USAID
FROM THE AMERICAN PEOPLE

Kenya Case Studies in e-Payments

November 2011
This report was produced for review by the United States Agency for International Development. It was prepared by Accenture Development Partners under the Global Broadband Initiative. The author of the report is Loretta Michaels.

EXECUTIVE SUMMARY

Mobile technology has spread throughout the developing world in the last dozen years faster than any other technology in history. With that growth has come an equally impressive surge of messaging services, providing not just a broadly used means of personal communications, but also a number of valuable information services, from agricultural data reports to healthcare reminders. The latest phenomenon that has been spawned by mobile technology is mobile money, providing money transfer services to millions of previously underserved people in the developing world, allowing them to safely send money and pay bills for the first time without having to rely exclusively on cash.

The world leader in mobile money is Kenya, where mobile network operator Safaricom launched M-Pesa in 2007. Four and a half years after launch, there are approximately 16 million users of mobile money in Kenya, conducting over 2 million transactions every day. M-Pesa is not only being used for standard money transfers and airtime purchase, but is being used to pay salaries, utility and other bills, and buy goods and services at both online and physical merchants. Three other mobile operators have also begun to offer mobile money services in Kenya – Airtel, Orange, and Essar (Yu) – and other players have recently emerged to offer complementary services. What's more, many aid donors and their implementing partners have already begun to integrate mobile money into their programs and are at the forefront of this learning opportunity.

Given this unique learning laboratory for the use of mobile money, both generally and within aid programs, Kenya was chosen for a field visit by United States Agency for International Development (USAID) staff to better understand the use of mobile money today within USAID's programs. The purpose of the trip was to interview partners to identify the various ways they were using mobile money and determine the key benefits and challenges they faced, with a view to forming an opinion of how USAID/Kenya might best support both the sector and its implementing partners in their efforts.

A separate assessment report was drawn up outlining the current state of the Kenyan mobile money sector, how USAID's partners are using mobile money, and suggestions for USAID/Kenya on how it might further support the sector. This document describes four case studies on the use of mobile money in Kenya, covering use by a government ministry (The Ministry of Lands), an NGO implementing partner of USAID (PACT), a governmental non-profit institution (Kenya National Examinations Council), and a small microfinance institution that provides financing and technical advisory services (Juhudi Kilimo). The purpose of these case studies is to illustrate how each of the users are leveraging mobile money and the benefits derived by moving from cash to electronic payment

TABLE OF CONTENTS

ACRONYMS

ABEO	Agriculture, Business & Environment Office
API	Application Programming Interface
B2P	Business-to-Person
CBK	Central Bank of Kenya
CALP	Cash Learning Partnership
DG	Democracy and Governance
EFT	Electronic Funds Transfer
ERP	Enterprise Resource System
FI	Financial Institution
GSM	Global System for Mobile Communications
ICT	Information and Communications Technology
m-banking	Mobile Banking
MFI	Microfinance Institution
MIS	Management Information System
MOF	Ministry of Finance
MNO	Mobile Network Operator
NGO	Non-governmental Organization
OFDA	Office of Foreign Disaster Assistance
OPH	Office of Public Health
P2B	Person-to-business
P2P	Person-to-Person
POS	Point of Sale Terminal
RTI	Research Triangle Institute
SACCO	Savings and Credit Cooperative Society
SIM	Subscriber Identity Module
SME	Small and Medium-scale Enterprise
SMS	Short Message Service
STK	SIM Toolkit
USSD	Unstructured Supplementary Service Data
USAID	United States Agency for International Development
WAP	Wireless Application Protocol

ANALYSIS OF CURRENT ACTIVITIES IN ELECTRONIC PAYMENTS

When it comes to making electronic payments in Kenya, there are a handful of options available to people, primarily: checks, electronic funds transfer (EFT), ATM, cards (debit and credit) and mobile money[1]. While very large payments, over Ks 1 million, have to be routed via the Kenya Electronic Payment and Settlement System (KEPSS[2]), and many others are conducted via bank-to-bank EFT, the vast majority of transactions in Kenya, in terms of volume, are conducted via the M-Pesa mobile money system (see Table 1, next page).

The government has embarked upon a comprehensive modernization effort in its Payment System in recent years, in particular: introducing check truncation for purposes of reducing check clearing times (from the current four days to two) and requiring all transactions greater than Ks 1 million to be routed via the KEPSS. Their goals are to improve the security and convenience of the system by stopping the use of high value checks and EFTs through the Nairobi Automated Clearing House (ACH). Instead they want to keep the ACH a low value, high volume system, moving very high transactions to KEPSS. The new KEPSS system will allow the public and banks to pay and receive large value, time-critical payments on a real-time basis rather than have to wait for clearing procedures.

As stated earlier, in terms of volume of transactions, mobile money is dwarfing other payment methods and continuing to grow. Mobile money has strict value limits on how large a single transaction can be (around Ks 70K, or $700, for Person-to-Person (P2P) and Ks 100K, or $1K, for Business-to-Person (B2P) 3), along with mobile wallet balance limits; in fact, the vast majority of mobile money transactions are quite small, averaging Ks 300-400 for P2P, with most transactions falling under Ks 1K.

While the growth of mobile money payments has been remarkable, there's little evidence that it's replacing other methods of electronic payment. Transaction volumes are increasing across the range of payment methods, with total value of transactions dropping slightly for ACH transactions; this is to be expected as high value transactions are now routed via KEPSS. For low value and remote transactions, where the cost of bank transfers can be prohibitive and branches are some distance away, the service of choice today in Kenya is mobile money.

[1] Other means of payment, though somewhat narrower in scope, include POS, MFIs and SACCOs.
[2] Kenya Electronic Payment and Settlement System, Kenya's real-time gross settlement (RTGS) system
[3] P2P = person-to-person, B2P = business-to-person

Table 1.1: Non-Cash Payment Options in Kenya

	FY 2009/2010	FY 2010/2011	% change
Mobile Money Transactions	251.25 M	364.06 M	44.9%
Mobile Money Transaction Value	Ks 597.31 B	Ks 919.22 B	53.9%
Automated Clearing House Transactions	25.036 M	28.655 M	14.4%
Automated Clearing House Value	Ks 2,321 B	Ks 2,284 B	- 1.6%
Checks	15.73 M	16.71 M	6.2%
Checks Value	Ks 1,954,000 M	Ks 1,939,000 M	- 0.76%
KEPSS Transactions	390,737	904,717	131.5%
KEPSS Transaction Value	Ks 13,925,385 M	Ks 17,100,725 M	22.8%
Postbank Express (newly launched[4]) – Branches + Outlets		92 + 380	
ATMs	1,943	2,183	12.4%
ATM Transactions	177.23 M	225.63 M	27.3%
ATM Transactions Value	Ks 947,210,000 M	Ks 1,178,910,000 M	24.5%
ATM Cards	1,252,893	1,439,729	14.9%
Debit Cards	4,156,187	7,002,091	68.5%
Credit Cards	111,383	117,835	5.8%

Source: CBK 2010-2011 Annual Report

[4] Kenya Post Office Savings Bank, wholly owned by the Government of Kenya, started in 1910 as Savings Bank and is only allowed to have savers but not borrowers, meaning it cannot use deposits of over 1.3 million accounts to generate profits. In the absence of a lending business, Postbank has been expanding not only on savings products but also on channels for delivering their services. The firm has such services as cash collection, payments of salaries and pension, safe custody and has links with money transfer services. They have also partnered with Western Union, MoneyGram and M-Pesa.

The success of mobile money in Kenya has been nothing short of phenomenal. In four years, a country with only 1,072 bank branches has seen the number of agent outlets providing mobile money service grow to 46,000. People have access to financial services as never before, such that the proportion of the population which is completely excluded from financial services is lower in Kenya than any other African country except for South Africa. The key drivers of this financial inclusion in Kenya, most notably around Safaricom's M-Pesa and Equity Bank, center on a very supportive regulatory regime, innovative business models and technological advances in the mobile phone sector.

M-Pesa has made a huge difference in the lives of the poor who have traditionally been excluded from the formal banking system. Bank products and fees have not typically catered to very low-income earners, nor have the poor felt the need or ability to use EFT. Culturally the poor have not felt welcome in banks. As a result, most low-income Kenyans have operated on a cash-only basis, with little or no savings and no means of developing a credit history. A key financial transaction for many of Kenya's citizens in recent years has been for a worker in Nairobi to send money home to family members remaining in home villages. The primary options for doing this have been via bank or postal transfer or to ask someone to carry it for them, either a friend or a taxi or bus driver, at high cost and high risk. (For small amounts, the fee as a percentage of amount sent can be higher than 35% due to the high minimum fees charged for every transfer[5].) The introduction of the M-Pesa[6] service in 2007, focused on the marketing slogan of "send money home," touched a nerve and filled a big gap in the market. Kenyans consider M-Pesa a cheaper, faster and safer option for sending money, and one that is considerably more accessible than other options out there, such as bus, taxi, PostaPay or bank branches (see Figure 1, below). The fact that M-Pesa was launched by Safaricom, a highly trusted and popular brand in Kenya with about 80% of the cellular phone market at the time, only helped to support its rapid growth.

Kenyans consider M-Pesa a cheaper, faster and safer option for sending money, and one that is considerably more accessible than other options out there, such as bus, taxi, PostaPay or bank branches (see Table 2, below).

Table 1.2: Cost Comparison of Money Transfer Fees

	M-Pesa	Postapay	Check Clearing	EFT
Cost of a money transfer	Ks30	Ks150	Ks100	Ks50-300*

** EFT charges range from Ks50-100 within the same bank, and Ks300 for transfer to different banks.*

Currently, about 16 million Kenyans use mobile money to send money, pay bills, cover expenses, and buy goods. Besides money transfer and bill pay, it is estimated that 75%

[5] Kabbucho, Sander and Mukwana, "Passing the Buck – Money Transfer Systems: The Practice and Potential for Products in Kenya," Microsave-Africa, May 2002

[6] "m" for mobile, while "pesa" means money in Swahili

of M- PESA users also save at least some money in their M- PESA account, citing reasons of ease (45%) and safety (26%) as the major factors[7].

Organizations are also increasingly using M-Pesa for small payments, formally and informally, particularly in rural areas. Kenyan microfinance institutions (MFI) and insurance companies are increasingly using M-Pesa for cash disbursement and repayment; businesses, government and NGOs are using it for cash transfers, procurement and salary payments. Merchants are also using it for purchases, both for its convenience as well as its cheaper fee structure (M-Pesa charges 1.5% to the merchant, versus 3-4% on the part of most credit cards).

For remote bulk payments, where bank branches are a long distance away or non-existent, organizations have typically had few options available. One is to hire an armored vehicle and security staff to transport the cash to its intended location and have additional staff on hand at the other end to supervise its distribution to recipients. The other is to have a central office staffer, often a finance officer/staff member, carry with them large amounts of cash out to the field, with the same issues of physical distribution and security at the other end. In both scenarios, the organization incurs a number of costs and security challenges, including vehicle hire, high fuel costs, the cost of sending staff members out (including opportunity costs of having them away from the office), and the cost of extra staffing where needed for security. In addition, there was a clear, palpable discomfort among staff associated with handling large amounts of cash, especially in rural areas, as they frequently ran the risk of harassment. In recent years some banks, particularly Equity Bank, have offered cash distribution services in remote areas, but in these cases they've had to deliver the money to the nearest branch in the nearest town, meaning the partner organization still faced a number of "last mile" delivery and distribution requirements and the associated costs.

The value proposition for use of M-Pesa by organizations focuses on a number of benefits, including reduction of cash "leakage" and corruption; increased operating efficiencies, including less paperwork and better transparency and accountability via the electronic records; and more independence and self-sufficiency for users. In terms of quantitative measures, organizational users of mobile money are reporting reduced cost of cash disbursement compared to other current options, such as cost of cash handling and associated security, reduced staff costs and better utilization of staff.

The last two years have seen a series of banks offer services that link their personal and corporate accounts to Safaricom's M-Pesa accountsto provide comprehensive payment services to their corporate customers. These linkages vary from account information and transferring value from one account to another, to banks offering to handle all intermediation between their client's accounts and any Safaricom services they wish to access. Some banks are even offering to cover any risk or costs involved should funds be

[7] Jack William and Tavneet Suri, "The Economics of M-PESA", MIT, August 2010.

sent to the wrong mobile money account.

One area of discussion and concern amongst regulators and bank managers is whether the success of M-Pesa has led to it displacing bank accounts or otherwise hurting the banking sector. Some of this concern is competitive posturing by the banks, but it is a topic that policy makers pay close attention to as they monitor the sector. There's been little evidence to date, however, that mobile money accounts are replacing existing bank accounts. Mobile money services have cash transaction limits that prevent the service from being used for high value transfers, so individuals and businesses are continuing to use their bank accounts at the same rate as always. EFT is still the primary means of most higher value money transfers[8], particularly for businesses and organizations, and any organization that wishes to use mobile money to disburse salary or expense payments still needs to have a bank account linked to that mobile money account.

Rather than hurting the banking sector, the mobile money sector has in fact had positive effects on banks, according to many observers. When M-Pesa took off, a large amount of liquidity that had been sitting as cash was routed and accounted for in the banking system, boosting bank liquidity[9]. Additionally, a number of organizations that use mobile money services with their constituents are opening up joint mobile money/bank accounts for them (e.g., via M-Kesho, a service of Equity Bank and Safaricom). These new accounts are increasing business for the banks and opening up opportunities at the low end of the market, a sector that banks have traditionally ignored. However, the banks still have to develop and offer services that specifically cater to low-income customers if they're to succeed in this space. Simply adding a mobile channel on to existing services will not assist in market growth for bank accounts if they are not designed to meet the needs of the low-income customer. One area where banks do have a valid concern is where joint accounts are opened at the very low end of the market, largely for humanitarian cash transfers at the moment, and the recipients are merely using the M-Pesa wallet and not the bank account that was opened for them. How the banks address this issue is difficult to predict for a target population with so little wealth, but many observers believe the overall opportunity is the banks' to lose at this point if they don't design services suited to the poor.

As stated earlier, many if not most banks in Kenya are now linking up with mobile money systems in partnership with the MNOs, offering joint accounts, bulk payment services, merchant payments, and information services. In these cases the banks work with the organization to validate their customer or employee data with the MNO, handle the transfers between the client bank account and the MNO, manage all record

[8] Very high value transfers, typically bank to bank, must be routed through the Kenya Electronic Payments & Settlement System (KEPSS), Kenya's real time gross settlement system (RTGS)

[9] M-Pesa agents must all have bank accounts from which to buy and sell e-value from the M-Pesa system, and all M-Pesa balance accounts are held in pooled trust accounts at prudentially regulated banks.

keeping between the various accounts and often take on the risk of any incorrect transfers. And they are doing it all for a “small” fee. Banks have shrewdly seen that many client organizations want support in dealing with the minutiae of bulk mobile money accounts, and that support was not forthcoming from MNOs, especially Safaricom. Given the growing prominence of mobile money use in Kenya amongst organizations, this particular business opportunity is one that banks will only continue to exploit and grow.

GOVERNMENT OF KENYA CASE STUDY: MINISTRY OF LANDS

WHO

The Ministry of Lands is charged with formulating and implementing land policy, undertaking physical planning, registering land transactions, conducting land surveys and mapping, land adjudication and settlement, land valuation and administration of state and trust land. It has four main departments, which include Lands, Physical Planning, Survey and Land Adjudication and Settlement.

PAYMENT FUNCTIONS

As part of its mandate, the Ministry of Lands has a number of areas where it must process and receive payments from constituents:

- processing and issuance of land titles
- registration of land transactions and other legal documents
- arbitration of land and boundary disputes
- valuation of land for various purposes
- generation and collection of land revenue and other charges

In recent years, the government has faced a number of scandals around fraud and corruption at the Ministry of Lands[10,11]. The manual processes involved people having to physically visit the land offices to find out how much they were supposed to pay. Initially, people had to get demand notices from the ministry then pay rates through banks or check to the Kenya Revenue Authority (KRA). Stamp duty, payable to the Commissioner of Domestic Taxes, is charged upon the change in property ownership at the rate of between 2% and 4% of the value of the transaction. Managing the manual process was hectic and time consuming due to the growing volumes of paper, which involved processing and retrieving the relevant information. Depending on the parcel of land and how it was registered a person would pay the land rates at the district level or at the national level where the records are held.

Given the long timeframe around the process and the many layers of individuals involved along the way, it became increasingly clear to investigators that the manual processing payments allowed lands officials to issue confirmation of levy payments to customers without the government receiving any money. The manual system also made it difficult for the Lands ministry to take legal action against defaulters since most defaulters took advantage of the long time it took for the government to prepare the demand notices.

[10] "Kenyan Land Buyers Lose Millions in Sham Ardhi House Deals," Business News, July 27, 2011

[11] Land Officials Face Court Charges Over Fraud," Business Daily Africa, July 6, 2011

ELECTRONIC PAYMENT SOLUTION

The Ministry of Lands embarked on an overall digitization effort in the last year, to allow for fully automating the land registry system. In the initial stages of the effort, the Ministry put in place measures to seal revenue collection loopholes, such as the introduction of franking machines in August 2010.

Manual filing systems are being replaced by an electronic platform with automation already in process as land data from districts has been fed into a centralized system based in Nairobi. With the integrated Lands information and communication technology (ICT) system, starting next year certificates for payment of land rates will be processed in three days, as compared to the current timeframes of about five months for owners to get confirmation. The automation will harmonize the departments, solving the problem of confusion and corruption cases that existed within the Lands ministry and making the process far easier and convenient for users. The ministry is also in the process of transferring the payment accounts from KRA to the ministry, removing a step in the process that added to the accountability problems.

The Ministry also rolled out an electronic payment system, which has sped up service delivery and allow for payment of rates through mobile money transfer systems[12]. Land rates can now be paid through mobile money transfer services such as M-Pesa with records kept online ensuring accuracy, making it easier to make projections on annual revenue and actual collections and to track defaulters. The ministry said users can establish what they owe in land rates through the online system and pay by mobile money transfer services at Sh5 above the normal short messages services (SMS) rates. Those who will use the system will have to be issued with special account numbers against their land reference numbers for payment of the rates.

BENEFITS

- **Increase in revenue collection**. The Ministry recently announced that since the introduction of the franking machines in 2010, that revenue collection had risen from an average daily collection of KSH18 million to KSH40 million today. Overall, revenue in the Ministry of Lands has risen from a KSH800, 000,000 in the 2006/007 financial year to over 8billion in the 2010/2011 financial year.
- **Greater convenience for users.**
- **Increasing transparency and accountability.**
- **Reduction in paperwork.**

[12] "ICT Set to Boost Efficiency at Lands Ministry," Business Daily Africa, May 21, 2010

USAID IMPLEMENTING PARTNER CASE STUDY: PACT KENYA

WHO

PACT is a USAID Democracy & Governance partner running the Kenya Civil Society Strengthening Program. PACT's core activities include workshops, focus groups, training and support to organizations around conflict resolution.

PAYMENT FUNCTIONS

PACT's cash needs around its program operations include per diem and travel reimbursements for workshop and training participants. Previously, PACT would send a finance staffer from headquarters into the field for each workshop, to carry cash and obtain confirmation & receipts of disbursements. (These workshops average around 50 participants.) The finance staffer would usually be gone for about three days while attending the workshops. PACT states that the costs involved in making payments to the workshop attendees included the following:

- Salary for Finance Staffer (3 days) Ks 6,000
- Vehicle Hire Ks 7,000 /d
- Fuel Ks 12,000
- Accommodation Ks 7,500
- **Total Cash Disbursement Costs: Ks 46,500**

ELECTRONIC PAYMENT SOLUTION

PACT started using mobile money service M-Pesa in August 2011 to pay workshop participants. The NGO decided to work with their bank, CBA, to engage with Safaricom to disburse workshop payments via M-Pesa accounts. PACT would first input the names and phone numbers of the payment beneficiaries, along with payment values, and submit that data to CBA. CBA would than verify the information with Safaricom to ensure that the phone numbers were indeed Safaricom customers and had M-Pesa accounts. Once verification is completed, PACT issues the payment order, which CBA confirms. CBA will then issue transaction records of the payments made, along with the Safaricom confirmation codes showing that the value was transferred to that M-Pesa account. The costs PACT for issuing workshop payments via the M-Pesa system are as follows:

Transaction Fees of Ks 75/transaction for 50 participants **Ks 3,750**

BENEFITS

- **Cost reduction of over 90%** for paying workshop participants
- **Reduction in staff risk** by eliminating travel with cash
- Simplified payment process

GOVERNMENTAL NON-PROFIT CASE STUDY: KENYA NATIONAL EXAMINATIONS COUNCIL (KNEC)

WHO

KNEC was established by the Government of Kenya in 1980 through an Act of Parliament as a non–profit institution, charged with administering national examinations. KNEC administers primary, secondary, tertiary and foreign examinations. Kenya has 40,000 primary schools and 20,000 secondary schools, not including privately run schools.

PAYMENT FUNCTIONS

All government and private primary schools must go through the Kenya Certificate of Primary Education (KCPE), the standard exam for all primary students. The exam takes place over three days in November every year. The students answer multiple-choice questions as well as write composition papers in English and Kiswahili. The multiple-choice examinations are automated and hence do not need examiners to mark the papers. However the composition papers need examiners, checkers and supervisors. The marking of the papers takes place in boarding schools. The boarding schools have to be paid by KNEC for using the facilities.

Each primary school needs a minimum of 2 invigilators and 1 supervisor. This is assuming the school has only one class. In most cases the schools have at least 3 classes, in which case at least 6 invigilators and three supervisors are needed for the 3-day period of exams. In addition to the invigilators & supervisors there are additional makers, checkers, examiners and supervisors for the composition papers. Secondary school exams run over a month-long period, after which the additional markers, checkers, examiners and invigilators are needed for an additional month to mark exams.

Since its inception all KNEC payments to invigilators were made in cash, which had to be delivered to all the schools for onward payments or to the district education officer (DEO). The DEO would then use a list to make payments to the teachers as they came in for payment.

Cash was mainly delivered to schools by vehicles. However, the examinations occur during the short rains. In the extreme terrains of the country, where vehicles could not get through, the cash had to be flown. This cost varied but the minimum charge for air charter was not less than Ks 1 Million per delivery.

Insurance is taken out on the cash, but this is only valid while the cash is in transit. Once the cash is delivered, the insurance lapses. Additional insurance is needed when cash is in the DEO's office or an examination center. Insurance is charged at 1% of the value of the amount held at the premises. In addition, the premises needs to be secured (this was not always the case). This meant holding the money at the DEO's premises without

insurance. A breakdown of the payment volumes and costs involved is shown in the tables below.

Table 2.1: Primary School Payments Breakdown

	No of Staff Required	No of Primary Schools in Kenya	Total No of Payments
Average No of Invigilators	6	40,000	240,000.00
Average No of Supervisors	3	40,000	120,000.00
		Total KCPE Payments	**360,000.00**

Table 2.2: Secondary School Payments Breakdown

	No of Staff Required	No of Secondary Schools in Kenya	Total No of Payments
Average No of Invigilators	4	20,000	80,000.00
Average No of Supervisors	1	20,000	20,000.00
		Total KCPE Payments	**100,000.00**

Table 2.3: Cash Transfer via Road

Description of service/product	Fee
Cash In Transit	Ks 3600 + VAT per per trip within a municipality. Any delivery beyond a 20 Km radius from a city centre is charged an additional Ks 115 per KM.

ELECTRONIC PAYMENT SOLUTION

KNEC decided to use CfC Stanbic Bank to implement a mobile money service for their payment needs. Stanbic worked with mobile network operators Safaricom and Airtel to develop a bulk payment solution for KNEC, whereby KNEC sends payment instructions to the bank with the names of the beneficiary, the phone number and the amount to be paid, and the bank transmits the instructions to the mobile money service providers to transfer the payments to the beneficiaries' phones. Mobile payments happen instantly and beneficiaries receive a text telling them that they have received a payment from KNEC via CfC Stanbic Bank in the amount noted. The bank then sends KNEC a reconciliation report that shows all successful transfers; if some transfers are unsuccessful, the report shows the specific reason for the failed transaction. A cost comparison of the manual cash delivery versus mobile payment systems is noted below.

Table 2.4: Cost Comparison for Payments

Cash Cost for Primary Schools	Total Cost	Mobile banking for Primary Schools	Total Cost
Cash In Transit Cost @ 3600 + VAT - Over 200 trips needed	10,440,000.00	200,000 transactions @ 50 per transaction	10,000,000.00
Air Charter - Min is Ks 1 M.	1,000,000.00		
Insurance - 1 % of the amount Kes 500 M	100,000,000.00		
Total Cost	**55,720,000.00**	**Total Cost**	**10,000,000.00**
Cash Cost for Primary Schools	**Total Cost**	**Mobile banking for Primary Schools**	**Total Cost**
Air Charter * depends if they need one		100,000 transactions @ 50 per transaction	5,000,000.00
Insurance - 1 % of the amount Ks 500 M	55,720,000.00		
Total Cost for Cash Transfers	**111,440,000.00**	**Total Cost for Mobile Banking Transfers**	**15,000,000.00**

BENEFITS

- **Cost reduction of over 86%** for distributing payments.
- **Simpler, faster** payment process.
- Greater **convenience** for beneficiaries, who can access their cash, 7 days a week, at any M-Pesa or Airtel Money agent, or at Pesa Point ATMs. Beneficiaries also do not need to have a bank account to get paid.
- **Reduced risk** of cash handling.
- **Enhanced security** of payment process, including an encryption tool at KNEC sites to ensure no unauthorized changes to payment instructions.

MICROFINANCE INSTITUTION CASE STUDY: JUHUDI KILIMO MFI

WHO

Juhudi Kilimo is a social enterprise and ABEO partner that provides asset financing and technical assistance to smallholder farmers and small-to-medium agro-businesses throughout Kenya. Juhudi operates exclusively in very rural areas, giving smallholder farmers access to the tools they need to scale up and succeed.

Juhudi maximizes the benefit of its asset financing by providing both technical assistance and business training. Prior to each loan, officers visit the client's farm to perform a business assessment and advise on improvements. The first four meetings of a new group are then devoted to training clients on basic finance and business. After a loan is approved officers give continued support, working with partners and local government ministries to offer targeted technical assistance on assets.

PAYMENT FUNCTIONS

Juhudi's cash payment needs largely focus on loan disbursement and repayment from clients. Given the very rural nature of its business and clientele, there is typically little access to bank branches or post offices. Juhudi used to send check and/or cash via courier to disburse loans, requiring customers to travel to bank branches to collect their funds. Repayments were then pooled by the group and taken back to a bank branch.

ELECTRONIC PAYMENT SOLUTION

Juhudi now uses mobile technology to collect payments and feedback and reduce the burden on clients in these remote areas. They use the M-Pesa system, both its Bulk Payments and its Bill Pay services, to allow disbursement and repayment of loans. A cost breakdown of fund disbursement and repayment before and after employing the M-Pesa system is outlined in the table below.

Table 3.1: Juhudi/Client Disbursement Costs: with and without M-PESA

Disbursements (Ks per transaction per client)					
Without M-PESA (cheques)			**With M-PESA**		
Juhudi	Cheque clearing charge	100	Juhudi	Cost of transfer	50
Juhudi	Courier charges	60	Juhudi	Head Office processing	5
Juhudi	Head Office processing	10	Client	Cost of cash withdrawal or onward transfer	150
Juhudi	Field Office delivery	5	Client	Travel to agent	10
Client	Travel to Bank	120			
Client	Cheque clearing charge	300			
Total		595	Total		215

Table 3.2: Juhudi/Client Repayment Costs: with and without M-PESA

Repayments (Ks per transaction per client)					
Without M-PESA (bank deposits- group pooled)			**With M-PESA (individual payroll transactions)**		
Juhudi	Back office data entry	20	Juhudi	Cost of transaction	20
Client	Travel to bank (group pooled)	20	Client	Cost of transaction	10
			Client	Cost of SMS confirmation	10
			Client	Travel to agent	10
Total		40	Total		50

Table 3.3: Juhudi Disbursements/Repayments Costs

Juhudi	Without M-Pesa	With M-Pesa
Disbursements	175	55
Repayments	20	30

Table 3.4: Client Disbursements/Repayments Costs

Client	Without M-Pesa	With M-Pesa
Disbursements	420	160
Repayments	20	30

BENEFITS

- **Net cost reduction to Juhudi and Clients of over 56%** for disbursing and collecting payments
- Faster loan disbursement (money transferred in 2 days from application submission, versus 7 days currently)
- Reduced distance (and risk) for 'cash in transit'
- Real time back office processing (average posting time cut down from 5 days to 5 minutes)
- Zero errors in back office processing
- Reduced distance (and risk) for 'cash in transit'

FINAL ANALYSIS AND CONCLUSIONS

Moving from cash payments to the use of mobile money has clearly had beneficial impacts on the organizations using it. While some of the benefits are also a result of other efficiency improvements, like in the Ministry of Lands example, the improvements in payment delivery are immediately obvious to the groups that choose to employ mobile payment solutions over cash. These benefits include cost reduction, efficiency improvements, greater convenience for beneficiaries, improved revenue collection and enhanced security compared to cash. For small companies like KickStart, the opportunities presented by being able to develop innovative mobile payments solutions for their customers are promising.

Because mobile money corporate payment services have only been around in Kenya for a few years (just one year in the case of bulk payments), it's early days yet in terms of collecting comprehensive cost-benefit data. Judging from the many examples, however, it seems apparent that there is a large opportunity to improve payment mechanisms via the use of mobile money, particularly in rural and remote areas. While the goals of Kenyan policymakers include bringing all citizens into the formal financial system (which would entail giving everyone a bank account), achieving this goal is a long term process that may or may not prove feasible. In the meantime, there is an immediate need to make everyday payment tools easier, cheaper, faster and safer for all citizens, and mobile money seems to be rapidly filling that need.

For donor groups such as USAID, it is an exciting time to explore the use of electronic payments as a replacement to cash in their work. The sector is growing and evolving and enlisting new players, from MFIs and banks to start-up businesses seeking to support the ecosystem. As donors continue to look for ways to improve their own service delivery, the use of mobile money will no doubt be a key tool, whether by design or by accident. Choosing to play a leading role in the evolution of mobile money for development purposes would be an astute move and one that will pay dividends down the road.