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Expanding the Financial Services Frontier:
Lessons From Mobile Phone Banking in Kenya

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A large proportion of households in developing countries lack access to financial services, which impedes economic growth and development. A large body of evidence shows that access to financial services, and indeed overall financial development, is crucial to economic growth and poverty reduction. Yet in Sub-Saharan Africa, only 1 in 5 households have access to financial services. In 2007, over 70 percent of Kenyan households did not have bank accounts or relied on informal sources of finance. In 2006, there were only 35 bank branches in Benin, a country with a population of 7 million. This lack of formal financial services limits market exchanges, increases risk and limits opportunities to save. Without formal financial services, households rely on informal services that are associated with high transaction costs. Thus, increasing access to formal financial services to the majority of households in developing countries remains an important policy goal. It has also been recognized that even for those with bank accounts, physical distances to branch banks or points of financial service adds significantly to transactions costs.

Traditionally, mainstream financial institutions in developing countries operated under the premise that low-income populations do not save and are bad borrowers, and therefore, institutions that provide services to the poor are essentially unsustainable. However, the microfinance revolution effectively shuttered these myths by demonstrating that when poor households have access to financial services, not only do they save, but, they also have high repayment rates when they borrow. Thus, financial institutions that extend services to those households can be profitable and sustainable. Nevertheless, while microfinance institutions have made financial services available to millions of poor households worldwide, this still represents a tiny fraction of the population in developing countries and the majority lack access to formal financial services. However, the traditional approach of branch-banking requires substantial investments in both infrastructure and personnel, and thus is not an effective in reaching millions of unbanked households, especially those in rural settings.

In Kenya, the last three years have seen dramatic changes in the financial sector landscape. First, commercial banks recognized that lowering barriers to entry (no requirements of minimum balances in opening bank accounts) can increase retail accounts. Second, banks realized that lowering costs of transacting across other bank accounts attracts more customers to open accounts. As a result of these changes, the number of bank accounts has increased from 2.3 million in 2006 to about 6.7 million in July 2009. Equally, deposits increased from Ksh 540bn

(US$ 7.2bn) in 2006 to Kshs 950bn (US$12.6bn) in July 2009. This growth notwithstanding, many Kenyans still do not have access to financial services.

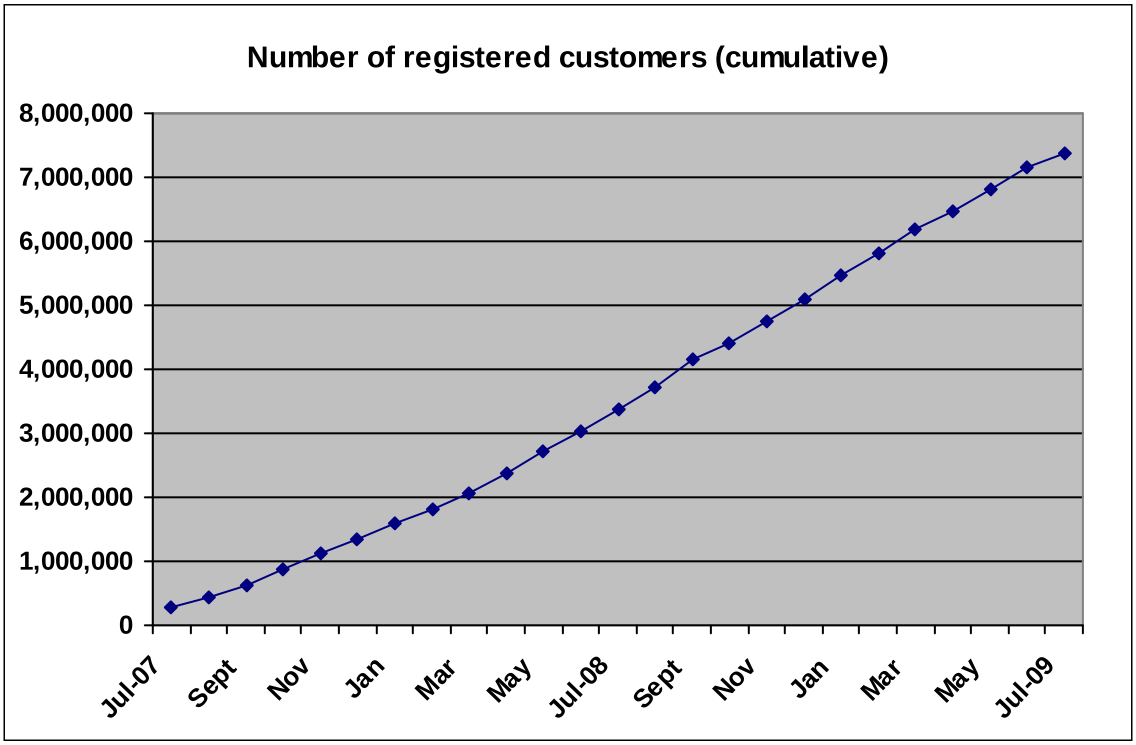
Technological innovations have now made it possible to extend financial services to millions of poor people at relatively low cost. A case in point is mobile telephone money transfer services that allow mobile phone users to make financial transactions or transfers across the country conveniently and at low cost. Kenya's mobile payment service, known as M-PESA, provided by the main mobile phone company, Safaricom in conjunction with Vodafone, represents a good example of how low-cost approaches that use modern technology can effectively expand the financial services frontier. Today, millions of Kenyans use M-PESA to make payments, send remittances and store funds for short periods. Many of those without bank accounts are able to use this service, at low risk and cost. As noted in a recent article in the *Economist* (September 26, 2009), Kenya's M-PESA is probably the most celebrated success story of mobile banking in a developing country. What started as a mobile money transfer has become a success story of financial services development with a technological platform that makes it cost effective and safe.

Innovations that extend non-standard means of financial services to millions hold potential to reach those without bank accounts at low costs, but can also be associated with various risks with the potential to destabilize the financial system. Although M-PESA has expanded at an extremely fast pace, access has not been achieved at the expense of financial stability. In essence, expanding access need not result in instability if appropriate regulatory and supervisory safeguards are in place. Although the success of M-PESA is as a result of a multiple of factors, we make the case that the primary factor is creation of an enabling environment through the establishment of prudent oversight that guarantees the simultaneous achievement of access and financial stability. In addition, investment in background research and continued improvements of the operating platform has ensured safety of the transactions. As other countries seek to expand access to financial services through mobile phone banking, there is need to take into account the possible trade-off between access and financial stability. In particular, regulatory oversight must not lag technological innovations.

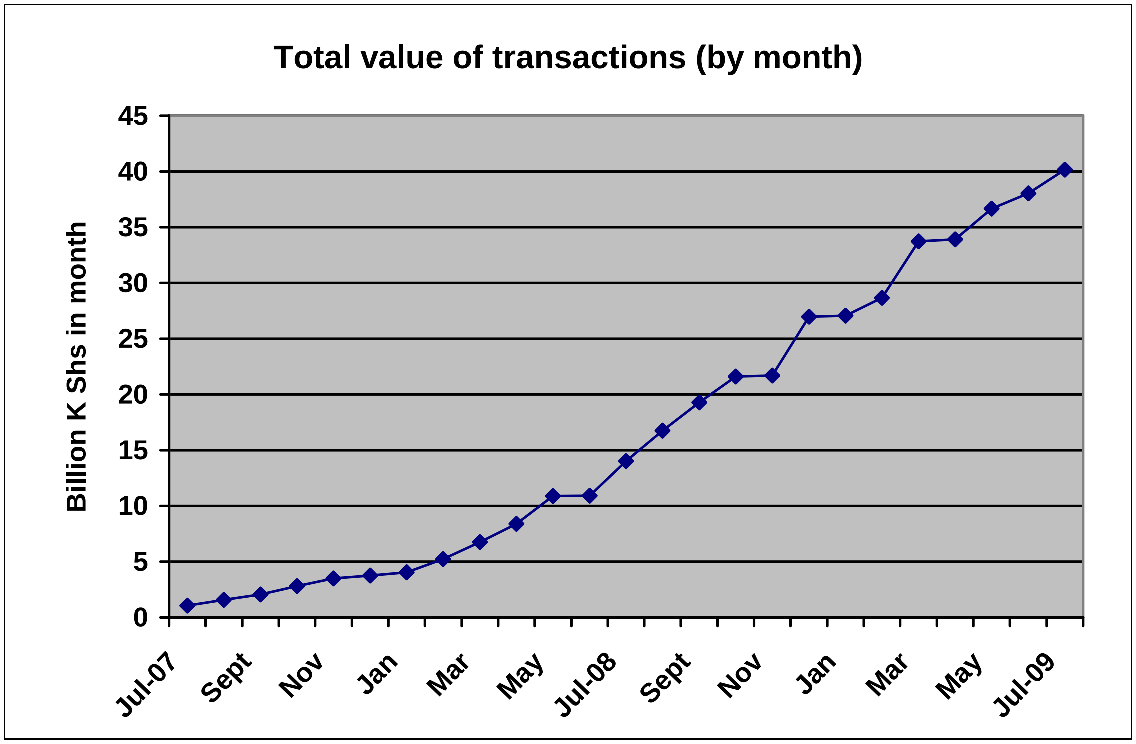
This note highlights the importance of mobile phone banking to Kenya's economy and especially in regard to its success in extending the financial services frontier. The note also discusses policy lessons emanating from the success of mobile banking in Kenya including a conducive environment for business, private sector-public dialogue in the formulation of policy, prudent oversight that keeps abreast of innovations and removal of barriers to entry into both supply of mobile telephone and banking services.

Growth and Significance of Mobile Phone Banking to the Kenyan Economy

M-PESA was introduced in March 2007. At inception, M-PESA operated on one commercial bank platform, but currently it has moved to other banks, which provides evidence that it has led to financial sector growth rather than contribute to risks and instability. In July 2007, there were 268,499 registered M-PESA customers and by July 2009, the number of registered customers was 7,387,980—an increase of 2,652 percent. This is about 21 percent of the population of 35 million covered in a two-year period. Also impressive has been the increase in the number of monthly transactions, which increased by 4627 percent over the same period (354,298 in July 2007 to 16,747,419 in July 2009). In July 2007, the total value of monthly transactions (deposits and withdrawals) was Kenya Shillings 1.065 billion (US$14.2 million). This figure was Ksh. 40.176 billion (US$535.6 million) in July 2009, a growth rate of 3671 percent. These numbers show impressive growth in the utilization of mobile payments within a relatively short period of time. But several factors are important as well: first, the level and speed of adoption has been quite impressive because, perhaps, its safety coupled with financial vibrancy and stability in this period. Second, this is a financial service with low value and high volume, generating substantial returns and creating job opportunities. The minimum payment per transactions is Ksh 35 (US$0.46) and currently there are about 12,300 agents in the country.



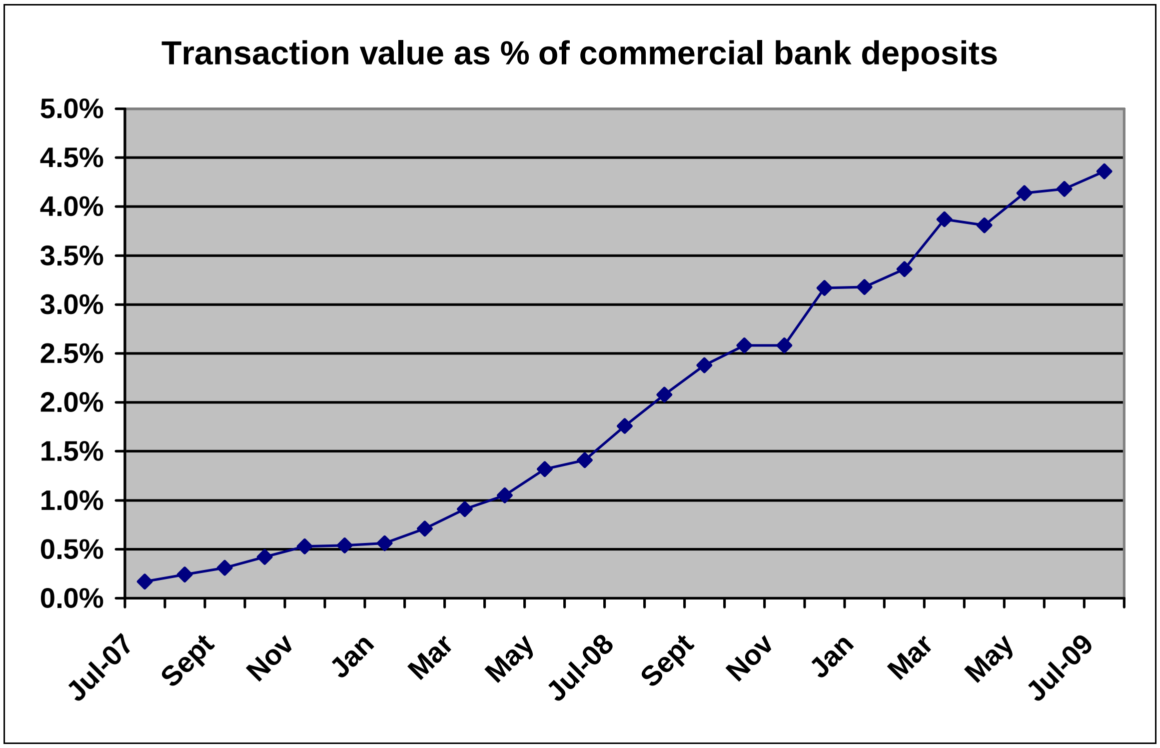
Source: Kimenyi and Ndung'u, 2009. *M-PESA Mobile Banking Statistics*, Central Bank of Kenya.



Source: Kimenyi and Ndung'u, 2009. *M-PESA Mobile Banking Statistics*, Central Bank of Kenya.

The significance of mobile banking to the Kenyan economy is better captured by looking at the value of M-PESA transactions relative to the commercial bank deposits and also the country's GDP. In July 2007, the value of M-PESA transactions was about 0.17 percent of commercial bank deposits. In July 2009, the value of M-PESA transactions was 4.36 percent of commercial bank deposits. Kenya's annual GDP in 2008 was estimated at US$ 30.24 billion. Yet in July 2009, M-PESA transactions during the month of July 2009 alone accounted for US$ 535 Million. Clearly, mobile banking is a significant aspect of the Kenyan economy and this is likely to be even more important as other providers enter the market.

The data also does not show the significant improvements and cost savings associated with using the service. Money transfers to pay for services, including weekly labor in remote parts of the country, have transformed life in rural Kenya and revolutionalized national payments system.



Source: Kimenyi and Ndung'u, 2009. *M-PESA Mobile Banking Statistics*, Central Bank of Kenya.

Lessons From Kenya's Mobile Banking

The Kenyan experience with mobile phone banking is testimony to how technological innovations coupled with a supportive policy environment and appropriate oversight can expand the financial services frontier. Nevertheless, mobile banking in many other countries has not met the success recorded in Kenya. We focus on the lessons emanating from the experience of mobile banking in Kenya.

Conducive Environment for the Private Sector

During the 1990's, Kenya lagged behind some African countries, such as Tanzania, in mobile phone penetration rates. This was primarily because of artificial barriers to entry erected by the government. However, this changed with the government taking a more liberalized stance and making it possible for competitive supply of mobile telephony, especially regarding the dismantling of the state monopoly. The enabling legislation "the Kenya Communication Act" that was implemented by the Communication Commission of Kenya (CCK) has provided an environment that has facilitated reforms in the telecommunications sector and has seen mobile telephony expand exponentially, providing a base for successful mobile banking as a value-added service. The mobile phone penetration rates increased rapidly starting in 2000 while the cost of mobile telephony decreased sharply. In 1999, there were 15,000 mobile phone subscribers. The number of subscribers had increased to 3.4 million in 2004 and to 16 million in 2008. With the rapid growth in ownership of mobile phones, suppliers have exploited the opportunity to compete on various margins. Other aspects of Kenya's private sector environment that has helped in the expansion of the mobile phone market and mobile banking include an increasingly efficient tax system and a stable legal structure governing both domestic and foreign investments. In addition, the policy of the government is to promote and support innovation and the country's current development planning emphasizes the fact that its economic development will be driven by innovation.

Thus, the first lesson for successful mobile phone banking is that developing countries must focus on creating a conducive environment for the private sector in order to attract investors into the mobile phone sector and also ensure that the market is open to competition.

Private-Public Policy Dialogue

A major shift in the way that the government of Kenya approaches policy making has been the opening up to dialogue with the private sector. In the process of introducing new technologies such as M-PESA, the private sector and relevant government authorities (Central Bank of Kenya, Ministry of Finance, Communication Commission of Kenya, and the Ministry of Information and Communication,) have engaged in consultations to ensure that that the providers receive the necessary support from government and also evaluate possible repercussions of new products to the integrity of the financial system. We believe that it is critically important for countries to engage with the private sector.

In implementing policies on mobile telephony and banking in Kenya, the role of private sector advocacy has been appreciated and adequately accommodated by the relevant authorities. Of importance has been advocacy based on well founded research. In this respect, we believe that the input of the private sector in the policy making process is more effective when private sector presents positions that are backed by evidence.

Balancing Access with Stability

Technological innovations in provision of financial services may result in situations whereby the appropriate legislation lags the innovations. One policy approach would be to not allow new products until appropriate legislation was in place. However, given that most often the process of enacting legislation takes a long time, such an approach risks the possibility of stifling innovation and thus undermining access. The other alternative is to allow products into the market and then enact legislation. This approach would achieve the goal of access but could associate with financial instability. In Kenya, the strategic policy choice has been to allow technological innovations in mobile banking, but under prudent monitoring and review to ensure that the integrity of the financial system is maintained. The Central bank of Kenya was proactive in that, together with the Ministry of Finance, it amended the Central Bank of Kenya Act in 2003. This enhanced its mandate whereby section 4 (A) (1) (d) mandates the Bank to "formulate and implement such policies as best to promote the establishment, regulation and supervision of efficient and effective payment, clearing and settlement system." At the institutional level, the Central Bank of Kenya has undertaken various strategies to enhance the oversight capacity effectively keeping abreast of innovation and technologically driven financial services. This has made it possible to increase access to financial services but at the same time maintain stability.

In their desire to expand access to financial services through mobile banking, relevant authorities must seek to balance access and stability. In particular, it would be extremely unwise to expand access at the expense of financial stability and integrity of the payment system. Countries that do not have adequate supervisory capacity of their payment system would be ill advised to allow new technologically-driven financial products and should carefully weigh the potential costs of instability. Some vulnerabilities of mobile phone banking that can destabilize the financial system and lower the efficiency of the payment system include fraudulent movement of funds, network hitches, mismatch of cash balances at the pay points, and problems that associate with high velocity of funds making it difficult to stop suspect transactions.

Ensure a Contestable Market

The rapid expansion of M-PESA reveals that there is a risk that the market could be dominated by initial entrants. Such a result could create uncompetitive outcomes raising consumer protection concerns. In countries where there is only one provider, it would be important for authorities to monitor the pricing of mobile banking services. Nevertheless, the best strategy is ensuring that other providers can enter the market for mobile banking. In Kenya, another company, Zain, has introduced a mobile banking service known as Zap. Other providers are also expected to enter the market. The result is a contestable market where, although there are only a few providers, the threat of entry is sufficient to protect consumers and ensure that pricing is competitive.

Mobile phone banking has opened opportunities for many Kenyans and others in developing countries. The rapid growth of mobile phone banking in Kenya is evidence of the great need for low-cost financial services in developing countries. This growth is expected to continue and to benefit other sectors of the economy and thus contributing to economic growth in the country. The note has highlighted some of the main factors that have contributed to the growth of mobile telephony and successful mobile phone banking. We have also emphasized the fact that such innovations, while extending financial services to many, can also compromise the integrity of the financial system and we have cautioned that relevant authorities must be careful to ensure that oversight capacity does not lag behind innovations.