8 billion per year.

Digitization can spur growth in related sectors

Broad acceptance of digital payments platforms also benefits stakeholders beyond the payments industry. In Kenya, for example, many startups are attempting to incorporate M-Pesa as part of their entrepreneurial business models. One small business uses it to

help parents make more timely school fee payments, while another uses it to establish informal savings groups. Even non-payments organizations are finding ways to use the new payments infrastructure. Bridge International Academies, for instance, is a low-cost, for-profit educational franchisor that found M-Pesa could help them obtain real-time financial data, which enabled them to become more trusting of franchisees and reduce recordkeeping.

Governments also gain when adopting digital payments, which not only reduce their payments costs, but also increase transparency. And the public ultimately benefits, too, when tax revenues grow concurrently with the increased documentation, transparency and overall economic growth that comes with digital payments.

When digital payments take hold as they did in Kenya, consumers eventually profit from the related savings. The cost of making remittances via M-Pesa is about half that of other formal domestic remittance services. Moreover, customers can instantly send payments from their mobile phones, instead of traveling an hour or more to distant bank branches. Many SSA customers need bank services, but simply live and work too far from a branch office.

Equally important is that electronic payments bring financial services access to vast numbers of unbanked and under-banked families. They dramatically reduce transaction costs, greatly increase customer convenience, and minimize the need for expensive physical infrastructure, including branch networks.

Implications for payments providers

The SSA region presents a number of opportunities for bank and nonbank financial

service providers, mobile operators and others seeking new markets. An important first step in considering these markets is understanding the common financial flows in a typical SSA household—flows that significantly differ from those seen in more developed markets. Here, fund sources tend to be as diverse as wages, crop income, remittance payments from family members, government payments and even public donations. Typical expenses include food, utilities, school fees, health needs, basic retail purchases and those associated with various life-stage ceremonies, such as weddings, funerals and holidays (Exhibit 2). Understanding where these flows are concentrated will enable the development of more effective market-entry strategies. For instance, banks’ relationships with employ-

ers, government agencies and agricultural entities might best position them to digitize private and government wages, or farm payments. And mobile operators with far-reaching airtime networks might do best in the P2P payments arena.

The region’s small and medium-sized enterprises (SMEs) also send and receive a wide variety of payments. They receive payments from customers, middlemen and government agencies, while making payments to wholesalers, employees, landlords and service providers. Notably, most of these are still paid with cash. SMEs are recognized to be an important market segment due to their higher payments volumes. And being at the center of customer and supplier networks, SMEs can stimulate adoption both up and down the value chain.

Exhibit 2

Potential payment flows in the typical sub-Saharan household differ from those in many other markets



Source: The Bill & Melinda Gates Foundation

There are also indirect benefits of mobile payments to consider. Mobile operators, for example, have noted that churn rates for mobile money users are significantly lower. And by incorporating data from payments flows and other nontraditional sources into credit models, institutions can significantly reduce loan losses. Mobile operators could do likewise for post-paid customers. Similarly, the flows discussed in our estimates exclude retail and several other types of transactions that could also be captured by early movers as markets continue to develop and could generate multiples of the revenue represented by the use cases discussed here.

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Launching mobile payments in new markets is seldom easy. In developing economies, one of the greatest challenges is providing convenient options for cash deposits and with-

drawals. ATMs, point-of-service devices and agent networks must be conveniently located throughout the community. The upfront investments this requires can be substantial, but are necessary in order to provide a solid foundation for future growth.

Clearly, there is significant latent demand for digital payments in many SSA markets and widespread consumer acceptance of mobile communications technology is highly encouraging. For players that are able and willing to move in the near future there are also opportunities to win important first-mover advantages.

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