Alliance for Financial Inclusion
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Case study

Enabling mobile money transfer
The Central Bank of Kenya's treatment of M-Pesa

About this case study

AFI case studies are developed specifically for policymakers. The cases capture the actual experiences and challenges faced by leading policymakers from developing countries as they innovate and implement new or reformational policy solutions in their country.

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At a glance

The following case study discusses the period of development of the M-Pesa mobile payment product from concept inception in 2005 to December 2008.

The Central Bank of Kenya's treatment of M-Pesa

The Kenyan 'M-Pesa' mobile telephone banking service was first conceived by Safaricom in 2005. It was launched in March 2007.

At the end of 2008 the Kenyan Ministry of Finance publicly – and suddenly – requested the Central Bank of Kenya (CBK) to conduct an immediate risk assessment audit of the service. This case study looks at the CBK's process of assessing the risk of M-Pesa and determining how it fit in the existing regulatory framework.

In reading this case study, please give some thought to how the evidence presented here informs your answers to the following questions for discussion:

1. How should the CBK have responded to the request for audit?
2. Did CBK adequately assess the risks inherent in the M-Pesa service—both at time of application and at the time of the case (Dec 2008)?
3. Are there any material risks that the CBK policy makers did not consider?

Key events in the development of M-Pesa

2006

June	FinAccess leases 2006 a CBK survey results
August	Safaricom approaches the CBK regarding M-Pesa
September	CBK requests further information from Safaricom
December	Safaricom submits detailed risk mitigation program as per CBK request Consult Hyperion conducts detailed assessment of M-pesa systems

2007

January	CBK internal review of Safaricom proposal Legal opinion determines that M-Pesa is not banking business
February	Safaricom issued a "Letter of No Objection" by the CBK
March	M-Pesa officially launches
April	Safaricom briefing to CBK regarding international Money Transfer
June	175,000 customers, 577 agents; First returns submitted to the CBK

2008

March	Safaricom allows bulk payments to pay salaries with M-Pesa 'Organizational' accounts created so schools can accept fees with M-Pesa
May	2.5m active M-Pesa customers
September	Survey of 3,000 M-Pesa users (shows high usage & product confidence) 4m customers, 4,230 agents
October	Safaricom request to buy goods with M-Pesa
November	4.5m active M-Pesa customers
December	Article in Daily Nation calling for an audit of M-Pesa

Scene setting

*Gerald Nyaoma returned to his office in Nairobi in December 2008 to discover a newspaper lying on his desk with the headline "**Michuki: Probe Cash Transfer.**" The article in Kenya's influential Daily Nation (see Annex B) reported that the Minister of Finance, John Michuki, had requested the Central Bank of Kenya (CBK) to undertake an audit of M-Pesa, the highly successful mobile phone based payment platform that was run by mobile network operator Safaricom. Within the article, Michuki was quoted as saying, "I don't know whether M-Pesa will end up well." Nyaoma's role as Director of Banking Services meant that he oversaw the National Payment System Department of the bank, responsible for the authorization and oversight of M-Pesa, and hence the senior manager at the CBK responsible for M-Pesa.*

In addition, Nyaoma had been Director of Bank Supervision at the time that M-Pesa had launched, and therefore he had been at the heart of discussions within CBK over how to respond to the new service. "Well," he thought, "it looks like the day of reckoning has arrived." Before he could even consult his M-Pesa related files his phone rang. It was the Governor, wanting to know how he planned to respond in a way which would protect the reputation of the Central Bank.

After the call, Nyaoma immediately called together his Head of Payment Systems to discuss how to respond to the gathering political and media storm.

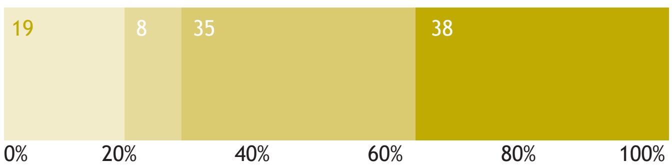
Kenya context

In 2008, Kenya had a stable, growing banking sector that appeared to have avoided most of the problems arising from the global financial crisis of 2007/8. However, despite the strong growth of leading local retail banks like Equity Bank in the preceding five years, only 19 percent of Kenya's population of 35 million in 2006 had bank accounts. As in many developing economies, banking was still generally considered to be the business of the rich who could afford the regular and expensive fees; or those less well off but who lived in urban centers with more accessible bank branches, albeit overcrowded and serving customers slowly. With 70 percent of the population still living in rural communities, there was not only limited access to basic infrastructure, there was very limited access to affordable financial services, such as payment facilities or savings. At this time there existed little incentive for banks to serve the unbanked, mainly due the significant costs of establishing a branch network and the tight margins associated with banking the poor. This was indicative by the low penetration of conventional banking channels. At the time of the M-Pesa application there were only 1.5 bank branches per 100,000 people and only one Automated Teller Machine (ATM) per 100,000 people.[1]

But for every Kenyan that had access to a bank account, at least two others had access to a mobile phone. Mobile phone penetration in 2006 was nearly 30 percent and growing much faster than bank account penetration (see Annex A, Table 1).

The Financial Access Survey in 2006 first highlighted to the CBK the very low reach of the traditional banking sector, with more than a third excluded from all financial services, and another third dependent only on informal services as Figure 1 below shows.

Figure 1: Access to formal financial services
(FinAccess, 2006)



Type of financial products used

Formal – regulated banks, building societies or Postbank
Formal other – SACCOs and MFIs (microfinance institutions)
Informal – ASCA (Accummulating Savings and Credit Associations) and ROSCAs
Unbanked – no formal or informal financial products used

[1] Financial Access Survey, 2009

Coincidentally, it was shortly after the release of the 2006 FinAccess survey that Safaricom approached CBK about launching M-Pesa. CBK realized that leveraging the mobile networks to facilitate a basic payment service could open many opportunities to increase financial inclusion in Kenya, particularly basic payment services (see Annex A, Table 2). However, moving from appreciation of the possible benefits of the service to allowing Safaricom to launch (March 2007) took months of engagement. Prior to launch, the CBK considered all aspects of the service to better understand the nature of the M-Pesa product and the associated risks.

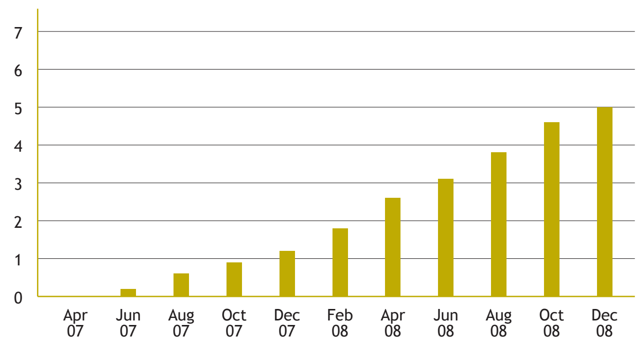
Market context

At the end of 2008 it was not surprising that M-Pesa was getting high levels of attention from the political establishment in Kenya: questions had been asked in Parliament only a few months before about the possible implications of allowing unregulated money transfer services. Banks had been publicly grumbling for some time that the playing field was not level for them and that Safaricom was taking on banking business without the appropriate license (see Annex B). These concerns were generated by the rapid growth of M-Pesa. From its launch in 2007 the service grew reach over five million customers in less than two years - this was already more than all of the banks combined (see Figure 2).

The Kenyan banking community expressed concern that M-Pesa could not meet the risk management requirements associated with a large payment system network; and that it was dangerous for any institution to operate on that scale outside of regulation. The banks were arguing that there was in fact a double standard with the CBK allowing a non-bank to conduct financial services without the regulatory burden that is imposed on the banking industry. Furthermore, while M-Pesa enabled money transfers using mobile phones, it still relied on using agents to deposit and withdraw cash, something which banks were prohibited from doing. These agents relied on the banking system to be able to maintain their floats of electronic money. As a result of more people sending more money home faster, the pattern of cash flows in the country had changed markedly, and some banks with widespread branches had incurred additional costs of providing liquidity in remote branches where M-Pesa agents would come to get cash.

To add another dimension to the pressure, the country's second mobile network operator, Zain, claimed that Safaricom was given an unfair preference by the CBK due to its large market share. Zain had been quick to launch a competitor money transfer service, Sokotele, in 2007, but this had failed. In October 2008, Zain had applied to CBK for permission to launch its new money transfer service (called 'Zap!') which was being rolled out across Zain subsidiaries in Africa, but had yet to satisfy the CBK that they had

Figure 2: Growth of M-Pesa users in millions
(FinAccess 2006)



addressed all of the requirements to operate safely. Along with the banks, Zain had started to express its displeasure about the delay. CBK had felt the need to publish a newspaper article in its defense (see Annex C).

So now the CBK had to address both the concerns of the banking industry and other mobile network operators, which the CBK had exercised its judgment and authority soundly by approving M-Pesa and allowing its rapid growth. Media fueled the fire, focusing attention on CBK's approval and supervision of M-Pesa. As a result, the pressure was squarely on the CBK team to demonstrate that they had indeed managed the process within the parameters of the law and public interest.

There were many elements of the due diligence process conducted by the CBK team that were not known to many of the CBK's domestic detractors. Detractors did not have access to the legal opinion provided by the CBK's legal counsel, or the operational risk audit performed by Consult Hyperion, the information technology consultancy responsible for the development of the M-Pesa software. Neither did they have access to the positive results from a major survey of more than 3000 M-Pesa customers, conducted in September 2008 by the trust Financial Sector Deepening (FSD) Kenya, the results of which had not been publicly released. In addition to the due diligence steps CBK had taken, Safaricom and its parent Vodafone had put significant effort into self-regulating the new product. All of these factors had given the CBK team comfort that M-Pesa was in fact operating safely and meeting the needs of its growing customer base. Despite these factors, it was true that the legal environment for regulating non-bank payment systems like M-Pesa remained unclear. The CBK policy makers reviewed each of these elements in their deliberations.

Framing of the evidence

Early engagement

M-Pesa had started as a pilot project of the multinational United Kingdom (UK) mobile operator, the Vodafone Group. With support from a UK Department of International Development (DFID) grant, the Vodafone M-Pesa team had chosen Kenya as the country in which to pilot a microfinance institution (MFI)-based loan disbursal and repayment system. However, early pilots proved too difficult to integrate easily with MFI systems. The Vodafone team persevered, believing in the potential of the mobile device to enable Kenyans to do more efficiently what they already did in large quantities: send money home from workers in urban areas to family members in rural areas.

Based on this simple service offering concept, the success of the M-Pesa product would be dependent on a reliable network of agents and low risk management of electronic value. To offer M-Pesa services, agents would pre-deposit a sum of money (called the "float") in a bank account, from which the electronic value was used to guarantee all customer deposits and withdrawals. In order to meet greater customer demand for M-Pesa services, the agent would have to increase the value of the float. The use of a float meant that there would be no credit risk taken by Safaricom or the agent.

The broadening of the vision beyond MFIs led to engagement between the M-Pesa project team, comprising both managers from Vodafone and from its Kenyan associate Safaricom. From early days, the CEO of Safaricom, Michael Joseph, had been a firm backer of the potential of this scheme. In those early meetings, the M-Pesa team had demonstrated a prototype of their funds transfer service and had responded to questions from a CBK team, which had included members of Bank Supervision, Legal, National Payment Systems and Research Departments. Based on this engagement, the CBK team had isolated a number of areas of potential concern:

1. Legal status: was M-pesa a banking business or not?
2. Money laundering: could the system be used illicitly for money laundering?
3. Operational risk: what risks could arise from the use of new technology?

1. Legal status

To address the first question on the legal status, Nyaoma had sought the advice of CBK's in-house legal counsel to determine whether M-Pesa would in fact be conducting banking business as defined in the Banking Act:

"(a) the accepting from members of the public of money on deposit repayable on demand or at the expiry of a fixed period or after notice; (b) the accepting from members of the public of money on current account and payment on and acceptance of cheques; and (c) the employing of money held on deposit or on current account, or any part of the money, by lending, investment or in any other manner for the account and at the risk of the person so employing the money."

The legal counsel had concluded in January 2007 that M-Pesa was not in fact banking business as defined by the Act, due to three important facts:

I. Cash exchanged for electronic value are not repaid on terms and remains in control of the customer at all times. To offer M-Pesa services the agent must deposit a float of cash upfront in an M-Pesa account, held by a local bank. As such there is no credit risk to either the customer or Safaricom.

II. Customer funds are not on-lent in the pursuit of other business or interest income. All funds were to be maintained in a pooled trust account at a reputable bank, and could not be accessed by Safaricom to fund its business. Hence, there was no intermediation, which was a key part of the deposit taking definition.

III. There was to be no interest paid on customer deposits, or received by Safaricom on the float—this was a further factor which indicated that the e-value created was not in fact a deposit.

The legal counsel therefore concluded that Safaricom would not be doing banking business by offering M-Pesa. But did it require authorization anyway to operate a money transfer service?

The Banking Act did not provide the basis to regulate products offered by non-banks, although the Central Bank of Kenya Act did give the CBK the general authority in Section 4A to formulate and implement such "policies as best promote the establishment, regulation and supervision of efficient and effective payment, clearing and settlement systems." The limits of this authority over non-banks had not been tested. CBK had already drafted a National Payment Systems Bill (NPS), which would consolidate and extend its authority over payment systems of all kinds but the Bill had low priority for Parliament and had not even entered the legislative process by late 2008.

In terms of the pooled trust account referred to in item (II) above, trustees would oversee the bank mandates in terms of which the float balance in the bank account would always exactly equal the e-value liabilities. Any withdrawals from the trust account required authorization. Safaricom also does not take on any credit risk as its agents put up their own float, which Safaricom then reconciles daily based on the volume of M-Pesa transactions. From the CBK's view this structure ensured that the risk to the customer is greatly minimized.

These important factors demonstrated to the CBK that M-Pesa could legally operate in Kenya. CBK management reached the decision that, because it had no clear authority over non-bank funds transfer, it would not interfere in the launch of M-Pesa. Indeed, CBK's desire to enhance financial inclusion was one incentive to promote this new approach. CBK was initially content to indicate that when the NPS Bill was passed, the new system would be subject to it. However, Safaricom, backed by Vodafone's significant investment in M-Pesa, had pressed for more certainty. The then-Acting Governor had agreed to issue a short letter of no objection, indicating that CBK would allow the service to launch, provided certain basic conditions were met, including that:

I. Appropriate measures are put in place to safeguard the integrity of the system in order to protect customers against fraud, loss of money and loss of privacy and quality of service.
II. The system will provide adequate measures to guard against money laundering
III. Proper records are kept and availed to regulatory authorities in formats as may be required from time to time.
IV. M-Pesa will observe all existing laws governing its relationship with its agents and customer.

The receipt of this letter in February 2007 enabled Safaricom to go ahead with its public launch of M-Pesa in March 2007. As a show of support, the launch had been attended by both the then Ministers of Finance and Communications. However, the changes in Kenyan politics following the contested 2007 election, the people in both these roles had changed by late 2008.

2. Money laundering

In the early stages of the development of the M-Pesa product money laundering risk was a headline issue, high on the list of concerns of the CBK. However, it was not only Kenyan customers who could potentially lose value from a system vulnerable to money laundering and fraud. Vodafone also understood that if the product were associated with money laundering they would suffer potentially significant reputational risk to their global brand. The specialist information technology company Consult Hyperion, had developed the product with explicit anti-money laundering (AML) measures in mind, such as suspicious transaction monitoring and electronic audit trails. Consult Hyperion dedicated a team to make certain that the M-Pesa system complied with AML standards set by the Kenyan Anti-Money Laundering Legislation as well as those set by Vodafone and the Financial Action Task Force (FATF)[2] internationally . Although Kenya is not yet formally compliant with the FATF guidelines, regulators have adopted alternative mechanisms to ensure minimum compliance with AML/CFT (Combating the Financing of Terrorism) approaches to client identification and verification. The level of risk mitigation applied to AML measures by Safaricom gave comfort to the CBK that the relevant controls and reporting procedures were in place to protect M-Pesa customers.

3. Operational risk

The M-Pesa team had early on shown concern about the robustness of their operational procedures and controls. Consult Hyperion (specialists in electronic payments) were again commissioned to conduct a second audit of the robustness of the M-Pesa platform.

Consult Hyperion examined the entire M-Pesa IT platform from 'front to back', with a particular view to ensuring that it could operate safely in the Kenyan market. They tested the end-to-end encryption of the SIM card functionality, which held all of the confidential customer data; reviewed the use of hardware security modules at the M-Pesa servers; and ensured that all business processes had embedded security procedures, including live backup. Most importantly, they checked that all of the M-Pesa systems allowed for comprehensive reporting and management so every transaction could be monitored, individually and en masse. This meant that CBK could request accurate information regarding the system audit trail, particularly liquidity management, clearing and settlement, and anti-money laundering procedures.

The M-Pesa platform had passed all of the Consult Hyperion's tests for robust operational capacity. The CBK policymaking team was comfortable at the conclusion of the review that not only was the system designed with the Kenyan market in mind (particularly the AML/CFT systems), but that it was also capable of handling the demand imposed on it.

Demand side and consumer experience

The final critical element to assess whether M-Pesa was operating soundly was the customer experience: were customers being put in undue risk or exploited in anyway? Although the rapid take-up and high usage seemed to imply customer satisfaction, the CBK team wanted to be assured that the experience of customers was positive. Consumer confidence, and thus market confidence, is critical to the stability of any financial service product, and the Kenyan market was no different. A survey of over 3000 M-Pesa customers commissioned by CBK with local agency FSD Kenya in September 2008 revealed beyond any doubt that more than 80 percent of users were happy with the service, many claiming that their life was better off because of it.

The survey showed that the majority of customers used the service for domestic remittances: on average sending about US$25 per transaction, twice per month. Among the customer complaints there were common reports of agents running out of cash, the occasional case of attempted fraud

[2] Transactions are limited to a maximum of KShs 50,000 ($650) per day and Kshs 35,000 ($450) per transaction. International transactions (UK) are limited to GBP 1,000 ($1600) per month and GBP 250 ($400) per transaction.

Figure 3: Customer usage of M-Pesa as compared to other money transfer products (FinAccess 2006)

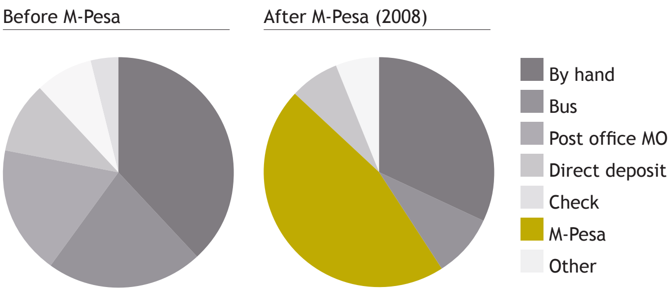


Figure 4: Volume of payments as compared to other national payment systems ***(S. Mwaura, CBK, 2008)***

Payment System Volume and Values 12 Month Data (2008) Monetary values in Ksh	Real Time Gross Statements RTGS (KEPSS)	Automated Clearing House (ACH)	Automated Teller Machines (ATMs)	Mobile Payments (SCOM)
Value moved (bn)	19,061	3,746	382	167
Value moved per day (bn)	70.60	13.87	1.05	0.46
Number of transactions	298,246	16,254,009	77,924,350	62,740,745
Transactions per day	1,105	60,200	213,491	171,892
Value per transaction (m)	63.91	0.230	0.005	0.003

and the occasional network complication. However the overall view of M-Pesa by customers was remarkably positive. M-Pesa had substantially changed the market for domestic transfers, almost eliminating the role of bus companies, the post office and reducing the percentage of people using hand transfers (see Figure 3 above).

A significant group used M-Pesa to buy pre-paid airtime directly from their accounts, and an intriguing 21 percent said that they used the service to 'store money'. However, an analysis of inactive accounts showed that only 1.6 percent (60,000 out of 4 million) remained inactive for more than 30 days. The average residual amount held in these accounts after 30 days was just Ksh 1,468, or approximately US$2 (see Annex A, Table 3).

During 2008, the service range had expanded to allow 'organizational' accounts so schools could accept fee payments from parents, and for some employers to make bulk salary payments. Safaricom had also been piloting receiving foreign remittances from the UK into M-Pesa accounts, although this service had yet to be rolled out at scale. Prior to each expansion in service the M-Pesa team engaged CBK to seek approval.

Supervision process

The letter of no objection had required Safaricom to prepare and send to CBK monthly returns, which enabled the volumes and usage of the system to be tracked. Although increasing fast in volumes, the values were still insignificant compared with other payment systems overseen by CBK (see Figure 4).

As documented in correspondence and notes of meetings, members of the CBK team had met regularly with M-Pesa to obtain information and to discuss requests to extend the service. CBK was also in contact with the Communications Commission of Kenya (CCK) who was in fact the lead regulator of Safaricom as a mobile network operator. M-Pesa was considered a value added service, which Safaricom was licensed to offer, although as a financial service, CCK deferred to CBK on the specifics of oversight.

Delivering the message

Due to the very public nature of the initial call for inquiry on M-Pesa, the lead CBK policy makers knew that it was not enough to respond to the Minister alone.

The team assessed the evidence before them. The payment product was clearly filling a gap in the financial services market in Kenya, it was well received by the customers, and the CBK had an open and ongoing dialogue with Safaricom regarding the risk management processes. However M-Pesa had also highlighted the gap in the regulatory framework in Kenya regarding payment services. It was clear that a payment services law that addressed mobile money was absolutely necessary to establish a solid foundation for the future of inclusive financial services in Kenya.

The attention brought on by this audit had raised some critically important questions regarding regulation of non-bank led payment services in general. While Nyaoma and his team felt confident that they had covered all of the important areas in the approval of M-Pesa there remained an element of concern. Had the CBK done enough to ensure that customer funds were protected? What if other applicants did not have the status and standing of Safaricom as a major public company and valuable brand?

Drawing on the team findings, and with these questions in mind, Nyaoma picked up his M-Pesa files and left his office to meet the Governor. He would ensure that the evidence was presented to the Governor and then the media so as to provide confidence to the politicians and the Kenyan public that the CBK had indeed managed the approval of M-Pesa appropriately. As Nyaoma closed the door he looked at his wall calendar: December 18th, 2008. The next few weeks could very well determine whether or not mobile money would continue to be successful in Kenya and continue to provide much needed financial services to the excluded.

Public distribution

To maximize the distribution of the statement, the CBK and the Ministry of Finance took out an advertisement in a prominent local newspaper, The Daily Nation (displayed in Annex C). This advert was in response to a similar piece submitted by the Ministry of Finance and detailed the role of the CBK in the due diligence and monitoring of M-Pesa services. Both adverts placed by the CBK and the Ministry of Finance sought to clarify key facts of the regulatory and supervisory environment around M-Pesa to give confidence to the market that M-Pesa was operating safely in Kenya. These facts included coordination between the CBK and CCK in monitoring M-Pesa, addressing the legal mandate regarding the regulation of electronic payment transfers as well clarity on which areas of risk management were regularly monitored by the CBK. The advert additionally touched on the CBK's role in facilitating competition between M-Pesa and the mobile operator Zain, who had recently applied to launch a mobile money product 'Zap!'.

Key messages from the CBK response included:

1. M-Pesa is not competing directly with commercial banks because traditional banking is has left a large access gap in the Kenyan market. The FinAccess 2006 survey concluded that only 19 percent have access to bank account while 55 percent have access to a mobile phone. In this context several commercial banks have already partnered with M-Pesa to compliment each other's services.
2. M-Pesa does not:
   - Accept from members of the public money or deposits that are repayable on demand or at the expiry of a fixed period of notice;
   - Accept from members of the public money for current account purposes that is used for payment and acceptance to cheques; and/or
   - Employ money held or any part of the money for purposes of lending and investment or in any other manner for the account and at the risk of the person so employing the money.
3. Prior to the launch of M-Pesa, Safaricom directly sought authorization from the CBK to undertake the money transfer service.
4. Regarding the legal protection of funds, customer funds are held in a Trust, on behalf of the customer, in one of the leading commercial banks in Kenya.
5. The CBK and CCK regularly monitor liquidity management, settlement risk, and reliability of the system, registration of users, system audit trail, AML measures and consumer protection issues.
6. There is no credit risk because M-Pesa agents pre-pay before offering funds to the customer.
7. The CBK and the Treasury have refined legal and regulatory measures aimed at promoting safety and efficiency of payment systems in Kenya. For example the review of the Central Bank Act, section 4A1(D) that mandates the CBK to promote the establishment, regulation and supervision of efficient and effective payment, clearing and settlement systems.
8. The Kenya Communications Act (2008) expanded the function of the CCK in relation to electronic transactions and provides legal recognition of the electronic transactions.

Impact of the audit on CBK supervision and due diligence

Based on the evidence, CBK believed they were in a strong position to argue that an appropriate amount of due diligence had been undertaken; particularly in areas that could most affect the stability of the system and protect the customer. Importantly the call for the audit also raised areas of interest that the initial due diligence had not covered. Concerned that M-Pesa was being used as a savings product, the CBK commissioned an aging analysis of M-Pesa accounts to understand how much residual money was being kept in M-Pesa accounts and for how long. CBK supervisors also requested specific management information regarding complaint handling on the part of Safaricom and a comparative analysis of M-Pesa total value against that of the domestic Real Time Gross Settlements (RTGS) system.

As a result of the audit inquiry the CBK incorporated these additional, evidence based, areas of relevance into the standard supervisory practice and thus developed a more robust system of monitoring M-Pesa as it continues to grow.

Concluding notes

In response to the public request for audit, the CBK team decided in January 2009 to publicly issue a statement outlining their position on M-Pesa.

CBK policymakers understood that they needed to make publicly clear the nature of M-Pesa to ease any concerns that M-Pesa might encroach on banking business without the appropriate license and supervision. The public statement outlined and discussed the evidence gathered as part of the due diligence on the M-Pesa product. This included the legal status of M-Pesa, a description of what type of service M-Pesa offers in relation to existing regulations (i.e. not deposit taking), and an overview of the process undertaken in the authorization of the M-Pesa application.

M-Pesa today (2009/2010)

M-Pesa has grown to over 8.5 million customers (November 2009), served by over 12,000 agents throughout Kenya. M-Pesa services have expanded to include bill payments, group salary payments, school fee payments and Safaricom continues to work with the CBK to develop creative new products for the service.

This case study has demonstrated the engagement between the CBK and Safaricom to ensure that M-Pesa could operate within the law, and as such was able to survive the pressure of the audit. However the CBK is still working to create a complete framework for mobile banking and taking concrete steps to allow the use of agent networks by banks as another channel for increasing financial inclusion. Regulations addressing e-payments, agency guidelines, and money laundering are expected to be complete in 2010. These are critical to a sufficient regulatory framework that provides more clarity for mobile banking services to be offered in Kenya in a manner that is conducive to further deepening the level of financial access.

From a market perspective, M-Pesa is no longer the lone service provider in Kenya, competing with a similar service offered by Zain Telecom, as well potential competition from the banking sector if and when they should be authorized to use agents. However M-Pesa is by far the industry leader at the moment, and has set the bar in terms of expectation of the consumer. M-Pesa is an innovative service that has catalyzed the industry (and Kenya as a whole) to create an enabling environment to broaden access to financial services.

Annex A: Relevant data

Table 1: FinAcces 2006, Mobile Phone Usage

Mobile phone usage

	National	Nairobi	All Urban	All Rural
Own phone	27%	63%	52%	19%
Access to family/ friend's phone	27%	20%	23%	29%
No Access	45%	16%	24%	52%

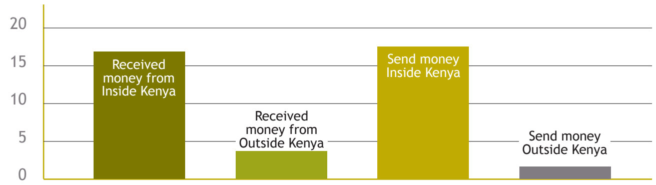
Usage of other technology related services

	National	Nairobi
Usage of sambaza mobile phone credit transfers	21%	55%
Have loaded airtime credit at a supermarket till	4%	15%
Send text/sms messages	29%	61%
Buy services on mobile phone eg dial tones	8%	23%
Ownership of ATM cards	*%	24%
Ownership of supermarket loyalty cards	2%	9%
Have heard of doing banking on cell phone	25%	51%

Table 2: FinAcces 2006, money transfer data

Usage of money transfer services

% respondents who sent or received money in last 12 months



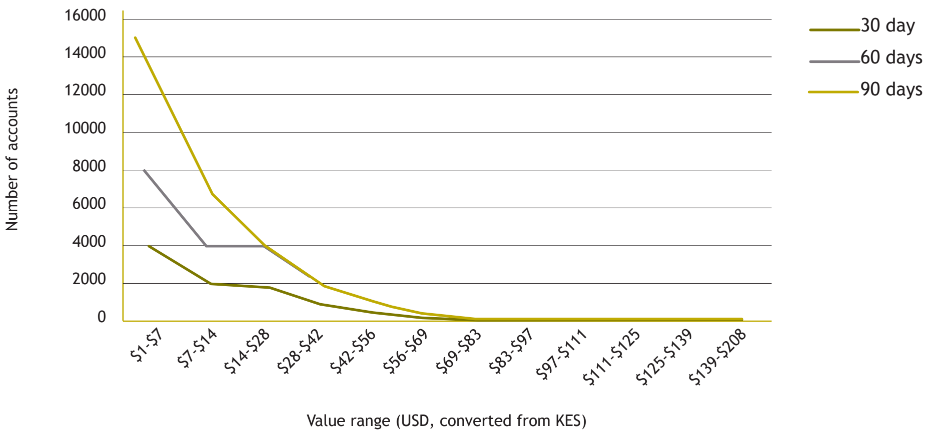
Means of transfer

	Local Money Transfers %	Intern'l Money Transfers%
Sent with family/friend	58	36
Through bus or matatu company	27	27
Post Office money order	24	20
Directly into bank account	11	29
Using money transfer services	9	66
By cheque	4	8
Paid into someone else's acount, who then passed it on	3	8

Methods of money transfer used

The most popular methods for sending or receiving money within Kenya are informal methods - with a family/friend or using a bus/matatu company. The most popular formal ways of International money transfers are to use money transfer services such as Western Union, or to pay directly into a bank account.

Table 3: Average residual values at 30/60/90 days (per 4 million customers); September2008



Annex B: Media articles

DAILY NATION

December 9th, 2008

MrMichuki (left) and Prof Ndung'u yesterday.

Michuki: Probe cash transfer

The Government on Tuesday ordered an audit of Safaricom's M-Pesa money transfer system just a day after the mobile phone service firm signed a deal with Western Union for international cash transactions. The instructions to the Central Bank came from Finance minister John Michuki as he launched new regulations at the School of Monetary Studies in Nairobi for micro-finance institutions.

"I don't know whether M-Pesa will end up well. I want guidance from Central Bank over the concerns of M-Pesa money transfer system.

"They should study the scheme and pronounce policy to safeguard depositors," MrMichuki said.

Satisfy regulator

However, speaking to Nation by telephone from London, Safaricom chief executive officer Michael Joseph said he welcomed the move saying it would reinforce the confidence in the service.

"We welcome the audit by the Central Bank of Kenya since it will verify the concerns and satisfy the regulator that we have put safeguards and the risks are minimal," Mr Joseph said.

He said the money is deposited in a trust account and no employee of the company has access to it.

M-Pesa money transfer system, launched in March 2007, has become popular with the unbanked population serving as deposit account for some, causing jitters in the banking industry. There are over four million M-Pesa registered accounts and over Sh20 billion has been transferred through the system since it was launched.

"Some of the banks are saying we are in competition, but I don't think M-Pesa is a threat to banking industry.

"What we are doing is that we filling a gap that the banks have left out," Mr Joseph had told the Daily Nation's Smart Company in an earlier interview.

Central Bank of Kenya governor NjugunaNdung'u has also in the past rooted for the M-Pesa mobile money transfer service. He has described it as a "step towards making financial service accessible to all Kenyans who have access to a mobile phone. On Tuesday, Prof Ndung'u said the Government will establish a national payment and settlement system that would provide mobile money transfer systems with a platform on which to operate.

Within minutes

"The M-Pesa money transfer system is very good, but it can be used by bad people," he said.

The Kenya Bankers Association has in the past called for regulations for the mobile money transfer over the possibility of the system being used for money laundering. An international money transfer launched by Britain-based Vodafone, a shareholder in Safaricom on Monday, is expected to build on the success of M-Pesa.

Vodafone said the service would allow customers to send remittances from Western Union stores directly to Safaricom mobile subscribers in Kenya within minutes.

"The successful take-up of M-Pesa in Kenya has clearly demonstrated the demand for easily accessible, secure cash payment services in emerging markets," said Mr Nick Hughes, Vodafone's head of international mobile payments.

Annex B: Media articles

THE STANDARD
For Fairness and Justice.

Published December 2008
By John Njiraini and James Anyanzwa

Unmasking the storm behind M-Pesa

After months of procrastinating and burying its head in the sand, the Government has finally admitted that the popular Safaricom money transfer service, M-Pesa, could be a disaster waiting to happen.

Borrowing a cue from experts in the banking and legal professions, the Government now acknowledges that the absence of a legal framework to regulate and supervise M-Pesa operations is a major gamble that could go wrong.

And although the people concerned from Safaricom Chief Executive Michael Joseph, Government officials, the Central Bank of Kenya (CBK), the Communications Commission of Kenya (CCK) to ardent users of the service seem to get solace from the fact that M-Pesa is only used in transferring money, experts warn the service is prone to abuse. Only weeks ago, Acting Finance Minister John Michuki acknowledged that M-Pesa, which is transferring an average of Sh4 billion a month and has about three million registered clients, is trending on fragile ground.

"I am not sure M-Pesa will end well," said Michuki.

Although he could not elaborate, opting to say he wishes to be proved wrong in the long run, Michuki was ultimately raising the red flag that its just a matter of time before a mega financial disaster befalls the country.

In the meantime, he ordered the CBK to carry out an audit on the service and prepare a detailed report on possible safeguards that can be put in place to forestall what could amount to crumbling of another financial service. The most recent to rock the financial sector was the pyramid scheme.

At the centre of the storm and an issue that the stakeholders avoid talking about is the use of the service for safe deposit. Experts view such application as a risky venture as it give M-Pesa agents custody of free cash that can be subject to abuse.

"We want to protect wananchi from the sharks who want to make money from the misfortune of others," he told reporters soon after launching the Microfinance Act and Regulations at the Kenya School of Monetary Studies.

Though only 21 months old, there is enough reason for concern. This is because during the short period it has been in existence, M-Pesa has graduated from a simple innovative concept that allows people to transfer small amounts of money easily to a complex service that is now being used as a bank account.

Millions of Kenyans are realising that M-Pesa gives them easy access to their money.

Without a law governing its operations and thus lack of a recourse body to turn to, it means the faith directed at M-Pesa could explode to a disappointment, says the Government.

CBK freeze

In August, a row erupted in the financial sector over the involvement of Safaricom and Zain mobile operators in offering services that are considered to be purely the commercial banks' domain.

The commercial banks are raising concerns that Zain (formerly Celtel) and Safaricom are walking all over their domain without much hindrance by providing money transfer services.

It has been unclear who between CBK and the Communications Commission of Kenya — which regulates Telecom services — should oversee the operations of M-Pesa and Sokotele.

Safaricom's M-Pesa and Zain'sSokotele money transfer services, however have a clear edge over the banks, because they cost overwhelmingly less, and deliver funds over great distances in real time. But banks want CBK to freeze the financial activities of the mobile firms citing the absence of a legal framework to compensate clients in the event of financial losses. But their attempts are yet to yield the much-needed fruits.

It is however argued that the CBK Act was amended in 2003 to give the banking regulator an oversight on all payment services and mandate to advise the Government and what the CBK is interested in is that the money is secure, moves efficiently and the operators can mitigate risks of losses. The Parliamentary Commission on Energy, communications, Transport and Public works however said it would push for the enactment of formal legislations to govern and regulate the money transfer business carried out by mobile phone operators.

Niche market

"CCK licensed the GSM network operators to offer these services but they can be put into a more formal legal terms," Eng James Rege, the Commission's Chairman and MP for Karachuonyo told The Standard in August. "This is a niche market that has been cut out for wireless operators and not banks."

But wedged into a tight corner by high transaction fees and tight operating guidelines, commercial banks now want the Central Bank of Kenya (CBK) to define clear rules for mobile phone money transfer services. However, banks are clearly at a disadvantage given the high cost of services the offer.

The Parliamentary Commission on Communications contend that the mobile financial service will help cushion consumers from exorbitant charges imposed by banks. The service gives many of the mobile firm's unbanked subscribers an efficient way of transferring money.

M-Pesa service has about four million registered subscribers to date with staggering Sh24 billion transferred using the services between March last year and May this year.

Annex C: CBK announcement (January 2009)

BANKI KUU YA KENYA

CENTRAL BANK OF KENYA

MOBILE PHONE FINANCIAL SERVICES IN KENYA

1. It has become necessary for the Central Bank of Kenya to issue a statement on mobile phone financial services in view of the continued media and public attention this issue is drawing. At the onset, the Central Bank welcomes innovation that has been introduced in Kenya's financial sector through the use of mobile telephony. Whereas this interest in mobile phone financial services is welcome, the Central Bank considers it necessary to shed more light on assertions being made in the media on its' role in licensing mobile phone financial services products.

2. At the very outset, it is important to note that the Central Bank of Kenya currently has regulatory oversight over banks, non-bank financial institutions, mortgage finance institutions licensed under the Banking Act and Foreign Exchange Bureaus licensed under the Central Bank of Kenya Act. The Bank also since May 2008 has had regulatory oversight over Deposit Taking Microfinance Institutions. The Central Bank therefore has no regulatory oversight role over mobile service providers, licensed by the Communications Commission of Kenya (CCK). The Central Bank's point of interaction with mobile phone providers is through its' licensee commercial banks who offer a platform for mobile phone financial services.

3. It is also important at this juncture to trace the genesis of mobile phone banking in Kenya. In 2005, a development agency requested for proposals from interested parties on cost effective ways of deepening Kenya's financial sector through enhanced access to financial services and products. Safaricom, a mobile service provider in collaboration with Vodafone U.K., one regulated commercial bank and two microfinance institutions submitted a proposal based on the use of mobile phones to transfer money.

4. The development agency found the proposal to be successful and a pilot of the mobile money transfer system was conducted in 2005/6. Before the pilot run, the regulated commercial bank requested the Central Bank for a go-ahead. The Central Bank agreed to the pilot run after discussions with the concerned commercial bank and a review of the proposed product. The pilot run was successful and the Central Bank was then approached in August 2006 with a proposal for a commercial launch of the product, "M-Pesa".

5. The product was subjected to a thorough due diligence from August 2006 to March 2007 when it was launched. The due diligence focused on the requisite legal and regulatory framework, product feasibility, customer identification procedures and product/customer/Agent security. However the principal concern of CBK related to the need for an enabling legal and regulatory framework for mobile banking to protect the interests of consumers and ensure sustainability of the product. An enabling regulatory framework for mobile banking should also incorporate a legal framework for oversight of payment systems, electronic contracting, money laundering, consumer protection and Information and Communication Technology (ICT).

6. It is however noteworthy that regulation generally lags behind innovation and a pragmatic approach was adopted with regard to the review of M-Pesa. The Central Bank, therefore, required that safeguards be put in place to address money laundering, consumer protection, product and agent security concerns before the product was launched.

7. Coming to the present, there have been reports in the media linked to the proposed launch of a mobile banking solution by Zain in partnership with regulated commercial banks. The Central Bank has noted the unfortunate media reports implying that it is denying or delaying the issuance of a license to Zain. We once again underscore that CBK has no direct relationship whatsoever with Zain or licensing the services it wishes to launch.

8. The application under consideration by the Central Bank is from a commercial bank that proposes to partner with Zain in providing a mobile banking and payment solution. The application has already been reviewed in accordance with statutory and prudential requirements governing licensed banks. A similar due diligence process as was applied with M-Pesa has also been undertaken. Matters requiring to be addressed have already been brought to the attention of the applicant bank. The Central Bank has a cardinal duty to ensure that products introduced by banks are safe, efficient and that the public interest is protected.

9. It is therefore very unfortunate that issues that are purely of a regulatory nature are being distorted and used to smear the credibility of the Central Bank or to create a marketing platform via sympathy. The Bank will not waver in safeguarding the public interest by ensuring the stability, safety, efficiency and reliability of the banking sector.

10. The Central Bank will also continue working with relevant players in the ongoing development of a comprehensive legal framework covering oversight of payment systems, electronic contracting, money laundering, consumer protection and Information and Communication Technology (ICT). This framework will further bolster the development of payment systems that leverage on technology to enhance access of Kenyans to financial services. The Central Bank, therefore, welcomes the introduction of such products in the Kenyan market and will ensure that the necessary safeguards to protect the interests of Kenyans are put in place before they are launched.

CENTRAL BANK OF KENYA

27TH JANUARY 2009

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The Alliance for Financial Inclusion (AFI) is a global network of central banks and other financial inclusion policymaking bodies in developing countries. AFI provides its members with the tools and resources to share, develop and implement their knowledge of financial inclusion policies. We connect policymakers through online and face-to-face channels, supported by grants and links to strategic partners, so that policymakers can share their insights and implement the most appropriate financial inclusion policies for their countries' individual circumstances.

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