Expanding Customers’ Financial Options Through Mobile Payment Systems: The Case of Kenya

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Equity Bank in Kenya has made deep inroads in reaching unbanked Kenyan households, amassing US $1.2 billion in customer deposits across 5 million accounts—a 10-fold increase in both accounts and the value of savings in the last five years. But even more than this, M-PESA has turbocharged the client proposition in Kenya by reaching virtually every community through its mobile money system. Mobile money is a particularly promising means to expand access to financial services because it piggybacks off widely deployed infrastructure—the retail shops that exist in every village and every neighborhood and the telecommunications networks that are rapidly being built in developing countries. Mobile money is attractive to customers because it enables them to safely store money in an account, instantaneously send and receive money from friends and family, pay bills and monthly insurance premiums, receive pension or social welfare payments, and receive loan disbursements and repay them electronically. In short, when customers are connected to an e-payment system, their range of financial possibilities expands dramatically.

M-PESA Shows the Promise of Mobile Money

M-PESA in Kenya is by far the most successful mobile money deployment. Since its commercial launch in March 2007, it has been adopted by 12.6 million customers (corresponding to 57 percent of Kenya’s adult population) and processes more transactions domestically than Western Union does globally. A total of US $415 million per month is transacted in person-to-person transfers, equal to 17 percent of Kenya’s 2009 GDP on an annualized basis. There are more than five times the number of M-PESA outlets (19,937) than the total number of postal outlets, PostBank branches, commercial bank branches, and ATMs in the country. William Jack of Georgetown University and Tavneet Suri of MIT recently released results from a panel survey that queried 2,016 Kenyan households in August 2008 and resurveyed them in December 2009. The results show that M-PESA is steadily propagating down market, reaching a majority of Kenya’s poor, unbanked, and rural populations:

- **Adoption of M-PESA has continued to march ahead, going from 44 percent of households in 2008 to 70 percent in 2009.** In addition, since December 2009, when the second round of the survey was conducted, the number of M-PESA customers has grown 40 percent, from 9 million to 12.6 million adults.
- **M-PESA has propagated down market.** The share of poor households that are registered M-PESA users has gone from 28 percent in 2008 to 51 percent in 2009. (Here, the poor are defined as the poorest 50 percent of Kenyan households who earn, on average, about $3.40 per capita per day.) Similarly, the percent of rural households using M-PESA has gone from 29 percent to 59 percent, and the percent of unbanked using M-PESA has gone from 25 percent to 50 percent.
• **Customers’ perceptions of M-PESA are steadily improving.** The percentage of users who trust their agent was 95 percent in Round 2, compared to just 65 percent in Round 1, even while the number of agents quadrupled during the period—from 4,000 to 16,000. Customers reporting delays in withdrawing money fell from 22 percent to 16 percent, and the share of delays attributed to agents running out of liquidity fell from 70 percent to 30 percent. When asked about the hypothetical impact of M-PESA closing down, 92 percent of customers said that it would have a large and negative effect on their lives, up from 85 percent.

• **M-PESA users are increasingly using it to save.** The percentage of users who use M-PESA to save has gone from 76 percent to 81 percent, and the percentage who save for emergencies has gone from 12 percent to 22 percent. Most of the uptick in saving behavior is due to early adopters saving more over time. This indicates that as users get familiar with the product, they are more likely to use it as a savings tool.

• **M-PESA helps users deal with negative shocks.** The researchers find that households that have access to M-PESA and are close to an agent are better able to maintain their level of consumption expenditures, in particular food consumption, in the face of negative income shocks such as job loss, livestock death, harvest or business failure, and poor health. On the other hand, households without access to M-PESA are less able to absorb such adverse shocks. The researchers have been careful to rule out explanations based on mere correlation and are currently investigating the precise mechanisms that underlie this ability to spread risk.

From a global perspective, it remains to be seen whether mobile payment systems can achieve M-PESA-like levels of customer adoption and usage outside Kenya. Kenya provided fertile grounds for mobile money due to many factors, including demand-side conditions (a high percentage of split families, which fueled demand for domestic transfers; poor alternatives for sending and receiving money), supply-side factors (a dominant mobile operator with 80 percent market share; reasonably extensive bank branch infrastructure to support agent liquidity management), and regulatory factors (a central bank that took the objective of financial inclusion to heart). The task now is to determine whether mobile money systems can scale in countries where some of these factors are weaker.

**Moving From Electronic Transactions to Savings**

While access to a safe and convenient e-payment system may, on its own, increase household welfare, e-payments are not the end goal. Instead, we believe that the propagation of a front-end, merchant-based e-payment platform is an efficient means for offering a fuller range of financial products to poor households. In May 2010, Equity Bank and M-PESA announced a joint venture, M-KESHO, which permits M-PESA users to move money between their M-PESA mobile wallet and an interest-bearing Equity Bank account. Account holders can also tap into loan and insurance facilities. Three months after the launch of M-KESHO, 455,000 customers have opened accounts, though activity on these accounts remains low. M-PESA reached this number of clients after five months, meaning that initial uptake of M-KESHO has been faster than that of M-PESA.

The early success of M-KESHO suggests that savings and other financial services may be a natural next step once transaction “rails” are operating well. It creates an opportunity to offer customers a range of financial services on the biggest mobile money platform in the world and stands to benefit from having two very powerful Kenyan brands drive awareness and mass marketing on an unprecedented scale.
Questions About the Viability of M-KESHO

M-KESHO’s ultimate success depends on a number of unanswered questions:

- **Customer convenience** – Will customers see sufficient value in the new account to compensate for 1) the administrative trouble of moving money between their M-PESA or Equity Bank account and the M-KESHO account, and 2) the extra cost of withdrawing funds from the M-KESHO account?
- **Marketing** – How heavily will Safaricom and Equity Bank promote the jointly branded M-KESHO product relative to their own products?
- **Credit scoring** – The quality of Equity’s credit scoring model will play a big role in determining the attractiveness and profitability of the product. How reliable will this transaction-based credit scoring model be in judging the creditworthiness of M-KESHO customers?
- **Down-market penetration** – It remains to be seen whether Equity can leverage the M-PESA platform to profitably process savings transactions as low as $2 (i.e., conducive for daily savings). This will likely depend on the ability of M-PESA and Equity to limit the cost of merchant commissions on small-value deposits and withdrawals, perhaps by creating a class of street-level “subagents,” characterized by transaction limits and commissions that are lower than those of store-based agents.

### Expanding Financial Access in Kenya

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<th>Year</th>
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<th>Formal</th>
<th>Formal other</th>
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1 Equity Bank data are as of June 30, 2010, [http://www.equitybank.co.ke](http://www.equitybank.co.ke). Historical Equity bank data are from [www.mixmarket.org](http://www.mixmarket.org).

2 Mobile penetration in Africa has increased from 4 percent in 2002 to 51 percent today and is expected to reach 72 percent by 2014, according to Wireless Intelligence, [www.wirelessintelligence.com](http://www.wirelessintelligence.com).


4 GDP figure is from the World Development Indicators database, World Bank (July 2010).


8 M-KESHO data is as of July 31, 2010, [www.safaricom.co.ke](http://www.safaricom.co.ke).

9 FinAccess Survey, Financial Sector Deepening Trust-Kenya (2009). “Formal” is defined as individuals who use a bank, PostBank, or insurance product. “Formal other” is defined as individuals who use services provided by mobile payment providers and nonbank financial institutions, such as savings and credit cooperative societies (SACCOs) or MFIs. “Informal” is defined as individuals who do not use any “formal” or “formal other” products but use informal financial service providers, such as accumulating savings and credit associates (ASCAs), rotating savings and credit associations (ROSCAs), and groups or individuals other than family and friends. “Excluded” is defined as individuals who use no formal, formal other, or informal financial services.