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## Acronyms

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<tr>
<td>AML</td>
<td>Anti money laundering</td>
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<tr>
<td>ATM</td>
<td>Automated teller machine</td>
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<tr>
<td>CBA</td>
<td>Commercial Bank of Africa</td>
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<tr>
<td>CBK</td>
<td>Central Bank of Kenya</td>
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<tr>
<td>EAB</td>
<td>East African Bank</td>
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<tr>
<td>EFT</td>
<td>Electronic funds transfer</td>
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<td>FIS</td>
<td>Financial Information Services</td>
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<tr>
<td>FMCG</td>
<td>Fast moving consumer goods</td>
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<td>FOSA</td>
<td>Front Office Savings Accounts</td>
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<td>G2P</td>
<td>Government to person</td>
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<tr>
<td>HSN</td>
<td>Hunger Safety Net Programme</td>
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<tr>
<td>ASAL</td>
<td>Arid and Semi Arid Lands</td>
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<tr>
<td>I&amp;M</td>
<td>Investment &amp; Mortgages</td>
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<tr>
<td>KBA</td>
<td>Kenya Bankers Association</td>
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<tr>
<td>KCB</td>
<td>Kenya Commercial Bank</td>
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<tr>
<td>KPOSB</td>
<td>Kenya Post Office Savings Bank</td>
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<tr>
<td>KYC</td>
<td>Know your customer</td>
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<tr>
<td>MFI</td>
<td>Micro-finance institution</td>
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<tr>
<td>NBK</td>
<td>National Bank of Kenya</td>
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<tr>
<td>NIC</td>
<td>National Industrial Credit Bank</td>
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<tr>
<td>NGO</td>
<td>Non-governmental organisation</td>
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<tr>
<td>PCK</td>
<td>Postal Corporation of Kenya</td>
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<tr>
<td>OVC-CT</td>
<td>Orphans and Vulnerable Children – Cash Transfer project</td>
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<tr>
<td>PIN</td>
<td>Personal identification number</td>
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<tr>
<td>POS</td>
<td>Point of sale</td>
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<tr>
<td>ROE</td>
<td>Return-on-equity</td>
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<tr>
<td>RTGS</td>
<td>Real-time gross settlement</td>
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<tr>
<td>SACCO</td>
<td>Savings and credit cooperative</td>
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<tr>
<td>SIM</td>
<td>Subscriber identity module: a removable smart card for mobile phones</td>
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<tr>
<td>SME</td>
<td>Small and medium enterprise</td>
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<tr>
<td>SMME</td>
<td>Small, medium and micro enterprises</td>
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<tr>
<td>SPP</td>
<td>Social protection payment (See glossary of terms)</td>
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<td>SPPS</td>
<td>Social Protection Payment System</td>
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## Glossary of Terms

<table>
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<th>Term</th>
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<td><strong>Card Associations</strong></td>
<td>The Visa and MasterCard associations that issue credit and debit cards through member banks</td>
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<td><strong>Dukas</strong></td>
<td>Swahili word for shops</td>
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<tr>
<td><strong>Interoperable ATMs</strong></td>
<td>ATMs that can be used by members of any bank</td>
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<tr>
<td><strong>Kenswitch</strong></td>
<td>An interbank switch</td>
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<tr>
<td><strong>Magstripe</strong></td>
<td>The magnetic strip on the back of ATM, bank and credit cards that contains minimum cardholder account information needed to complete a transaction on a point of sale device or ATM</td>
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<td><strong>Mini-ATM</strong></td>
<td>A reduced functionality/specification ATM</td>
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<tr>
<td><strong>PesaPoint</strong></td>
<td>An independent ATM network in Kenya</td>
</tr>
<tr>
<td><strong>Off-bank or off-us</strong></td>
<td>Transactions acquired by another bank</td>
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<tr>
<td><strong>On-bank or on-us</strong></td>
<td>Own-bank transactions</td>
</tr>
<tr>
<td><strong>Point of sale (POS)</strong></td>
<td>A POS device enables an efficient recording of the data that comprises a business transaction when the sale of goods or services to a customer occurs</td>
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<tr>
<td><strong>Social Protection</strong></td>
<td>Reducing the vulnerability of the poor</td>
</tr>
<tr>
<td><strong>Social Protection Payment/s</strong></td>
<td>Regular payments of money to individuals or households with the objective of reducing the vulnerability of the poor</td>
</tr>
<tr>
<td><strong>Switch</strong></td>
<td>The technology and methodology that allows banks (card issuers) and merchant processors to communicate and cooperate to provide a payment service. Examples of switches include Visa and Kenswitch</td>
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This document:

- Describes the supply of financial services from the retail banking market in Kenya.
- Identifies opportunities for using current and alternative payments infrastructure to support social protection payment (SPP) transfers.

Chapter 2 outlines the potential target market for social protection payments. These are groups supporting children orphaned due to AIDS and families based in areas subject to drought in the north and east of the country. These target groups are found mainly in rural areas.

Chapter 3 describes the current supply of payments infrastructure in Kenya. The four main groups of financial service providers have dramatically different payment capabilities:

- Commercial and Mutual Banks: have access to the national payment system and provide retail transaction acquiring through branches, smaller agencies, Automated Teller Machines (ATMs), electronic Point of Sale (POS) machines, telephone call centres, and websites. Most physical infrastructure is found in urban areas. A small number of banks dominate the sector. Low-income customers in remote areas seldom benefit from this infrastructure because of high transaction fees, limited infrastructure presence, and because much of the infrastructure available is not interoperable and cannot be used by customers of other banks.

- Kenya Post Office Savings Bank (KPOSB): the bank uses the Postal Corporation of Kenya’s large agency network to provide basic savings and transfer services to its customers. Its current customer base of about one million makes it the largest provider of retail financial services in Kenya. The bank is hampered by a lack of automated payments infrastructure – very few cards have been issued or ATMs deployed.

- Micro-finance institutions (MFIs): are based mostly in major urban, peri-urban and large trading centres. MFIs provide limited transactional banking facilities, although this is expected to change with the Deposit Taking Microfinance Act. They typically use commercial bank infrastructure and payment capabilities to process payments. Their focus is on providing credit. The lack of regulation in the past, no direct access to the national payments system, and their small size in comparison to larger banks has precluded them as significant players in the payment services market.

- Savings and Credit Cooperatives (SACCOs): are both numerous (an estimated 3,500 operate in Kenya) and significant providers of financial services to peri-urban and rural Kenya (three to four million customers). They provide basic savings and credit facilities to their members. A small number of the larger SACCOs have access to payments via PesaPoint, a third-party card acquiring network. However, none has its own electronic transaction acquiring infrastructure, apart from small branches or Front Office Service Activity (FOSA) points. The large number of small proprietary network SACCOs also limits their ability to process payments outside their service areas.

The chapter also outlines current payments infrastructure deployed in Kenya:

- Branches: are divided into standard branches, agencies and mobile branches. They are concentrated in major urban centres. Forty per cent of branches are located in Nairobi. The five largest...
owners of branch infrastructure are KCB, KPOSB, Barclays, Equity and Co-operative Bank.

- ATMs: are more widely spread across Kenya, but are restricted to urban centres. The top five providers are PesaPoint (a third-party provider), KCB, Equity, Co-operative Bank and Barclays. Monthly ATM transactions in Kenya have been low by international standards. This is partly due to limited interoperability between ATM providers, as well as high costs when they are interoperable.

Retail transactions switching is relatively new in Kenya. There are two dominant retail transactions switches, Visa and Kenswitch. Visa is currently used by the larger ATM infrastructure providers. Kenswitch provides switching to smaller financial institutions and KPOSB. PesaPoint includes members from both Kenswitch and Visa, but does not offer switching between PesaPoint members.

This section highlights the fact that the high cost to customers of using other banks’ infrastructure has a significant impact on the use of services and the cost of providing infrastructure. Together, these factors contribute to making transactional banking unaffordable for low-income customers.

Chapter 4 compares a range of bank channels through which banks can provide transactional services:

- Branches: are the most expensive channels are limited to urban centres. The very specific regulation of the design and structure of bank branches in Kenya makes them expensive to operate.

- ATMs: provide 24/7 access to a range of basic transactional banking facilities. However, they are expensive to operate and are confined to high transaction areas, and are therefore found mainly in urban areas. In low-transaction environments, ATMs have a high per transaction cost in comparison to other channels, and become at least as expensive as benchmark branch transactions. In Kenya, historically low transactions per ATM machine have made ATMs costly to run.

- POSs: are a recent channel for banks in Kenya. Although in theory POS machines can be used as substitutes for ATMs a lack of consensus on pricing models has hindered their use in anything other than the higher-income market.

Chapter 5 compares off-bank network payment solutions with on-bank network payment solutions that could support SPPs. The chapter argues that in countries where dedicated payment solutions have been introduced, they are more costly than when bank channels have been modified to support the payments.

Chapter 6 identifies bank channels that could support SPPs. It highlights the importance of banks creating low-cost, accessible new account opening procedures that can operate in conjunction with the SPP application process. Modifications to current ‘know your customer’ (KYC) regulations will however be required before banks can adopt such strategies.

Modifications to the channel environment that can extend the reach of the payments system to where all recipients reside were reviewed. These include:

- Low-cost branches or agencies: Current branch regulations increase the cost of branch operations, making it less likely that banks will have branches in low-volume areas. Relaxation of the current regulatory regime, on the proviso that banks use insurance to minimise losses, could reduce the cost of a branch infrastructure without jeopardising financial stability.

- New channels: Two new low-cost acquiring channels are recommended as alternatives to the currently high-cost cash-out infrastructure provided by banks.
  - Cellphone banking: Cellphone banking models that rely on the recipient of the payment having their own mobile phone are not suitable for social protection payment recipients, as many are too poor to own a mobile phone. However, using a mobile phone as a POS machine to acquire card transactions may have potential as a low-cost channel.
  - Mini-ATMs: These are modified POS machines that can be located in retail outlets but which operate like an ATM. The customer prints out a slip that is then exchanged for cash at a bank.

For both channels, it is recommended that they be linked to an interoperable network of financial institutions to maximise transactions per machine, driving down the cost per transaction.

Chapter 7 makes some recommendations for selecting a payments solution provider, and suggests changes that could be made to the
Kenya payments system to enhance access. The requirements include:

- Linking SPPs to the creation of a low-cost bank account.
- Ensuring that the cost of these accounts is carried by the payments provider.

The recommended changes to Kenya’s payments system include initiatives that can be undertaken by the government, the regulator, as well as private sector participants.

Chapter 8 outlines the potential synergies of the SPP system with other potential banking customers. The synergies exist in both the retail and small business environment. Efficiencies in the payment of goods and services in rural areas have positive spin-offs for larger businesses. Urban remitters also benefit from more reliable, lower-cost remittance services.

Chapter 9 models the relative costs of using proprietary, non-bank transactional solutions, vs. on-bank solutions using proprietary ATM networks, interoperable ATM networks and interoperable Mini-ATM networks. Mini-ATM networks are shown to provide a potential solution for cash disbursement within the recommended cost of service to low-transaction volume areas where payment recipients are located.

Chapter 10 concludes that there is an opportunity for payment providers to supply transactional services to provide other cost-effective services. Channels are operating in other emerging markets that can provide these services at low cost. However, regulators, financial institutions and SPP providers do need to cooperate to create an environment conducive to providing low-cost transactional services.
Social protection payments can assist in avoiding the negative, ongoing impact of poverty in emerging markets. By providing a consistent flow of small payments to low-income households and individuals, they can cushion against the impact of a loss of income from other sources. The government of Kenya and the donor community have reached consensus on the need to develop an SPP system in Kenya, and in particular, on the need to provide support to orphans and vulnerable children, and to families living in arid and semi-arid areas. Critical to the success of these initiatives is achieving a disbursement system that ensures that individuals and families who have been identified, and who qualify for support, have easy access to the payments. For payment providers, the challenge is to design a disbursement system that achieves the widest coverage with the least cost and investment. This can often be achieved using the banking or postal networks.

FSD Kenya approached Genesis Analytics (Genesis) and Financial Information Services (FIS) to investigate the range of opportunities open to government to create an affordable distribution network for the payments. The findings of this research are intended to inform and guide the Social Protection Payments Challenge Fund.

The Social Protection Payments Challenge Fund

The Social Protection Payments Challenge Fund was established by the Financial Sector Deepening Trust Kenya (FSD Kenya) and the Consultative Group to Assist the Poor (CGAP). Its aim is to promote the development of innovative solutions for delivering small value payments required for a four year pilot of social protection programmes in Kenya due to start in early 2008. Aimed at providers in the financial sector, the Fund seeks to encourage solutions which can offer more than a basic cash payment delivery mechanism to recipients of social protection transfers. The objective is to help deliver cash transfers while contributing to widening access to financial services in Kenya.

The pilot cash transfer schemes have both a broad and narrow set of goals.

Narrow goals:

- Safe, accountable and verifiable delivery of payments
- Minimum financial cost to government/donor for delivery of payments
- Procurement process consistent with relevant public procurement standards
- Mitigation of risk from adopting single channel
- Proof of concept and ability to reach significant scale rapidly
- Alignment with timetable for orphans and vulnerable children (OVT-CT) and hunger safety net (HSN) pilots
- Minimum financial transaction cost to recipients (including indirect, e.g. transport)
- Minimum shadow transaction cost to recipients (overall time to access payment, accessibility/convenience, flexibility)
- Quality of service provision to recipients (including preservation of dignity of recipients, responsiveness to special needs, accountability to recipients)
- Safety to recipients

Broader goals:

- Provision of additional financial services to recipients
- Provision of financial services to non-recipients (e.g. service points for clients also accessible by other low-income groups)
- Avoidance of long-term lock-in to single provider, platform or solution
- Spin-off contribution of innovations to pro-poor financial sector development

This report aims to understand the existing supply of financial services in Kenya at a:

- Micro level: This analysis of existing payments channels in Kenya is offered by various financial institutions.
- Meso level: This analysis of the payments networks in Kenya also focuses on existing ATM networks as well as potential alternative networks that could be used.
- Macro level: This is an evaluation of the current regulatory environment in Kenya.

The report focused on the potential supply of transaction payment services provided by four types of institution currently providing financial services to retail customers: commercial banks and building societies; micro-finance institutions (MFIs); savings and credit cooperatives (SACCOs) and the Kenya Post Office Savings Bank.
(KPOSB). All four groups were evaluated for their ability to support grant disbursements:

- While SACCOs currently provide the most comprehensive coverage of low-income individuals in Kenya, their relatively weak internal governance structures in comparison to commercial banks, and lack of access to the payment system, make it difficult for them to become the primary supporters of grant disbursements. However, their significant total customer base indicates that SACCOs may assist in servicing rural customers in partnership with commercial banks.

- MFIs service a large, low-income customer base in peri-urban and rural areas. However, they also have limited access to the payment system. Governance structures are more defined than SACCOs, with larger MFIs having clear and consistent reporting streams. Some MFIs are members of PesaPoint, an independent ATM network. However, MFIs will continue to be at a disadvantage to banks in the payments environment.

- The Postal Corporation of Kenya (PCK) was identified as an alternative provider, although internal capacity constraints (inability to handle significant volumes of cash in agencies and a limited electronic communication network) hampered their ability to provide the necessary backbone to distribute payments.

- Banks have the largest distribution network in Kenya and (most) have advanced transactional payments capabilities. However, commercial banks and building societies do suffer from a number of constraints that hamper their ability to provide low-cost transactional banking services, especially in rural areas:
  - Infrastructure is greatest in urban and peri-urban areas.
  - Current infrastructure is expensive to operate increasing cost of serving customers.
  - ATM transaction volumes are low, pushing up the cost of infrastructure for banks.
  - Not all banks belong to a switch and not all switches are interoperable resulting in duplication of infrastructure.
  - Interchange fees for Visa-member banks are high in comparison to national and international benchmarks, making Visa-member banks effectively a non-interoperable environment for low-income customers.
  - Account opening requirements (proof of income, address, and in some cases a letter of recommendation from current bank customers) block potential recipients who live in informal settlements.
  - The current regulatory framework for branch and agency operations makes infrastructure more expensive than it could be. This increases transactional and servicing costs for banks providing services through branches and agencies, making it unprofitable to have infrastructure in small towns.

This report seeks to provide an understanding of these constraints and what can be done to mitigate them. By providing appropriate incentives (pricing agreements), support for innovation (the Challenge Fund), and regulatory reform, banks should be able to provide a low-cost, accessible payment disbursement solution for government, and increase access to transactional solutions for low-income individuals. Key to the changes is the introduction of interoperable, low-cost Point of Sale (POS) machines to provide affordable access to cash withdrawal facilities.

To demonstrate the benefits of the proposed approach, four scenarios (representing four combinations of disbursement infrastructure) are explored. The scenarios compare the relative cost of using:

1. off-bank and on-bank grant disbursement networks,
2. on-bank, proprietary ATM networks vs.
3. on-bank, interoperable ATMs and
4. on-bank, interoperable network solutions using new technologies and machines (Mini-ATM and M-Commerce – see Glossary of Terms).

The scenarios highlight the potentially high costs of using current on-bank and off-bank infrastructure solutions for government. The alternative electronic (POS) solution provides both cost savings for government as well as a profitable transactional banking solution for banks. The scenarios highlight that the combination of low cost for government and profitability for banks means that this approach could provide the transactional solution in which disbursements could be made into rural areas.

1 See definitions under section 4.1.3
WHO ARE THE SOCIAL PROTECTION PAYMENTS TARGETING?

The government of Kenya has identified two main target groups for social protection payments:

- Orphans and vulnerable children (OVC-CT): This group comprises families with children between the ages of 0- to 17-years who are orphans of AIDS or families who are considered to be poor.

- Vulnerable families in arid and semi-arid areas (HSN-ASAL): These are families that are based in the northern and northeastern regions of Kenya who suffer from the depredations of adverse climate conditions (primarily droughts and sporadic flooding) in these areas. Payments aim to provide a safety net against hunger during times of drought or flooding.

In both groups, the SPPs should encourage:

- Greater participation of children in formal education.
- Improved food security, especially for those families and individuals based in areas where crop failure is a regular occurrence or where families are unable to grow sufficient food to feed themselves.
- Formal registration of caregivers in families as well as children. This will assist payment providers in planning and budgeting for further social protection payment programmes.

The payments will be used in conjunction with social welfare projects undertaken by government departments to assist in reducing the level of absolute poverty in rural Kenya.
3
KENYA’S FINANCIAL SERVICES INFRASTRUCTURE

Kenya has a relatively well-developed financial services sector in comparison to other African states. The sector includes banks, micro-finance institutions, savings and credit cooperatives, insurers (short- and long-term), foreign exchange bureaus, non-bank financial institutions, mortgage finance houses, building societies, and a postal service offering savings products. Of these financial service providers, four groups are involved in providing some form of transactional banking services appropriate for social protection payments:

1. Commercial banks and building societies (banks).
2. Kenya Post Office Savings Bank (KPOSB) and the Postal Corporation of Kenya (PCK).
3. Micro-finance institutions (MFIs).
4. Savings and credit co-operatives (SACCOs).

Regulation by the Central Bank of Kenya (CBK) varies between the tiers. Commercial banks and building societies are subject to the most regulation, while MFIs and SACCOs are less regulated. More highly regulated institutions have greater access to the payments system and are therefore in a better position to provide payment solutions to the government. The structure of the retail payments system in Kenya is described in Section 3.3.

3.1 STRUCTURE OF THE FINANCIAL SECTOR IN KENYA

Kenya’s banks dominate the financial service industry in terms of asset size, but are dwarfed in numbers by the SACCO movement that includes a large number of relatively small institutions. As shown in Fig 1, banks account for less than 1% of financial institutions providing transactional/ savings or loan services, but represent over 90% of the sector’s assets. Their current customer base accounts for less than 37% of total customers served by the four tiers. KPOSB is also significant in the market, especially in the number of customers it serves. In comparison, MFIs and SACCOs account for 7% of assets. There are a significant number of individuals, approximately 2.5 million, using the SACCOs’ basic transactional and savings services.

The small average customer base per SACCO and MFI (in comparison to the banks and KPOSB) has limited their access to the payment system and their ability to provide payment solutions to the government.
infrastructure and the ability to participate as transaction processors. However, their significant total customer base may allow SACCOs and MFIs to play a role in the distribution of transfers, if payment system access could be improved, possibly by association with a bank.

3.1.1 Commercial banks and building societies

In June 2006, there were 42 commercial banks (down from 49 in 2000), and one building society (down from four in 2000) operating in Kenya. The failure of commercial banks has resulted in consolidation within the sector, with the larger entities accounting for the majority of assets, branches, customers and profits. In 2004, 13 banks accounted for 77% of assets, 78% of deposits, and 83% of pre-tax profits. Forty-seven per cent of assets were held by four banks (KCB, Co-operative, Barclays Bank and Standard Chartered) in 2006. The conversion of building societies to commercial banks reflects the uncompetitive regulatory regime under which building societies exist in Kenya.

Use of modern card-based transactional infrastructure to service clients is still in its infancy in Kenya. Banks have made the transition to card-based transactional solutions, although most banks have not deployed significant numbers of ATMs and POSs. 2005 was the first year in which there were more ATMs than bank branches in Kenya. Developed markets have between two and a half (Australia) and four (UK) times more ATMs than branches. Banks have focused on urban centres, adopting all types of infrastructure in these environments. This has limited accessibility to bank services for lower-income individuals based in small towns.

3.1.2 KPOSB and PCK

The PCK has nearly 900 outlets located in urban and rural centres around Kenya. This is the largest network supporting remittance services in the financial sector.

KPOSB has used PCK’s network to provide a set of savings products to retail customers and SMEs. In 2005, it had 55 full branches, 16 sub-branches, and 384 outlets in PCK branches. It is also affiliated to Western Union. A significant proportion of their business is in money transfer and savings accounts. Very few customers have ATM, debit or credit cards.

While the KPOSB/PCK network ranks as the largest in the country, severe capacity constraints currently limit its ability to support the payments system.

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3 CBK, 2005
4 CBK, 2004
5 Genesis research, 2005
6 CBK, 2005
• KPOSB outlets based in PCK branches are currently not connected in real-time to the KPOSB IT infrastructure.

• Current systems cater for savings products in the retail environment. Passbooks remain the predominant mechanism for interacting with customers (although a limited number of KPOSB customers do have Visa credit cards). These are subject to high levels of fraud and are costly to process and maintain.

• PCK outlets do not hold or accumulate significant volumes of cash. This means that PCK would be required to transport cash from urban centres to service the cash-out needs of payment recipients, dramatically increasing risks and operating costs.

KPOSB is currently upgrading its infrastructure to provide electronic retail payments in its network of offices and outlets in PCK branches. It will also be linked to other bank infrastructures through its membership of Kenswitch, an interbank switch, and on PesaPoint, an independent ATM network.

All KPOSB customers will be able to transact in real-time using cards within the next one to two years. However, only the small number of credit card customers will have access to the Visa-linked infrastructure. Currently there is no move to issue Visa cards to savings and transactional banking customers. Kenswitch’s new link with PesaPoint will however provide increased access to the ATM infrastructure for non-Visa cardholders.

3.1.3 MFIs

The UNDP (2003) estimated that there were more than 100 MFIs operating in Kenya. However, most of these are small. The 25 MFIs registered with the Association of Micro-Finance Institutions (AMFI) account for the majority of activity in this sector. Plans to regulate the sector by the Kenyan government are expected to result in consolidation and concentration as the costs of compliance increase. One MFI has been converted to a commercial bank, K-Rep. Most MFIs are affiliated to a foreign donor/NGO. Funding is provided by the donor/NGO, or, if borrowed from commercial banks, is underwritten by the donor/NGO.

MFIs in Kenya still largely use paper-based transactional services using the infrastructure of commercial banks. Lending is provided predominantly on a group basis. Individuals within a group are provided with a cheque, which they then cash at a bank. The process of loan repayment again uses the commercial bank infrastructure. Borrowers deposit loan repayments into the MFI’s account held at a commercial bank. Payment is made in cash. While MFIs are more focused on rural areas than banks, they still have a predominantly
urban focus. The UNDP reported that the larger MFIs were more likely to be located in urban and peri-urban areas, with distribution channels five times more likely to be operating in the provinces with the lowest levels of poverty than those with the highest levels of poverty (UNDP, 2002). MFIs offer greater access to services for the rural poor, but do not have the systems to provide transactional services to this group. Regulatory, as well as capacity, constraints within MFIs are the key limitations to participating in the payment disbursement system.

Recent regulatory changes are expected to increase the range of services offered by MFIs. The recently-passed Deposit-Taking Microfinance Act is set to facilitate deposit-taking by MFIs, and to improve supervision of the sector. It is however very unlikely that MFIs will have access to the national payments system in the near future.

3.1.4 Savings and credit cooperatives (SACCOs)

Kenya has the biggest credit union movement in Africa. There are more than 3,500 SACCOs with a membership estimated at between three to four million. The biggest SACCOs include Mwalimu, Harambee, Afya, Ukulima and Kenya Bankers, all with total assets in excess of Ksh2bn (US $30m). Although agricultural SACCOs (including Nyeri, Murumati, Aembu and Kininyaga) have large membership bases, they have relatively small asset bases.

Most SACCOs provide services to low-income individuals in urban and rural areas. Coverage is more comprehensive in rural areas than either MFIs or banks. SACCOs are therefore best located to provide financial services to the rural poor. Three SACCOs have more than 50,000 members. Harambee and Aembu have close to 85,000 members and Murata has about 69,000 customers.

The top SACCOs including Nyeri, Afya, Kiambu Unity Finance, Nanyuki Equator and Muaramati, have set up banking halls providing banking services which they refer to as Front Office Service Activity (FOSA), and some have installed their own ATMs. There are 113 SACCOs offering FOSA services through 183 branches. Through FOSAs, SACCOs have accelerated their asset growth to over 20% per annum (FIS, 2006).

However, in comparison to the banks’ infrastructure, FOSA infrastructure is still relatively limited in rural areas. While over 86% of FOSA infrastructure is outside Nairobi, a significant proportion is concentrated in the Central region. No FOSAs were recorded or located in the North Eastern Province.

PesaPoint, a third-party ATM provider, currently services a number of the larger SACCOs including Mwalimu and Stima. However, this infrastructure is concentrated in urban areas.

Like MFIs, SACCOs use bank infrastructure to bank members’ funds. This is typically through a joint savings facility that the SACCO manages on behalf of customers. More advanced SACCOs provide customers with individual accounts. The latter offers a more attractive solution for distributing grants.

The ability of the sector to provide social protection payments to low-income and rural populations is constrained by:

- Weak governance
- Weak management
- Weak capabilities and systems

In the case of SACCOs providing joint accounts, identifying the recipient becomes relatively costly to service in comparison to dedicated accounts (because tellers are required to identify the recipient for every transaction), even if the account could be serviced through the national payments system.

Regulators have targeted the sector for increasing regulation. Interviewees indicated that most SACCOs will be unable to comply with the regulations because of limited institutional capacity within the businesses. This will decrease the number of regulated SACCOs as non-compliant SACCOs either disband or shift into the informal sector. Regulation may also force consolidation within the sector, as compliance costs rise.
3.2 DELIVERY CHANNELS - BRANCHES AND ATMS

Branches have been the mainstay of banking in Kenya. ATM access was very limited until recently, but this is now changing and is expected to continue. A number of banks indicated that they would be deploying a significant number of ATMs (an excess of 300 new ATMs were reported by interviewed banks) within the next one to two years.

KCB, Barclays, Equity, Co-operative and KPOSB account for 51% of the 527 branches in Kenya. This gives the larger banks an advantage when distributing social protection payments to rural recipients. However, these banks are still constrained to centres with a population in excess of 10,000 people.

Banks can deploy three types of branch:
1. Full branch
2. Agency
3. Mobile branch

The larger providers have fewer branches located in Nairobi than the industry average. For example, of KCB’s 89 branches and 35 sub-branches, only 14 are located within Nairobi. The larger banks have been the most aggressive with their branch expansion plans. This is expected to increase coverage outside Kenya and the southwest. However, high branch operating costs will constrain the location of new branches to high density/large rural trading centres, not necessarily increasing coverage of recipients.

Agencies may be located in less-densely populated and poorer areas. However, the CBK has limited the number of agencies that banks can open to 50% of the bank’s total branch network (currently no financial institutions have reached their maximum allowable agency network size, although one bank indicated that it would reach it within the year). This restriction has limited bank coverage in lower volume areas that cannot support a full branch.

A number of banks in Kenya have deployed “mobile branch” units. These are customer service terminals mounted on the back of 4-wheel-drive vehicles. Currently, one bank, Equity, has deployed

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3.2.1 Branches

The number of branches declined in the late 1990s. Barclays, Standard Chartered and KCB closed 58 mainly rural branches in 1999 alone. However, this trend has reversed after small banks moved in to the areas abandoned by Barclays and KCB. By 2005, there were 532 branches and agencies, up from 465 in 2000. This trend is expected to continue.

Banks have concentrated infrastructure to service the formal economy. In addition, the large number of banks for the size of the market meant that in 2004 40% of branches were located in Nairobi (the economic centre of Kenya), and 38% were located in the southwest. The northern and eastern regions, especially in areas away from large rural centres, have been ignored by banks.
about 54 mobile units. Other banks reported that they had abandoned the use of mobile branches because of the high costs of this channel relative to alternatives, including ATMs and agencies. Banks were unable to indicate whether the mobile units had been replaced by alternative channels to the same areas.

3.2.2 ATMs

ATMs are relatively new to most banks in Kenya. Barclays and Standard Chartered deployed the first ATMs in the early 1990s. Since then, most banks have deployed ATMs. The dominant operators are Equity, KCB, Co-operative, Barclays, Standard Chartered and PesaPoint. Together they account for 81% of the ATMs deployed in Kenya.

Most banks in Kenya have proprietary ATM networks dedicated to their own customers. However, the larger banks are linked to either one of the switches.

Most ATMs operated by banks have, up until now, been located at the banks’ branches. This has limited ATM reach beyond bank branch networks. However, all banks interviewed indicated that their ATM rollout would include expansion away from branches.

PesaPoint, a third-party ATM acquirer, leads the use of off-site ATMs. The majority of its ATMs are in areas not serviced by PesaPoint-member banks. These areas generally mean that the ATMs are located away from bank branches as well. ATMs have been introduced in 42 towns in Kenya. Over 67% of PesaPoint ATMs are located outside Nairobi and surrounding area.

All banks, including those with proprietary and open ATM networks, indicated that the primary reason for ATM deployment is convenience for customers. In the case of Visa-member banks, interchange for off-us transactions (see 3.3.1) has been structured to charge a premium for this convenience. This has had a significant impact on the use of other the banks’ infrastructure.

A few banks indicated that ATMs were being used as a mechanism for migrating customers out of congested branches. Some of the banks interviewed had developed a comprehensive policy for migrating customers to ATMs. The combination of customer-focused use and weak migration strategies has contributed to low average transaction volumes per ATM in comparison to some international benchmarks (see Fig 8).
3.3 RETAIL INTERBANK SWITCHING IN KENYA

The way in which card transactions are handled within the payment system has a major impact on the evolution of retail financial services. This section considers current transaction pricing and switching arrangements, as well as settlement issues.

In Kenya, electronic retail payments are cleared through two switches, Kenswitch and Visa. A third-party, PesaPoint, also clears transactions between itself, Kenswitch, Visa and its member banks. All three switches use real-time clearing systems to reduce the risk that funds are not available in a customer’s account. At present, however, not all cards can be used on all ATMs.

3.3.1 Defining interoperability

Interoperability plays a central role in the card environment and refers to the ability of bank customers to use infrastructure provided by other financial institutions. In the case of ATMs, an interoperable network would allow customers of one bank use another bank’s ATMs.

Transactions that are acquired by another bank are called off-us transactions, highlighting that the transaction has been acquired off, or outside, the issuing bank’s infrastructure.

Internationally, interoperability is typically facilitated using a range of Card Association networks (Visa, MasterCard, American Express, etc.).

**Fig 8: Average monthly transactions per ATM**

<table>
<thead>
<tr>
<th>Country</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabia</td>
<td>9,655</td>
<td>9,405</td>
</tr>
<tr>
<td>Sweden</td>
<td>7,500</td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>5,405</td>
<td>5,200</td>
</tr>
<tr>
<td>Mexico</td>
<td>3,659</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>3,818</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>3,440</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>2,543</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PROCESSING ELECTRONIC RETAIL TRANSACTIONS**

Electronic retail payment transactions (examples of which include transactions initiated at ATMs, POS machines, on the internet and in branches) made across the banking sector are processed in two stages:

- **Clearing:** this stage establishes whether the account from which funds are being transferred (customer’s account) has sufficient funds to cover the value transferred. Each transaction requires confirmation of available funds. If funds are available, the transaction is cleared to be settled. Funds in the customer’s account are then earmarked for transfer and are often deducted from the account when the clearing process is completed.

- **Settlement:** cleared transactions are then aggregated by banks, generating a set of outstanding assets and liabilities to other banks in the payment system. Depending on the settlement system, the liabilities are then deducted from the assets, creating a net financial position of a bank against other banks in the payment system. At a particular point, these outstanding net positions are paid out into the recipient bank’s account held at the settlement bank, normally the central bank. The bank receiving the funds then settles its liability with customers who are owed the funds from the sender.

The two-stage process reduces the costs associated with processing electronic payments. Instead of transferring value between banks for each electronic retail transaction, funds are only transferred at a point in time and are paid on a net basis, reducing the flow of funds between banks.
JCB) and/or through the creation of a national retail payment system, e.g. Bankserv in South Africa, SAMA in Saudi Arabia.

3.3.2 The impact of incomplete interoperability in Kenya

There are currently effectively three switches in Kenya; Visa members that switch through Visa’s international network, Kenswitch, and PesaPoint. Not all banks are members of one of these switching networks, although most of the large banks offer some combination of access, but often on very different terms:

- **ATMs**: Visa and Kenswitch provide mutually exclusive switching for their respective members. PesaPoint-member banks are able to offer off-us ATM transactions to PesaPoint and Visa members on PesaPoint infrastructure, but not to proprietary bank ATMs.

- **POS**: only Visa Principle-member banks have introduced POS machines, via the Visa network.

Limited interoperability has resulted in:

- **Reduced transactions on current bank infrastructure**: Partial interoperability (or the pricing thereof) has confined bank customers to a fraction of the bank infrastructure deployed in Kenya. This has led to the limitation of customers to transact and the value they receive from the service.

- **The duplication of bank infrastructures has reduced average transactions per machine leading to raised network costs**: Banks are forced to deploy infrastructure in areas already covered by other banks because their customers are unwilling to transact on the other bank’s infrastructure. The result is that instead of one machine acquiring transactions in a particular area, banks have introduced multiple machines reducing average transactions per machine.
3.3.3 Relative costs of switching in Kenya

The range in the cost of switching ATM transactions is dramatic. Total switching fees range between Ksh21 (Kenswitch) and Ksh106 (Visa).

a) Kenswitch

Kenswitch has 14 ATMs (mostly small banks), with the exception of KPOSB which does not yet have many ATMs. The total number of ATMs linked to Kenswitch account for less than 12.5% of all ATMs deployed. Of the approximately 70 ATMs linked to the switch, a significant proportion (estimated at about 40%9) are located in Nairobi. For upcountry customers, this limits the network’s usefulness/relevance, although this could change if KPOSB deploys a significant number of ATMs.

The number of users is also relatively small. The smaller banks have less than 150,000 customers each. Although PostBank has about one million customers, none (except Visa Credit Card customers) have an ATM card yet, reducing the actual number of PostBank customers who would transact at a Kenswitch ATM to a small fraction of the total. The low number of customers with ATM cards, and the relatively limited distribution of ATMs, have limited off-us transactions processed by Kenswitch. The switch processes about 80,000 transactions a month, or 1,142 transactions per ATM. This has significant impact on ATM transaction costs (see section 4.1.2.1) to hosting banks. To be profitable, a full-service ATM needs to achieve closer to 7,500 transactions per month.

Issuing banks are charged approximately US $0.30 (Ksh21) per transaction. Final cost is dependent on volumes. Of that amount $0.15 (Ksh10.5) is paid to the acquiring bank, and $0.15 (Ksh10.5) is a switching fee. In comparison to the other switches, the switching fee is relatively high and the interchange fee low. PesaPoint has just concluded an agreement with Kenswitch, linking Kenswitch-member banks to the PesaPoint network. This dramatically increases the effective network for Kenswitch bank customers, and could see increased transactions volumes on PesaPoint ATMs.

Fig 9: Charges for switching off-us ATM transactions, by operator

<table>
<thead>
<tr>
<th>Switches and member banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Interchange</td>
</tr>
<tr>
<td>Ksh 6</td>
</tr>
<tr>
<td>Kenswitch</td>
</tr>
<tr>
<td>Ksh 21</td>
</tr>
</tbody>
</table>

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9 Kenswitch, 2006
b) VISA

Visa had four members by 2000: Barclays, Standard Chartered, NBK and KCB. More banks have joined over the past five and six years, including Equity Bank, Co-operative Bank, KPOSB, Prime, Imperial, NIC, Southern Credit, Fidelity, I&M, Diamond Trust, Stanbic and CBA. Visa provides the international benchmark switching solution to these banks at low switching cost (can be as little as Ksh3 per transaction\(^\text{10}\)). About 70% of total ATMs accept Visa-branded cards. This is significantly larger than Kenswitch’s network.

Issuing banks currently pay Ksh100 to acquiring banks in interchange. The current interchange pricing reflects Visa-members’ focus on getting customers to pay a premium for convenience. This is approximately 40% higher than the standard international interchange rate of Ksh70 ($1.00) charged by Visa for inter-country ATM transactions. Visa rules allow member banks to set domestic interchange fees and there are moves afoot initiated by the smaller banks to reduce interchange fees to Ksh 50. As Visa members face no additional local switching investment, it is interesting that this fee is still more than double PesaPoint’s estimated “sustainable” interchange price of Ksh22.

Issuing banks’ fees to customers include switching fees as well as processing fees and profit margin. Some banks currently charge their own customers Ksh250 for an off-us Visa ATM cash withdrawal. While Visa members report that off-us transactions are being made on their network, the transaction volumes are low. For low-income customers, the fees are unaffordable. The result is that lower-income earning customers transact “on-us” and do not benefit from the availability of Visa-linked ATMs. Interoperability has not resulted in individuals being able to use the service, because of the significant costs of off-us transactions.

c) PesaPoint (third-party acquirer)

PesaPoint, a third-party acquirer, was established in 2004, providing unidirectional switching from its own ATMs to members’ banks and Visa. For ATM transactions, PesaPoint is paid interchange for acquiring the transaction. PesaPoint has one of the largest ATM networks in Kenya (+/- 120 ATMs) and has specialist skills in remote infrastructure deployment, making it a potential partner to banks wishing to compete to process Government to Public (G2P) payments. However, member banks are not able to switch transactions acquired on another member banks’ infrastructure.
3.3.4 THE IMPACT OF FEES ON DEMAND

Visa-member banks switching fees are high, even by international standards. The default international ATM interchange is $1 (Ksh70). Even though Visa should be the lowest-cost switch provider in Kenya - by using the existing global infrastructure that can switch all of Kenya’s transactions with no additional investment - interchange fees agreed between member banks are considerably higher than for Kenswitch.

The impact of price on demand can be illustrated by a comparison of the change in volume of off-us transactions after a bank lowered the transaction fee from Visa’s Ksh250 to the PesaPoint fee of Ksh40. Customer transactions increased 14-fold, whereas the price declined by 6.25 times. This indicates that customers’ demand for off-us transactions is highly price elastic, increasing by more than the decrease in price. The rising transaction volumes ensure that the bank still manages to earn profits at the lower rate of Ksh40.

Fig 10 extrapolates from these data points to highlight that if all transactions were charged at Ksh30 shillings, the number of off-us ATM transactions, network-wide, would increase by 660%. This would raise average transactions per ATM to well over 15,000 transactions per month (13,500 off-us), while making some feasible assumption of the share of off-us transactions.

In contrast, Kenswitch’s interchange fees (see Fig 9) are probably too low to encourage Kenswitch members to expand their own networks for the benefit of other banks’ customers.

The combined impact of high fees charged to Visa customers for off-us transactions, and the low number of ATMs that allow low-cost off-us transactions using Kenswitch’s ATMs, has severely depressed total ATM transaction volumes in Kenya. Even though Visa-member banks indicated that they would be deploying more ATMs, it is unlikely that off-us transaction volumes will increase at the current prices.

3.3.5 SETTLEMENT ISSUES

Banks build up liabilities to other banks in the payment system between clearing and settlement. In high-volume environments, these liabilities can be significant. Increasing the time between clearing and settlement thus increases liabilities. If a bank with an outstanding liability to other payment system members is unable to settle its liabilities, other banks can suffer significant losses as they now must cover for the value of the outstanding liability to its customers. This can bankrupt a bank.

Systemic failures within the banking system can be caused by the failure of banks to pay their outstanding liabilities to other banks in the payment system. Therefore, a payments system and its member banks are closely monitored by a central bank and required to hold collateral at the settling bank against potential liabilities generated in the payment system. Because of the significant liabilities and risks generated through a payment system, settlement banks must be stable and resilient to systemic risk and be highly-rated within the payment system. Central banks are ideal settlement banks, as they are the most stable bank in a banking sector.

3.3.5.1 KENYAN CONTEXT

In Kenya, all three switches use real-time clearing systems to reduce the risk that funds are not available in a sender’s account. However, in the case of settlement, each switch has a different settlement process:

- Visa: Members settle through the national settlement system at the central bank. This is the most secure settlement process available in Kenya.
- Kenswitch: Members settle through CBA. It is a medium-sized bank with a higher-risk profile than the central bank as well as some of the other banks in the payment system. Settlement is not conducted over weekends and holidays, exposing banks to liabilities for extended periods of time. To cover these liabilities, banks are required to deposit extra collateral at CBA. This has caused significant resentment, as Kenswitch-member banks are required to hold collateral at CBA, as well as the central bank, who benefit from the funds.
- PesaPoint: Members settle through NIC Bank. Member banks are required to hold collateral at NIC. Because members will always have a liability to PesaPoint, collateral held at NIC can be significant for the smaller members, especially over weekends. This is added to the collateral held at the central bank. Holding collateral at the central bank and at NIC can become expensive for banks in terms of foregone interest income.

Several of the larger banks have cited holding collateral at smaller banks as a reason for not joining the national switch. As Kenya’s
banking sector has suffered a number of bank crises in the last decade, banks are cautious when exposing themselves financially to other banks.

Settlement in Kenya is conducted on a RTGS system that is capable of settling transactions in real-time. However, settlement at the CBK is limited to one cycle every day, no matter the outstanding liability generated over a 24-hour period. This is because the current regulation does not support the concept of netting off liabilities against assets (CBK, 2006). Banks are therefore unable to force another bank to settle an outstanding liability independent of the daily settlement cycle. This means that banks are unable to manage their exposure to other banks by settling outstanding liabilities when they reach a predetermined threshold. Settling value more than once a day would provide the larger banks with a tool to manage exposure to smaller banks by settling positions that the smaller banks have with the larger banks when a predetermined financial liability is reached, and increase stability in the payments system.

Recommended modifications to settlement rules:

1. Switch all settlements to the CBK. This provides a stable bank for settlement as well as reducing collateral.
2. Facilitate netting of positions outside the daily settlement cycle. This will reduce exposure between banks in the payments system and reduce collateral.
4 DELIVERY CHANNEL COSTS IN THE BANKING SECTOR

4.1 COMPARING BANK CHANNEL COSTS

International studies indicate that electronic channels are significantly cheaper than manned solutions. A selection of international benchmarks (see Appendix 1.1) confirms that conducting a branch-based transaction is the most costly way for a bank to interact with a customer (international benchmark cost of Ksh64 per transaction). A telephone call centre solution that requires staffing is a lot cheaper but still almost double the cost of providing an ATM transaction. A POS is dramatically cheaper than an ATM.

Thus, the paradox of the banking system in most developing countries is that many of the smaller institutions that meet the needs of many poorer individuals do so using the most expensive infrastructure possible.

Kenya is no exception, but local factors further increase the cost of branch-based transacting.

Fig 11: Breakeven transactions costs to banks by channel, direct and indirect costs

<table>
<thead>
<tr>
<th>Channel</th>
<th>Fixed Costs</th>
<th>Operating Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch</td>
<td>$23,000</td>
<td></td>
</tr>
<tr>
<td>Telephone (IVR)</td>
<td>$639</td>
<td>$4,577</td>
</tr>
<tr>
<td>ATM</td>
<td>$2,222</td>
<td>$437</td>
</tr>
<tr>
<td>POS</td>
<td>$1,622</td>
<td>$1,000</td>
</tr>
<tr>
<td>Total</td>
<td>$37,563</td>
<td>$9,737</td>
</tr>
</tbody>
</table>

As well as the high capital cost of a branch, Kenya’s economic and institutional environment makes bank branches expensive to run. Significant running costs include cost of sending cash upcountry (due to poor infrastructure) and labour costs (branches need to be staffed with mid-level managers).

4.1.2 ATMS

ATMs currently provide the most accessible mechanism for cash dispensing in Kenya, both in on- and off-site locations. ATM machines have the advantage of being accessible on a 24/7 basis, lengthening access times to beyond office hours. ATMs also provide off-site 24/7 access to basic bank functionality more cost-effectively than branches for the same transaction; although in Kenya, cash depositing is limited to a small number of ATMs. This has extended the reach of bank networks, making banking a more attractive value proposition for customers.

An ATM’s main cost is the machine itself (when amortised on a monthly basis), monthly maintenance (especially for off-site ATMs), monthly, weekly or in some cases daily cash transport and loading and, in unsecured environments (i.e., street locations in high-crime areas), security costs.

Table 1: Typical off-site ATM direct costing model in Kenya

<table>
<thead>
<tr>
<th>Fixed (capital) costs</th>
<th>Operating cost p/m</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM</td>
<td>$20,000</td>
</tr>
<tr>
<td>Installation</td>
<td>$3,000</td>
</tr>
<tr>
<td>Total fixed cost</td>
<td>$23,000</td>
</tr>
<tr>
<td>Depreciation (over 3 years)</td>
<td>$639</td>
</tr>
<tr>
<td>Cash servicing cost</td>
<td>$4,577</td>
</tr>
<tr>
<td>Cost of funds</td>
<td>$1,79</td>
</tr>
<tr>
<td>Communication</td>
<td>$18</td>
</tr>
<tr>
<td>Monitoring of machines</td>
<td>$125</td>
</tr>
<tr>
<td>Security and insurance</td>
<td>$30</td>
</tr>
<tr>
<td>Rental of location</td>
<td>$75</td>
</tr>
<tr>
<td>Maintenance</td>
<td>$100</td>
</tr>
<tr>
<td>Total monthly cost</td>
<td>$1,622</td>
</tr>
</tbody>
</table>

Table 1: Typical off-site ATM direct costing model in Kenya

<table>
<thead>
<tr>
<th>Average transactions per ATM p/m</th>
<th>Total cost per transaction</th>
<th>Ksh/USD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0.22</td>
<td>70 Ksh</td>
</tr>
<tr>
<td></td>
<td>15 Ksh</td>
<td></td>
</tr>
</tbody>
</table>

11 According to CBK regulations.
12 Cash servicing cost based on Ksh4,000 per cash load. Maximum load = Ksh3 million. 75% of ATMs transactions are cash withdrawals, average withdrawal amount = Ksh4000
13 Based on average float in machine of Ksh 1.5 million

Interviews with participants, Genesis reports, Safaricom
areas), monthly insurance and security costs. The high fixed costs (ATM machine amortisation, communications infrastructure, monitoring, maintenance, insurance and security costs) and low transaction-related costs (cash loading), make transaction costs very sensitive to transaction volumes at ATMs.

In Kenya, the cost of running an ATM is lower than the international benchmark. This is due mainly to the cheaper, lower functionality machines deployed in Kenya, versus more developed markets.

Off-site ATMs are more expensive to maintain than on-site ATMs. This is because of the cost of maintaining the machine in working order from a greater distance from bank staff. Cash in transit costs rise significantly if the ATM is located away from ATM high-density areas. These ATMs require a dedicated cash delivery service.

Similarly, servicing ATMs becomes expensive when servicing crews need to travel large distances to service the machine. ATMs are also relatively expensive to service because of the large number of moving parts and sensitive electronics. ATMs fail more frequently in hot and dusty environments. This is typical of the arid northern regions of Kenya.

The higher running costs of off-site ATMs could be reduced by locating a branch nearby to share the costs. However, the branch itself is a high-cost channel for banks. Locating a branch and ATM in a low-density area would just increase the operating costs of providing infrastructure in the area.

The high fixed costs and relatively high running costs make ATMs sensitive to transaction volumes. The transaction cost to a bank on a typical off-site ATM ranges from about Ksh94 per transaction based on 1,000 transactions per month, to less than Ksh9 with 20,000 transactions per month. The most significant decline in costs occurs within the first 5,000 transactions; by 6,000 transactions per month a transaction’s cost is below Ksh20.

The significant range in potential transactions costs to banks has forced banks to actively manage their ATM networks, so that they optimise transaction volumes. Banks move underperforming ATMs regularly.

Underperforming ATMs are defined differently in each bank. However, in South Africa, most banks define an underperforming ATM as one that has less than 6,000 transactions per month. The ideal transactions volume for an ATM is about 7,500 transactions per month. For reasons of convenience, banks also restrict maximum transactions to about 15,000 per month. Above that rate, usage is so high that customers are likely to queue for services.

The high cost of ATMs and the need to actively manage ATM networks is forcing some smaller banks in developed markets to re-evaluate their deployment of off-site ATMs. A popular solution is a third-party acquirer whose business is to provide low-cost access to an off-site ATM for member banks. The third-party acquirer has a number of advantages over banks:

- **Off-site ATM deployment is their core business.** This focus makes them better managers of ATM networks than banks, who treat ATMs as a channel within a set of networks aimed at servicing customers.

- **Third-party acquirers have scale.** ATMs are not only a scale business at the individual ATM level, but also at the network level. Larger ATM networks can be managed using similar resources as a smaller network, spreading the cost of monitoring, insuring and servicing ATMs across a larger network. This reduces costs of running an individual ATM within the network.

The entry of PesaPoint is expected to achieve both of these objects over the next few years.

### 4.1.2.1 TRENDS IN ATM COSTS AND UTILISATION IN KENYA

Kenya’s ATM network is in a strong growth phase. Customers are increasingly using these machines for basic transactions, including cash dispensing. Transactions rose from 4.92 million in 1999 to 9.1 million in 2005.

However, although the network of ATMs has increased at a higher rate over the same period, the average transactions per ATM per month have been declining. Average ATM transactions per month averaged 4,763 in 1999, but fell to 1,367 in 2005. This has affected the profitability of ATMs for banks in Kenya.

The falling transactions per ATM leads to rising transactions costs for ATM providers, making an off-site ATM unprofitable for a bank levying a transaction fee of between Ksh20 and Ksh30. It is also
highly likely that a significant proportion of on-site ATMs are unprofitable for banks.

With a significant increase in ATMs planned over the next two years, average transactions per ATM are expected to fall further. This will have a significant impact on profitability for the banks. Instead of being a profit centre for banks that manage their ATM networks effectively, most banks in Kenya will be finding their ATM networks becoming an increasing burden to their businesses.

Banks could argue that there are cost savings because customers transact at an ATM rather than in a branch. These savings (termed virtual revenue) should be included in the income generated by ATM channels for internal management reporting purposes. However, banks with significant ATM networks and recurring actual costs need to ensure that these costs are covered by actual revenue. Banks need to be able to create ATMs as a profit centre that generates sufficient revenue to at least cover the cost of the infrastructure, otherwise banks would be forced to raise income through other charges, reducing their value proposition to customers.

The primary beneficiaries of the current high interchange fees include larger banks that have made access to their infrastructure a competitive advantage over smaller banks. Smaller banks are at a disadvantage to the larger banks in this environment because their customers must pay the higher interchange fees. It is thought that if the cost of interchange were to fall, smaller banks would be able to offer a more competitive product, while high volumes would still reward the providers of infrastructure (large banks).

Social protection payments have the potential to increase transactions at ATMs, improving the economics of deploying ATMs for banks. The number of cash withdrawals on current ATM infrastructures would be about 450,000 per month (full deployment), or about 3,100 transactions per ATM per month. However, for social protection payments in rural areas, ATMs are not the ideal channel for dispensing cash because:

- ATM running costs in an off-site environment are at their highest, and
- in small centres, transactions volumes are likely to be relatively low in comparison to urban centres, significantly raising the relative cost of operating these machines in comparison to urban areas.
4.1.3 POS

POS is the newest channel deployed by banks in Kenya. It is currently one of the lowest-cost channels that can be deployed by banks. International benchmarks indicate that the cost to a bank of POS can be as low as KshS per transaction. The relatively lower capital cost of the machine (as low as $250) and lower running costs in comparison to ATMs make POSs ideal channels in low-transaction environments.

POS machines can theoretically be used for cash withdrawals. A "cash-back" transaction allows customers to draw cash while paying for goods in a retail environment. Because the merchant is credited into his/her account by the customer to the value of the cash withdrawn, electronic funds in the bank remain within the bank and are not withdrawn from the bank in the form of cash.

From a banking sector perspective, a cash-back at POS has no impact on the total bank sector balance sheet. In an ATM transaction, the total balance sheet decreases with every cash withdrawal at an ATM. This has significant implications for the size and profitability of the banking sector. Banks generate revenue from interest income and transactions fees.

The dominant POS business model is based on the credit card model in which the retailer is charged a merchant discount (a percentage of the transaction value) for processing a purchase transaction electronically. By charging the merchant for the transaction, the transaction cost is not carried by the customer. Historically this played a key roll in growing the credit card market and overcoming customer resistance to using credit cards.

The reasons for charging the merchant are twofold:

1. Merchants benefit most from a customer making a POS purchase. Merchants reduce cash-management costs as funds are credited directly into the merchants account. The automated reporting process also facilitates in reconciliations and accounting.
2. Fewer "missed purchases" occur when a customer wishes to make a transaction, lacks the cash, but has funds in an account.
### Table 2: Key Obstacles to Transactions Acquired at POS

<table>
<thead>
<tr>
<th>Customer</th>
<th>Credit Card purchase</th>
<th>Debit Card purchase</th>
<th>Cash-Back</th>
<th>Cash Advance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchant</td>
<td>Merchant discount</td>
<td>Merchant discount</td>
<td>Merchant discount</td>
<td>Merchant discount</td>
</tr>
<tr>
<td></td>
<td>too costly</td>
<td>too costly</td>
<td>too costly</td>
<td>too costly</td>
</tr>
<tr>
<td>Bank</td>
<td>Banks do not want</td>
<td>Transaction too</td>
<td>No obstacles</td>
<td>Merchant avoids</td>
</tr>
<tr>
<td></td>
<td>credit exposure to customer</td>
<td>costly for bank</td>
<td></td>
<td>merchant discount</td>
</tr>
<tr>
<td>Key stumbling blocks</td>
<td>1) Banks do not want credit exposures to these customers; 2) Low value transactions are too expensive for banks</td>
<td>1) Low value transactions are too expensive for banks</td>
<td>1) Channel not supported by banks through switch; 2) Limited customer knowledge; 3) Customers are forced to purchase</td>
<td>1) Merchants avoid the merchant discount</td>
</tr>
</tbody>
</table>

#### Cash advance – reverse interchange

- **Issuing bank**
  - Pays Interchange & Switching fee
  - Pays Interchange, switching fee & Issuing bank fees – flat rate

- **National switch**
  - Pays Interchange

- **Acquiring bank**
  - Receives fee, a percentage of interchange Ksh3

- **Pays Interchange Ksh0**
For debit card transactions, a similar charging system is used. Merchants are charged a discount for debit card transactions, but they are typically lower than credit card transactions. This is because debit cards do not have the same benefits to customers as credit cards (principally the benefit of reversing transactions up to six months after the transaction took place). Fraud on signature-verified cards is also higher than on PIN-based cards. Magstripe with signature credit cards are also more risky from a payments perspective than magstripe with PIN debit cards.

Debit cards in Kenya do not charge a transaction fee to the customer when transacting like some other emerging markets (South Africa, Brazil, and India), with the result that the cost of the transaction is covered by the merchant discount. As banks need to recover the (predominantly) fixed costs of deploying a POS, a monthly rental is also charged to the merchant. In low-transaction value environments, banks also increase the merchant discount above high-transaction value environments. Merchants typically recover these costs through higher prices charged on all goods sold, which is why in competitive low-transactions volume/value environments, POS becomes unattractive for merchants. It is therefore unlikely that merchants in rural areas of Kenya would want to deploy POSs to acquire debit card transactions, even if customers do not get charged per transaction.

Combining a purchase with “cash-back” could assist merchants by allowing customers to remove the merchant’s excess cash holdings (thus saving the merchant from the need to make a trip to the bank). This is not ideal for the customer if they can only obtain cash by making a purchase.

However if a cash advance is not linked with a card purchase, card associations fear that merchants might “cheat” the system by encouraging customers to withdraw cash, for which the merchant normally earns a fee, and then make a cash purchase from the merchant, who would then avoid paying a merchant discount. This would have dramatic consequences for the card business at most banks:

1. Merchant discount revenues would fall from their current level of approximately 3%.
2. Bank costs would rise as they would now need to pay the merchant for providing a cash withdrawal fee (as in the ATM model, the provider of infrastructure to facilitate withdrawals earns a fee).
3. Account balances would fall as funds are withdrawn from accounts to pay for purchases.
4. Cash utilisation (with all its attendant costs in the system) would not fall.

Internationally (and in Kenya) there is thought to be considerable resistance from the Card Associations and some member banks to allowing member banks to provide cash advances from POS machines.

4.1.3.1 POS IN KENYA

The actual number of POS machines deployed in Kenya is about 6,000 and Barclays Bank alone has slightly over 4,000 merchants countrywide. POS machines have been introduced predominantly in tourist locations (hotels and resorts) and retailers targeting high-income customers to support the credit card market. This compares with more than nine million transactions per year made at ATMs.

Even in highly-developed payments environments, cash transactions remain a significant proportion of total transaction volumes. This is because lower-value transactions processed electronically become unviable for bank providers. Fig 13 outlines the cost of processing an electronic transaction (including switching via Visa) as a percentage of the purchase price. It highlights the high cost of processing an electronic transaction as a percentage of a low-value purchase price. Since banks would be unable to pass these costs onto consumers (debit is free in Kenya) or merchants (as an increased merchant discount) without either one reverting to lower-cost cash to make the transaction, lower-value transactions are likely to continue to be paid in cash.

This means that banks will need to provide cash-out facilities in rural areas to provide a compelling value proposition to customers and merchants.

The preceding analysis highlights that debit is unlikely to become the payment means of choice for some time to come. Cash-back is not as yet widely available in Kenya, although it is about to be introduced. The previous section also outlined the business reasons why banks and the Card Associations may be reluctant to support “cash advance” strategies. Equally importantly, however, cash from POS suffers from a large number of customer acceptance and marketing challenges. In many instances, “cash-back” solutions at POS have failed due to:

- Visibility: The till area in any supermarket is crowded with merchandise affording few opportunities for branding and visibility.
• Teller training: Tellers need to be properly trained and offered incentives to encourage customer usage. This has proved difficult if the value of the transaction-related fee is very low, and the number of customers wishing to use the service is also low.

Thus, a successful “cash advance” strategy needs to overcome visibility, customer education and teller training, without increasing risks to an unacceptable level. The alternative, which is for all transactions to move to debit, is only feasible if customers make a large proportion of their monthly purchases at a single shop at infrequent intervals.

4.2 CONCLUSION: CONSTRAINTS TO LOW-COST, ACCESSIBLE SOCIAL PROTECTION PAYMENTS USING KENYA’S CURRENT BANK INFRASTRUCTURE

Current banking infrastructure does not provide an ideal platform for the distribution of social protection payments in Kenya:

• There is limited access to formal, secure infrastructure supporting transactional banking in rural areas. Access to the national payment system is limited to banks, and banks have not established infrastructure in rural areas and small towns. This has limited access to transactional banking facilities needed to distribute SPPs.

MFIs and SACCOs have limited access to the national payments network. The lack of access to transactional banking means that even though they are well placed to provide financial services to rural social protection payment recipients, their ability to process regular low-value payments is low.

• Current infrastructure, branches and ATMs are high-cost, high-volume transaction channels: Branch infrastructure in Kenya is high-cost. This is because of the high set-up costs (determined in part by CBK regulations) and high running costs of branches. This makes branches unprofitable in low-volume transaction in low-income areas. Smaller agencies provide an alternative, but are also costly. They are also limited to making up 50% of a bank’s branch network.
ATMs offer a lower-cost alternative, but are still relatively expensive. This is because of the high capital and operating costs of ATMs. Transaction costs are also very sensitive to transaction volumes. The low average transaction volumes in Kenya indicate that most banks are making a loss on every ATM transaction processed. Processing social protection payments would increase transaction volumes, reducing transaction costs. However, ATMs are unsuited to low-transaction value/volume environments (such as the arid northern regions of Kenya).

- **POS machines** do not currently provide an alternative channel to ATMs or branches because of the lack of an appropriate pricing model (the merchant discount versus ATM fee issue) and issues of visibility and customer education. Although cash-back at POS might soon become available, social protection payment recipients should not be forced to purchase goods at a retailer in order to withdraw their payments.

- **Switches do not provide effective interoperability across the banking sector.** The larger banks that have the branch infrastructure to support acquiring are not part of PesaPoint, forcing customers to transact at the much higher Visa-member pricing rate if they wish to use non-proprietary ATMs. PesaPoint provides significant off-site ATM infrastructure for partner banks, but is not able to switch between partner banks. Kenswitch currently offers a low interchange fee alternative to Visa, but switching costs are high for banks. Also, Kenswitch interchange does not offer incentives to banks to expand ATM infrastructure aggressively.
5 CURRENT G2P PAYMENT SOLUTIONS IN EMERGING MARKETS

Social protection payments can be made either through the banking system or through stand-alone payment systems that we have called “off-net providers”. Off-net providers make sense if bank infrastructure is either not available in the right areas, is too costly to use, or fails to meet specific requirements of the payment service to be provided.

5.1 OFF-NET SOLUTIONS

In some countries, most notably South Africa, non-bank, off-network service providers have been appointed to manage and provide social protection payments. This came about because:

- Banks lacked infrastructure in the places where payment recipients were located (the same situation is likely to exist in Kenya).
- Banks lacked low-cost delivery channels to support the handling of these payments (as has been shown to be the case in Kenya).
- The government required that each beneficiary be uniquely identified for each payment. A bank can very easily verify that the person with the card has the right PIN to use that card; however, no standard exists for ensuring that the person with the PIN is the person who was originally issued the card. This was thought to create a major risk to the system as an old age pensioner could pass their PIN to their family members who would then be able to continue to draw a pension long after the pensioner passed away. To address this problem, the government adopted the requirement for a biometric to link the unique identifier of the cardholder and the holder of the PIN.

Thus, in South Africa, most of the contracts to handle payments were initially awarded to off-net service providers who were:

- Willing to create the cash distribution infrastructure.
- Able to provide biometrics identification.

However, welfare agencies have increasingly recognised that many off-net service providers are very costly, that unique identities can be forged in other ways, and that biometrics currently have their limits. A recent report indicated that facial recognition scanners could be inaccurate 10% of the time. Fingerprints can become unreadable with constant manual labour, a feature of most rural communities in Kenya. Reconfirmation of the health/welfare of the recipient is part of government’s on-going responsibility to the beneficiaries and at the same time can provide a reliable means of reconfirming that the beneficiary still requires money, thus obviating the need for biometric identification.

In South Africa, off-bank distribution networks are costing the government about Ksh26bn (US $390m) a year for 8.3 million recipients (Ksh 260 per transaction) (Department of Social Welfare, 2006); versus an estimated Ksh1.5 billion for the two million banked recipients (about Ksh 60 per transaction), and Ksh60 for the cash withdrawal by the recipient (Department of Social Welfare, 2006). Similarly, in Kenya it is likely that the development of a dedicated payment distribution system would incur significant costs, making it more expensive in comparison to infrastructure already in the market, including banks, money transfer groups and the Post Office/KPOSB network. Proprietary distribution networks that are not interoperable with the banking payments infrastructure also cannot provide access to financial services providers through their networks. Although non-bank networks may provide loans and insurance, the range of products available to non-banked customers is limited because they do not have a bank account.

5.2 ON-NET SOLUTIONS

On-net solutions have a significant cost advantage over off-net solutions. In South Africa, the trend towards using on-bank solutions has been driven by the rising cost of delivering social protection payments using alternative means.

The difference in the cost arises from:

- Ability to share infrastructure between providers; a card issued by one service provider can work on any remote infrastructure.
- The ability to use infrastructure – created to serve social protection payment recipients – that will also serve other customers who do not hold bank accounts due to the lack of infrastructure.
- The ability to benefit from existing investments in payments processing.
- The ability to use open standard and interoperable infrastructure that is not dependent on one single hardware or software provider.

When banking infrastructure is available, there are significant advantages for a recipient who receives his or her funds directly into
a bank account linked to a card:

- Ability to use account for savings.
- Ability to retain value in the account (rather than a wait for a mobile unit to visit).
- Ability to transact close to home rather than carry cash over long distances.

Other societal benefits emerge when more jobs are created in the financial services sector to service the social protection payment plan.
6 ENSURING THAT THE BANKING SYSTEM CAN CREATE APPROPRIATE ON-NET SOLUTIONS

Social protection payments disbursement solutions need to focus on using the most accessible, low-cost network. The distribution network must be able to function in the low-population-density regions of Kenya. This is not currently the case. Various changes in the way the retail payment system operates and an incentives structure for infrastructure providers and card issuers are required.

6.1 ACCOUNT ISSUING, KC, AND VERIFICATION

Social protection payment recipients need to open an account at a bank so they can use the bank to receive other payments, save and transact. Currently banks do not target potential recipients because:

- Their current low income makes them unprofitable for most banks.
- The requirements to open an account are too stringent for most potential customers. Current KYC/AML legislation is to be replaced with a more restrictive system. Current (and future) guidelines and regulations include the need to hold combinations of the following documents:
  - Kenya national ID or passport (currently required): While coverage of Kenyan nationals is high (over 90% of adults — Genesis Analytics, 2006) this excludes foreign nationals and refugees.
  - Proof of address: Utility bills, bank statements, statements from insurers (currently required by some banks, but will be required under new legislation). An estimated 20% of adults have a formal residential address, but only 5% could produce a utility bill (Posta, 2006).
  - Proof of employment: Letter from employer or salary slip (currently required by some banks); this excludes informally or self-employed individuals.
  - Letter from a current bank customer (currently required by some banks): This is used as an alternative to proof of employment documentation.

In order to bank social protection payment recipients, banks (and regulators) will need to sanction a relaxation of account opening requirements, including relaxation on references from employers and proposed proof of address requirements, as is currently the case in South Africa.

6.1.1 PROPOSED CUSTOMER VERIFICATION AND POTENTIAL FRAUD REDUCTION STRATEGIES

Customer verification needs to occur at application and periodically thereafter. Fraud can occur both at application and during the disbursement process. For example, in South Africa, a significant proportion of social welfare fraud is alleged to occur at the application stage. A combination of fraudulent IDs (approximately 20% of IDs are fraudulent) and misrepresentation by applicants is thought to represent a far larger source of fraud than fraud at disbursement.

Banks would not be able to conduct effective recipient verification at remote delivery channels every time the recipient withdraws the social protection payment. ATM or POS machines are not equipped to verify beyond a card and PIN. Retrofitting all remote infrastructures with fingerprint or retinal scanner technology would make the infrastructure as expensive as off-bank network solutions. However, alternative verification strategies are possible.

The process of verification can be managed separately from the payment process. This is being pioneered in South Africa, where banked recipients are verified on a quarterly or biannual basis by the social welfare agencies. This contrasts with unbanked recipients who are verified using proprietary biometric systems every time they collect their grant. The shift to quarterly or biannual verification came about due to the reduced costs of transferring grants through the banking system, as opposed to using the proprietary biometric verification system. These cost savings remain significant, even though the possibility of fraud increases because recipients are not verified every time the disbursement is made.

6.2 PROPOSED MODIFICATIONS TO CURRENT/FUTURE BANK CHANNELS

Bank channel deployment needs to aim at providing access to financial services in small towns and villages in rural Kenya. This should be through modifying current infrastructure to make it more cost-effective, and deploying new channels that are cheaper to deploy than branches and ATMs.
6.2.1 BRANCHES

The current regulatory environment regarding branch deployment has been identified by banks as a key cause of the high cost of this infrastructure. Alternative mechanisms for indirect regulation can reduce these costs while maintaining similar levels of security needed by the CBK. The alternative model has been successfully adopted by many central banks.

The alternative indirect regulation model utilises the ability of short-term insurance companies to manage risk to regulate the conduct of banks. Regulators in Kenya could then relax minimum requirements for branches allowing banks to manage the branch design and construction process.

Banks have responded to the relaxation of regulations elsewhere by insuring the contents, including cash in the vault, with private sector short-term insurers. These insurers assess each branch for risks and highlight improvements that should be made before the insurer covers bank property. In this way, banks are forced to ensure that precautions are taken to avoid building and running risky branch infrastructure. The advantages for access are significant:

- Banks do not have to comply with building codes that may not be necessary for a particular environment.
- Banks are able to manage their risk directly by modifying the characteristics of their branch network to reduce risks, i.e. by reducing cash in the vault, locating branches in safer areas, using highly-qualified staff, and hiring rapid reaction security companies to protect the premises.
- South African banks are given the option not to insure their branches from theft. This is more risky, and the cost of theft at branches is reflected directly in the bank’s income statement. In a small bank, with limited Tier I capital, this could result in a loss-making position for the bank, resulting in bank failure. In the Kenyan environment, banks should be required to insure branches to an equivalent of the maximum amount of cash held at the branch. This ensures that:
  - Losses from theft are not carried through to a bank’s income statement, causing financial instability.
  - The CBK is able to easily verify whether insurance coverage is adequate for the branch. This reduces bank supervision while maintaining bank stability.

- Banks do not have to comply with a complex set of regulations (at high cost), and can achieve similar levels of security using the indirect regulation model (at lower cost).

6.2.2 CHANNEL INNOVATION

6.2.2.1 ALTERNATIVE DELIVERY CHANNEL: MOBILE BANKING

Mobile banking applications have become increasingly popular in theory in emerging markets, particularly as a result of the success of initiatives such as SMART Money in the Philippines. In Kenya, there are an estimated six million customers with cellular phones. This is about two times larger than the banked population, and offers a significant opportunity for banks to use mobile phone networks to deploy banking solutions.

Using mobile banking solutions to provide the point of access to social protection payment recipients is however far from straightforward:

- SPP recipients will typically be below the income level where mobile phone ownership is prevalent.
- Mobile banking solutions are typically more expensive than transacting at a POS machine or least-cost card solutions. A proposed money transfer scheme in Kenya indicated that transfer fees would be in excess of Ksh100. This compares with proposed POS fees of less than Ksh30 per transaction.
- While some mobile commerce solutions use SIM cards to identify customers, accessing cell phones and the security of initiating a transaction using a shared phone infrastructure, creates huge payment and fraud risks for banks.

The mobile payment models that are most likely to create opportunities in the servicing of SPP recipients are those that can interface with card-carrying recipients, and where the merchant is able to use their mobile phone as an alternative to a POS machine. For this to happen, the merchants using a mobile phone as a POS machine would need to be accredited and managed by a licensed bank or third partner payments provider to reduce fraud and meet Card Association and bank regulations in order to access the payments system. The widely publicised Mobilemoney initiative in South Africa enabled users to post payments to debit or credit cards. Other providers (e.g. CreditPipe) have focused on enabling mobile
phone users to carry out transactions; however, these solutions require the manual entry of cardholder details, and are therefore better suited to higher value/lower volume environments. At the time this research was carried out, Safaricom’s Mpesa initiative did not have links to card use, nor were merchants registered under Card Association rules.

6.2.2.2 ALTERNATIVE DELIVERY CHANNEL: MINI-ATM MACHINES

A Mini-ATM is a POS machine that allows transactions that are normally processed using an ATM. Mini-ATMs are normally located in merchant locations that accumulate large volumes of cash which are then recycled back to customers. The machine used is a high specification POS machine with a customer-friendly interface. While more expensive than POSs, Mini-ATMs are still about 10 times cheaper (capital cost) than ATMs, and do not require cash loading or storage. This significantly reduces monthly running costs. The machine has a similar functionality to an ATM, and presents customers with a flow of screens similar to a full-size ATM.

Mini-ATMs allow bank customers to withdraw cash. The customer carries out the transaction then the machine prints two vouchers debiting the bank customer account to the value of the cash withdrawn, and crediting the merchant’s account with the same value. The bank customer then redeems the voucher at the merchant for cash. The merchant’s voucher is used to verify the amount withdrawn.

Mini-ATMs differ from POS and Enhanced POS in a number of ways (Table 3):

- **Customer facing**: Mini-ATMs are designed interface with bank customers like an ATM. This ensures that customer details are kept secure from tellers. Customers are then able to perform a number of non-cash transactions (balance enquiries, mini-statements and person-to-person transfers) without revealing the information to the merchant.

- **Increased suite of potential transactions over POS**: Mini-ATMs are like an ATM, but come from a POS environment. The machine is able to perform more transactions than either a POS or an ATM.

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**Table 3: Characteristics of potential POS machine configurations**

<table>
<thead>
<tr>
<th>Type</th>
<th>POS</th>
<th>Enhanced POS</th>
<th>Mini-ATM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction initiator</td>
<td>Merchant</td>
<td>Merchant</td>
<td>Customer</td>
</tr>
<tr>
<td>Transactions supported</td>
<td>Retail card acquiring; top-up; 'cash-back'; third party payments</td>
<td>Retail card acquiring; 'cash advance'; top-up; third party payments</td>
<td>Retail card acquiring; balances, mini-statements; 'cash advance'; cash deposit; top-up; remittances; third party payments</td>
</tr>
<tr>
<td>Interface with machine</td>
<td>Card + PIN/Signature</td>
<td>Card + PIN/Signature</td>
<td>Card + PIN</td>
</tr>
<tr>
<td>Cost of machine</td>
<td>Ksh15,000-55,000</td>
<td>Ksh15,000-55,000</td>
<td>Ksh20,000-200,000</td>
</tr>
</tbody>
</table>

Genesis research, POS providers, industry experts
The cost of the transaction needs to be covered by the customer because merchants have been unwilling to provide cash to customers without being compensated for doing so. This contrasts with the merchant discount paid by the merchant on a retail purchase at POS.

The main challenge to the deployment of Mini-ATMs is the already highlighted fear of the Card Association and banks that Mini-ATMs could damage the credit card market. There are also concerns that customers could present out-of-date slips to the teller who may perhaps not notice the customer’s attempt at fraud.

### 6.2.2.3. MINI-ATM DEPLOYMENT - WORKING WITH FMCG DISTRIBUTION NETWORKS

**Finding cash-accumulators**

Critical to the success of Mini-ATM deployment is identifying locations where there is a sufficient amount of cash available to disburse to transactors. Cash accumulation points need to be accessible to individuals from both a geographical perspective (the closer to homes the better) and from a service perspective. The ideal businesses should operate in a retail environment that deals with the public on a daily basis and is a point at which individuals traditionally congregate.

The ideal points for the location of Mini-ATMs are Fast Moving Consumer Goods (FMCG) retailers whose customer base includes those who will be targeted for social protection payments. FMCG sustain the most comprehensive commercial distribution networks in Kenya. The network is designed to provide the highest possible level of coverage of consumers in markets in rural and urban areas. They are therefore geographically widely spread and provide the most comprehensive business coverage in rural areas. This guarantees that products are provided to consumers as conveniently as possible. The most likely point at which recipients will spend their money is at the retail points (dukas, street vendors, small supermarkets) of FMCG products. By placing an acquiring machine at these points, banks will be able to provide easily accessible distribution points for SPP recipients where they spend their payment on consumables.

FMCG distribution networks are multi-tiered. In the case of Kenya, four easily identifiable types of business support distribution efforts of FMCG manufacturers (such as EAB, Unilever, and Proctor and Gamble):

1. **Key Distributors** (also known as Super Distributors): Comprise of no more than 10-15 businesses. Key Distributors purchase large volumes of an FMCG product and distribute it (typically) within a specified geographical area. Key Distributors are normally restricted by the FMCG producer to distributing only their product.

2. **Distributors**: Distributors provide added reach for key distributors into trading centres in rural areas. The significant distances from major centres into rural areas requires this added layer of distribution. (In Uganda, smaller distances mean Key Distributors are able to service trading centres themselves).

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17 Further research should highlight the pattern of spending amongst the target groups.
They are responsible for ensuring that wholesalers in trading centres are stocked with the FMCG producer’s product. Distributors can stock multiple FMCG producer products but have a specialisation in one type of FMCG product, i.e. cigarettes, soft drinks, cell-phone airtime. Purchases from distributors are mainly in cash, and sales to wholesalers are also in cash.

3. **Wholesalers**: Wholesalers are based in major rural trading centres. They focus on providing retailers, and consumers, with products from a range of FMCG producers. Wholesalers can service multiple trading centres if close by. Wholesalers transact using cash.

4. **Retailers**: Retailers include formal sector shops in buildings, informal stores located on street pavements, and mobile hawkers. They provide distribution of product at a street and block level. Cash is the only form of transaction at this level.

Truncation of the FMCG distribution model as a result of cost-cutting and falling profit margins has forced wholesalers and retailers to overlap. The number of tiers between the FMCG manufacturer and the customer can be as little as one in urban areas where large supermarket chains purchase directly from the FMCG manufacturer. In more rural areas the distribution chain comprises three to four tiers. However, wholesalers do sell products directly to the public.

To be a suitable location for a Mini-ATM (or other cash-back solution) a merchant needs to have significant cash accumulation characteristics. Since Mini-ATMs need to process at least 1,000 transactions per month, merchants need to have sufficient cash turnover to provide around 1,000 bank customers with cash. If, hypothetically, the average cash withdrawal is Ksh2,000, this implies sufficient excess cash with a monthly turnover of Ksh2,000,000 (US $30,000. An important future focus of research will be to highlight the distribution of merchants with this level of turnover in Kenya.

Wholesalers with retail outlets provide an ideal location for POSs:

- **They have significant cash accumulation characteristics**: Wholesalers generate significant flows of funds. At any point in time, they hold sufficient excess cash to facilitate cash withdrawals. (This is in contrast to rural PCK offices which do not accumulate significant volumes of cash).
They are located in all main rural trading centres.

They sell products directly to the public: Wholesalers are increasingly becoming large retailers as well. This places them ideally for cash dispensing as customers already frequent their shops to purchase goods.

Cash advance models rely on sufficient cash at the merchant to facilitate cash withdrawals. If demand for cash from social protection payment recipients were concentrated at a particular time of the month, for example month–end, demand for cash could easily outstrip supply. Account transfers therefore need to be staggered over the month and, preferably, not permitted during the last five days of the month when most spending occurs. This would minimise the cash handling costs for the merchant, and ensure that bank infrastructure is not overwhelmed by demand at month–end.

6.2.2.4. MANAGING MINI-ATM AND POS USE

Mini-ATMs provide an attractive business model for banks when demand does not justify a full ATM and customer retail purchase behaviour makes debit at POS unprofitable for banks/merchants. Fig. 16 highlights the different pricing models for traditional card transactions, (free to the user but with a merchant discount and communication costs), and a flat fee for cash withdrawal using a Mini-ATM. In Kenya, a typical rural retail transaction is too low in value to support the normal POS/debit card model.

To avoid damaging the traditional card model it is recommended that banks could cap the value of a Mini-ATM cash withdrawal. Fig 16. outlines the point at which revenue generated from a Mini-ATM becomes less than revenue generated from a POS machine.

The cap would be at the level where debit and credit card transactions become profitable on a traditional POS.
Assuming that a cash withdrawal results in four retail transactions of up to Ksh600 per transaction, one POS withdrawal of Ksh2,400 would generate the same net revenue for issuing and acquiring banks as the four debit/credit card transactions on POS. However, issuing banks continue to make a loss from the four transactions on retail transactions up to Ksh1,100. Again, assuming four transactions per cash withdrawal, this would imply that POS withdrawals of Ksh6,500 would generate similar revenues for the issuing bank. The cap for cash withdrawals at a POS should therefore be between Ksh3,500-6,500. Ideally, the cap should allow social protection payment recipients to withdraw their funds in one transaction.

By segmenting the market between potentially more lucrative POS-acquired transactions and cash withdrawals at Mini-ATMs, banks would be able to ensure profitable servicing of low-income customers, without undermining their traditional card business. Banks should agree on the maximum cash withdrawal that can be made at a POS.
7
GUIDELINES FOR CHOOSING G2P SOLUTIONS

Banks can offer the lowest cost distribution network for SPP transfers by exploiting their existing payments infrastructure. However, the government needs to set the rules if it is to achieve a win-win situation whereby the banks facilitate payments and create infrastructure, while ensuring that the government achieves a least-cost distribution system. Achieving this outcome requires the involvement of all the key stakeholders: banks, Card Associations, regulators and government agencies.

All the stakeholders supporting the payment system need to play a role in ushering in the changes through the banking system:

• **Account issuing:**
  - Social welfare authorities: Should make the commitment that payments will be paid via the banking system, providing banks and financial institutions commit to creating the necessary infrastructure to manage these payments.
  - The authorities need to agree a price per account opened and per transaction that generates sufficient income to encourage a bank to compete for the social protection payment business. This fee should probably be equivalent of a modest discount (e.g. 15%) to the least-cost current fee in the market (currently around Ksh50 per month) given the scale of the payments - amounting to around Ksh30 for the first withdrawal each month.
  - Banks: Will need to customise the current product offering to suit SPP recipients/low-income customers and develop a low-cost account issuing strategy for low-income individuals in rural areas.
  - Government: Needs to create a formal exemption from KYC requirements or act as guarantor for all social protection payment recipients.°

• **Transaction switching (interoperability)**
  - Banks: Those wishing to participate in the distribution of social protection payments should be a member of a switch that:
    1. charges the lowest-cost switching and interchange fees available in the market,
    2. has a significant share of remote infrastructure in Kenya, and
  - agree to handle SPP recipients’ transactions at a fee of not more than Ksh30 per transaction, paid by the recipient, but recoverable from the government as a mark-up on the value of the grant paid into the account, e.g. the government pays an extra Ksh30 on top of the grant amount into the account.

• **Branch deployment:**
  - Central Bank of Kenya/Kenya Bankers Association: The CBK and KBA must come to an agreement on the use of indirect regulatory mechanisms for branch deployment. It is recommended that the CBK consult with other central banks on the subject of bank infrastructure regulation to ensure the best possible outcome for the Kenyan environment, with as little regulatory intervention as possible.°
  - CBK: Should relax the requirement that only 50% of a bank’s network can comprise agencies.

• **POS deployment:**
  - Banks: Banks have three options:
    1. Allow cash withdrawals at POS (cash without a linked purchase transaction): This could damage the merchant POS business model as merchants avoid merchant discounts by forcing customers to make cash withdrawals to pay for goods and services.
    2. Disallow cash advances at POS, but create a special “channel” to facilitate payments on the machine aimed at specific target markets: This would allow social protection payment recipients to withdraw their money, without requiring a retail purchase.
    3. Use Mini-ATMs (a modified POS machine) in a strictly controlled transactions environment, e.g. put caps on the maximum transaction value.

• **Mobile banking solutions:**
  - Banks: Mobile banking solutions provide a useful mechanism to access currently under/unbanked customers. Efforts to develop this environment to support recipients should focus on card acquiring on mobile phone solutions.

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° This would be consistent with the approach adopted in South Africa and with recommendations of a CGAP report, Supporting remittances in Southern Africa, 2005 by Genesis Analytics

° A study tour should be arranged
7.1 CONDITIONS FOR SERVICE PROVIDERS

In order for banks or their service providers to qualify to distribute social protection payments they should comply with a set of requirements, supporting the goal of a low-cost, accessible distribution network.

7.1.1 ACCOUNT

A bank must provide a transactional banking solution that supports payment disbursement, as well as supporting other transactions, including interbank and account transfers, POS transactions and non-value transactions, including balances and mini-statements at remote infrastructure. This ensures that as many transactions are processed by these machines, reducing the unit costs of the transaction.

Banks need to define an appropriate customer-servicing environment for remote areas, probably through a toll-free or share-call facility using public phones.

7.1.2 PRICING

Based on current pricing in the market, the government should define a maximum that it is prepared to pay to effect social protection payments. This would exclude expensive providers and focus attention on providing a low-cost payment solution for potential providers. This should involve four components:

- An account-hosting fee. The lowest cost in the market is currently Ksh50 per month. Given the volume of accounts anticipated, the government should probably target a hosting fee of Ksh30 per month.

- Current pricing for internal funds transfers in Kenya ranges from Ksh0–200, with most banks making it free. The government should offer to pay not more than Ksh30 for an electronic funds transfer (EFT) into the customer’s account. The entire cost of the transfer must be charged to the sender (i.e. the government).

- Current cash withdrawal fees charged by banks to customers making withdrawals at PesaPoint ATMs is Ksh40. The government should pay the service provider Ksh40 to cover the cost to the service provider of a single withdrawal per month.

- Current charges on balance enquiries range between Ksh0–20. The government may wish to consider paying a further Ksh10 for a balance enquiry through any channel.

OLIGOPOLIES, COLLUSION, AND IMPACT ON THE PRICE OF GOODS.

Economic theory suggests that monopoly producers have the potential to affect the price charged to customers. Monopolies benefit from scale economies, limited competition to their products, and limited substitution away from the products. If these factors are present in a market, the monopoly producer is able to affect the price of the product it produces. This can result in monopoly producers maximising revenue by charging customers more than the average cost of producing the goods.

Oligopoly producers can behave in a similar manner to monopolies but comprise more than one producer. They achieve this by colluding. Collusion is defined as “conduct intended to coordinate the actions of firms,” (Church and Ware, 2000: 308). This ensures that firms behave as if they are a monopoly. Collusion results in revenue maximisation when:

- Consumers are unable to substitute the product for alternative products,
- the colluding firms account for a significant proportion of the market for the product,
- and entry into the market by new firms is hindered.

There are two types of collusion, explicit and tacit collusion. Explicit collusion occurs when firms “mutually devise a common plan of action and exchange mutual assurances to follow that common course of action,” (Church and Ware, 2000: 308).

Because of the high level of concentration in the banking market, barriers to new entrants and coordinated pricing between parties, banks and retail payments providers have been investigated for collusive behaviour.
The total cost of disbursing funds to recipients should not cost more than Ksh100 per month per person to the government and nothing to the recipient for the basic transaction profile.

**7.1.3 SUPPORT DISBURSEMENTS MADE THROUGHOUT THE MONTH**

End-of-month queuing at banks and ATMs is a common characteristic of most emerging markets, as customers try to withdraw salaries as soon as possible after they have been paid. By introducing a significant number of new customers, these queues, with the resultant decrease in service levels, could be exacerbated. This can be avoided by distributing social protection payments evenly across the entire month.

**7.2 IMPROVEMENTS TO THE FUNCTIONING OF THE BANKING SYSTEM**

The analysis has highlighted that changes to the regulatory and payment-pricing environment could play a role in improving access to finance in low-income/volume areas. The government could make it easier for service providers to provide lower-cost services by:

**7.2.1 BRANCH REGULATIONS**

- Moving to a market-based mechanism for managing branch risk and reducing the central bank’s role in branch regulation.
- Lifting restrictions on the ratio of agencies to branches.

**7.2.2 PAYMENT SYSTEM PRICING**

Internationally, the system supporting the setting of interchange fees has become an increasing focus for competition regulators who are concerned that the structures support collusive behaviour. The leading regulators involved in investigations have been the Office of Free Trade (UK), the Federal Trade Commission (USA), and the European Commission (EU). More recently, investigations into transaction pricing by banks have been launched in Brazil, New Zealand, Australia and South Africa.

The focus areas for competition authorities have been:

- **Multilateral agreements on interchange pricing:** Interchange pricing has normally been agreed by the industry through negotiation between all the parties. The price is set for all transactions. This has been identified as assisting banks in colluding, as banks are able to act as an oligopoly, although this has not necessarily meant that prices have been set in an anti-competitive manner.

  - **Determinants of the agreed interchange price that have indicated some form of collusion:** Interchange fees have been found to be much higher than the cost of providing off-us transaction services, (EC, 2002).

  Competition authorities in other countries have established that there is significant opportunity for collusive behaviour to dominate the setting of the interchange fee to the issuing bank and that prices have been higher than would have been expected in a competitive outcome (EC, 2002; OFT, 2002). However, this has not resulted in the disbanding of the multilateral pricing. Rather, competition authorities have recommended that a number of controls be included in the negotiation process to reduce the possibility of collusive pricing. Multilateral pricing ensures that all parties are treated equally in an off-us environment. By disbanding multilateral pricing, competition authorities highlighted the possibility that smaller institutions would be charged higher interchange fees by larger banks, resulting in a more anti-competitive environment than under multilateral pricing agreements. Competition authorities have therefore allowed multilateral pricing to continue on condition that interchange fees are related to the actual cost of providing the service. A set of guidelines is used to provide a maximum price for POS transactions. Card Association members are then required to set a price for interchange below the maximum determined price.

  The system of determining a maximum interchange price has been applied in a number of jurisdictions, including countries in the EU (excluding Scandinavian countries where no interchange is allowed by law). While the determination of a ceiling interchange price has facilitated a more competitive environment, there have been objections to the application of this system. It is currently being challenged by the New Zealand competition authorities who believe it is not sufficiently competitive.

**7.2.2.1 DETERMINING POS INTERCHANGE AND MERCHANT DISCOUNTS**

In case COMP/29.373 (Visa International - Multilateral interchange fee), 2002, the EC recommended that POS merchant discounts should be based on the following cost calculations:
• Cost of processing transactions.
• Cost of free funding for cardholders.
• Cost of providing payment guarantee.

The cost calculations would be made by an independent organisation. The cost would then be used to benchmark the agreed interchange price. If the interchange price were higher than the calculated cost, the interchange price would be adjusted down to at least reflect the calculated cost. A similar principle can be applied to ATM pricing.

7.2.2.2. DETERMINING ATM INTERCHANGE

Competition authorities in South Africa are currently considering the issue of ATM interchange pricing. Banks and Card Associations in Europe have indicated to their regulators that they would be willing to provide a benchmark rate for the determination of a maximum price for ATM interchange.

The result of this mechanism for pricing is a fixed interchange fee for POS because variable costs are minimal in the cost calculation. But, ATM charges could have a variable component to interchange, as the costs associated with loading and holding cash vary for the number of transactions processed. This variable price model has been implemented in a number of jurisdictions including South Africa and Saudi Arabia.

7.2.2.3. APPLYING LESSONS FROM INTERNATIONAL EXPERIENCE

Interchange pricing reflects revenue maximising behaviour by market participants. The current interchange pricing of Ksh100 does not relate to the actual cost of providing ATM infrastructure in Kenya for Visa members. PesaPoint has priced ATM transactions and switching fees at Ksh25 per cash withdrawal. Applying a switching fee of Ksh5, PesaPoint is charging banks Ksh20 to banks in interchange. PesaPoint has indicated that this fee is sufficient to cover the cost of providing ATM infrastructure to banks. This would imply that banks should be pricing interchange for ATM transactions at about Ksh20-25, less than 50% of 2007’s interchange fee charged to issuing banks in the Visa network. At the current transaction volume, in excess of 4,000 transactions per month per Visa-linked ATM, and using the PesaPoint price of Ksh25 as a benchmark, a net revenue of Ksh75, or a margin of 150%, could be generated. As of 1 January 2007, interchange was reduced. Negotiations between the Visa members has reduced the interchange fee to Ksh50 per off-us cash withdrawal. This is in response to increasing pressure by smaller banks within Visa to gain affordable access to other banks’ ATM networks for their customers.

The reduction in the interchange fee should, by our calculations, increase transactions processed by Visa members by about 17%. If current ratios, with regard to the charging of interchange and issuing bank fees to customers continues, (the fee to the customer is divided approximately 50:50 between the issuing and acquiring bank – implying a transaction fee to customers of Ksh100), banks are expected to increase revenues from off-us transactions with the majority of the increase accruing to issuing banks.

Transactions per ATM are low by international standards raising entry barriers for smaller banks. Internationally, the optimal volume of transactions processed by an ATM ranges between 6,000 to 14,000 per month. In comparison, transaction volumes for ATMs in Kenya are between 1,300 to 1,700 per month. This has a large impact on the cost of an ATM transaction, as fixed ATM costs (the machine, maintenance, communications and monitoring) are a significant proportion of ATM costs. The impact of an underutilised ATM infrastructure is to increase costs of providing ATM infrastructure for banks that pass these costs on to customers. This in turn reduces customer utilisation and excludes low-income customers from using bank services.

High interchange fees also entrench the competitive advantage of larger banks. Smaller bank customers are more likely to transact off-us, because of their lower proportion of ATMs to the entire ATM network. If interchange fees are significantly higher than the cost of providing the ATM infrastructure, small bank customers are

MONOPOLY UNDERTAKING

A “monopoly undertaking” is defined as “a dominant undertaking or an undertaking which, together with not more than two other independent undertakings:

a.) produces, supplies, distributes or otherwise controls not less than one-half of the total goods of any description that are produced, supplied or distributed in Kenya, or any substantial part thereof;

b.) provides or otherwise controls not less than one-half of the services that are rendered in Kenya or any substantial part thereof”, Restrictive Trade Practices, Monopolies and Price Control Act, 1989 (CAP 504).
asymmetrically disadvantaged in comparison to customers from larger banks and pay more for transactions as a whole because they are more likely to transact off-us.

Low transaction volumes are used by large banks to justify higher interchange fees. The low transaction volumes (and higher interchange fees) reduce the smaller banks’ ability to provide a competitive service to their customers in comparison to larger banks whose customers are more likely to transact on-us at a discounted rate.

Potential tools used to intervene in the retail payments market

In Kenya, the Restrictive Trade Practices, Monopolies and Price Control Act, 1989 (CAP 504), outlines a range of sanctions available to competition regulators and the Minister of Finance. In addition, the Act outlines potential sanctions that can be used against "monopoly undertakings". These include:

- the ability of the minister to fix the maximum price that may be charged by goods or service providers (section 35), and/or,
- the ability of the minister to determine the method for determining the cost of goods (section 37).

Trade agreements that are considered "restrictive trade practices" in terms of Section 6 include:

- "an agreement or arrangement between manufacturers, wholesalers or retailers to sell goods at prices or on terms agreed upon between themselves," (sub-section b), and/or,
- "an agreement or arrangement between manufacturers, wholesalers, retailers or contractors or any combination of persons other than a partnership, engaged in the selling of goods or the performance of services, at prices or on terms agreed upon between the parties to any such agreement or arrangement," (sub-section d).

An alternative to regulatory action under the Restrictive Trade Practices, Monopolies and Price Control Act would be for the central bank to take action under its statutory powers. However, although the CBK should probably encourage Visa members to agree on a more reasonable level of interchange, it is not clear that it has any direct instruments to achieve this outcome:

- Regulations exist to ensure that the CBK has to approve price increases. As these prices have already been approved, it is not clear that the CBK has the authority to insist on a reduction in the interchange fees.
- Although the CBK is empowered to intervene in the banking sector to facilitate an "efficient and effective" payments system (Section 4.A.1.d of the CBK Act), it is unclear what instruments have been defined to achieve this outcome.

7.2.2.4. CONCLUSION

This analysis suggests that the cost of Visa interchange fees are relatively high in Kenya and highlights the extent to which “interchange” fees have become the focus of anti trust legislation/actions in many countries. The Government of Kenya has the necessary legal wherewithal in the form of the Restrictive Trade Practices, Monopolies and Price Control Act to take action should a detailed investigation demonstrate anti-competitive practices. However, the G2P programme also creates an important opportunity to use positive endorsement in the form of an important new revenue stream to affect change in the banks’ pricing behaviour. Elsewhere in this analysis, it has been shown that at a fee of Ksh100 per month per SPP recipient in the G2P programme creates a sufficiently significant revenue pool for the banking system to encourage banks to deploy new types of infrastructure in more remote areas, and to change the way in which banks set interchange fees. This will only occur however if the government insists that any participating financial provider offers an interoperable solution and the government triggers a reduction in interchange fees by agreeing to pay no more than Ksh40 per transaction.
8
POTENTIAL SYNERGIES WITH THE SOCIAL PROTECTION PAYMENT SYSTEM

The social protection payment system (SPPS), by providing a bank account to unbanked rural customers that is linked to the national payment system, will provide significant opportunities for other financial service products to be provided to these customers, as well as the other customers and the merchants supplying cash-out facilities.

8.1. RECIPIENT SERVICES REMITTANCES

Payments professionals interviewed highlighted the significance of remittances for the Kenyan economy. In 2005, international remittances became the second largest foreign exchange earner after horticultural products for Kenya, replacing tourism.

High-cost channels are currently used both internationally and locally to effect remittances. In 2004, Western Union was estimated to have about 60% of the market (Women’s World Banking, 2004). Key to its success has been an aggressive acquisition of distribution infrastructure in urban and rural areas as well as reliability and speed.

If, as a result of the SPPS, rural customers have a bank account, they would be able to receive deposits directly into their bank account at the urban branch of any participating bank. Thus the cost they would face to receive a remittance would fall to the cost of a single withdrawal – a significant saving.

Participants who are issued with a Visa card will increasingly be able to benefit from the Visa money transfer products now being marketed by many banks. This product allows any bank account holder to post payment to any Visa cardholder, and to pay substantially less on the transfer than the main remittance providers.

Remittances can then be withdrawn through rural bank infrastructure (Mini-ATMs) which will be at least as accessible as Western Union points.

8.1.1. SAVINGS

A transactional account provides secure, low-cost savings facilities to customers who wish to save. Banks can provide dedicated savings plans (such as fixed deposits and products encouraging savings for education and medical costs) linked to the underlying transactional
account. This produces further revenue (transactional and float) for the bank.

8.1.2. INSURANCE
Collecting insurance premiums is considerably easier if customers have an underlying account against which a debit order can operate. By providing a bank account to customers, insurers can debit accounts with the monthly premium, significantly reducing costs of collection. Many banks, including Indian, South African and, soon, Ugandan banks, also provide insurance as part of their transactional banking service. Insurance coverage can include basic health, life and disability coverage, with the option to top-up insurance.

8.2. OTHER RURAL CUSTOMERS / SERVICES
The deployment of an interoperable, low-cost transactional network in rural areas will encourage non-social protection payment recipients to open bank accounts. They will be able to take advantage of all the peripheral products available to SPP recipients as well as loans. Two main commercial customers that could also be serviced are MFIs and SACCOs.

8.2.1. LOANS
A transactional account is the basis from which a commercial bank provides credit:

- The transactional account is used to disburse loans and collect repayments. This reduces the cost of credit provision and facilitates increased scale. Banks are able to automate the disbursement and collection process on millions of accounts at a time.
- A customer’s transactional and savings behaviour provides a key source for credit scoring purposes. Customers can be provided with credit remotely using automated credit assessment tools and loan application processes.
- The borrower can be managed through remote bank channels, such as ATMs, Mini-ATMs, retail POSs, mobile banking solutions, telephone and mail, as well as through branches.

8.2.2. MFI-TARGETED SOLUTIONS
The management of loan disbursement and collection accounts form a significant proportion of costs for MFIs. By issuing a bank account to customers, MFIs will be able to reduce disbursement costs. Loans can be deposited into an account and withdrawn from the account at any POS.

8.2.3. SACCO-TARGETED SOLUTIONS
SACCO members would have direct access to savings facilities at banks. Banks could partner with SACCOs to reduce deposit costs and manage customers. Visa provides for a model in which banks can sponsor other financial institutions into the payment system. SACCOs would then have access to the payment system via the principle member. The partner bank would supervise the SACCO and take responsibility for settling liabilities incurred through the payment system. Banks could either provide a card management platform for the SACCO or outsource card management to a third party supplier.

8.3. MERCHANT SERVICES
Merchants acquiring POS transactions are required to hold an account with the acquiring bank to credit cash withdrawals made at the POS. This provides opportunities to cross-sell a range of bank products.

8.3.1. CASH MANAGEMENT SOLUTIONS
The immediate benefit to merchants of acquiring POS transactions is that they are able to manage cash flows through the business more effectively. Merchants reduce the number of cash deposits, which can be expensive in remote rural locations. Merchants are also credited with funds into their account at no cost.

8.3.2. TRANSACTIONAL SOLUTIONS
The acquiring account can either be a transactional account or linked to a transactional account. Merchants will be able to pay for goods using EFT transfers or card payments. This reduces cash-handling costs and risks.

These transactional solutions can also be sold to businesses involved in the distribution of FMCG products, thus intermediating a significant proportion of the FMCG supply chain. This has significant benefits to banks, which are able to provide significant value added services to medium and large enterprises, and could be a major advantage for banks.
8.3.3. INSURANCE

Merchants can be sold short-term insurance as part of the acquiring solutions, or separately. Premiums are then deducted from the transactional account.

8.3.4. CREDIT

Banks will be able to assess merchants for lending opportunities. Lending would be more effectively controlled as disbursements and collections can be managed through the transactional account.

8.3.5. RETAIL ACCOUNT FOR MERCHANT/OWNER

In addition to a range of business products, banks will be able to provide retail solutions to wholesaler owners and employees.
MODELLING THE IMPACT ON PAYMENT SYSTEMS AND PROVIDER PROFITABILITY OF G2P IN KENYA

G2P payments are expected to have a significant positive impact on Kenya’s payment systems by:

1. Increasing transactions processed through the payments system – this is expected to decrease transaction costs.
2. Encouraging banks to establish infrastructure in areas that were previously unprofitable for banks because of low transaction volumes - the infrastructure is expected to be lower-cost than current infrastructure.
3. Improving the value proposition for individuals by making banking infrastructure readily available at low cost.

This section considers the potential impact on the banking sector and bank customers of intermediating social protection payments through various payments channels and develops four scenarios, including:

Off-bank network solution

1) Off-bank network solution (as used in South Africa).

On-bank network solutions, using

2) Proprietary ATM infrastructure.
3) Fully interoperable ATM infrastructure.
4) Fully interoperable POS infrastructure.

The model does not include the use of mobile phones. This is for two reasons. Firstly, the recipients of SPPs are not expected to have sufficient income to own a mobile phone and thus could not receive direct transfers. Secondly, the main mobile payment initiative in Kenya - Safaricom’s MPesa - has not at this stage developed an interface to allow Mpesa agents to acquire card transactions 20.

The model makes a number of assumptions regarding the type of demand expected for grants, the number of points of representation (POR) at which grants could be distributed, as well as the number of non-grant transactions that are expected to be made at on-bank infrastructure. This provides six levels of demand in three main geographical areas:

- Urban areas: These are areas currently serviced by banks. It was assumed that current infrastructure would be used to provide access to grants.
- High- and medium-density areas: These areas are marginally serviced by banks, but are the core target market for smaller SACCOs. It was assumed that the new infrastructure would need to be introduced into these areas.
- Low-density areas: These are areas that are currently not covered by any financial service providers.

Table 4: Demand and concentration assumptions used to model the impact of social protection payments on the payments environment

<table>
<thead>
<tr>
<th></th>
<th>Pilot</th>
<th></th>
<th>Full rollout</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>High- and medium-density rural</td>
<td>Urban</td>
<td>High- and medium-density rural</td>
</tr>
<tr>
<td>Payment recipients</td>
<td>1,200</td>
<td>6,000</td>
<td>50,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Monthly transactions</td>
<td>60,000</td>
<td>60,000</td>
<td>50,000</td>
<td>300,000</td>
</tr>
<tr>
<td>Points of Representation (POR)</td>
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<td>2</td>
<td>30</td>
<td>33</td>
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<tr>
<td>Payment transactions per POR</td>
<td>3,000</td>
<td>90</td>
<td>2,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Total transactions per POR</td>
<td>9,000</td>
<td>3,750</td>
<td>2,500</td>
<td>3,750</td>
</tr>
</tbody>
</table>

Source: Genesis, 2006

20 It has been suggested that the way to overcome this would be to provide every SPP recipient with a mobile phone as part of the programme.
Table 5: Fees income (payment and non-payment) and cost assumptions

<table>
<thead>
<tr>
<th>Switching and processing fees for cash-out transactions</th>
<th>Proprietary – processing</th>
<th>KES 4.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interoperable – switching and processing</td>
<td>KES 12.00</td>
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<td>Assumptions on non-channel costs</td>
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<tr>
<td>Hosting fee</td>
<td>KES 20.00</td>
<td></td>
</tr>
<tr>
<td>EFT</td>
<td>KES 15.00</td>
<td></td>
</tr>
</tbody>
</table>

Table 6 outlines the net revenue generated from cash-out transactions for payment recipients per channel deployed, by level, in the three geographical areas. At Ksh30 and Ksh50 transaction fees, the POS channel makes profits for banks. ATM channels are unprofitable at low transactions volumes until transactions revenue rise to Ksh70 per transaction. Proprietary networks, which assume a higher ATM density than interoperable networks (and therefore lower transactions per machine) remain unprofitable even at Ksh70. Off-bank solutions remain significantly unprofitable in comparison to other on-bank channels.

Raising revenue per transaction does not ensure that traditional ATM channels become profitable at low transaction volumes, even if transaction revenues generated from payments are raised by 133%.

Table 6: Total net revenue from all NEW (excluding current urban transactions) transactions to suppliers by channel at a range of cash out fees

<table>
<thead>
<tr>
<th>Net revenue at Ksh100 per recipient, annual – million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot</td>
</tr>
<tr>
<td>Urban High- and medium-density rural rural</td>
</tr>
<tr>
<td>Full rollout</td>
</tr>
<tr>
<td>Proprietary ATM</td>
</tr>
<tr>
<td>Interoperable ATM</td>
</tr>
<tr>
<td>Interoperable POS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net revenue at Ksh80 per recipient, annual – million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot</td>
</tr>
<tr>
<td>Urban High- and medium-density rural rural</td>
</tr>
<tr>
<td>Off-bank solution</td>
</tr>
<tr>
<td>Proprietary ATM</td>
</tr>
<tr>
<td>Interoperable ATM</td>
</tr>
<tr>
<td>Interoperable POS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net revenue at Ksh60 per recipient, annual – million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot</td>
</tr>
<tr>
<td>Urban High- and medium-density rural rural</td>
</tr>
<tr>
<td>Off-bank solution</td>
</tr>
<tr>
<td>Proprietary ATM</td>
</tr>
<tr>
<td>Interoperable ATM</td>
</tr>
<tr>
<td>Interoperable POS</td>
</tr>
</tbody>
</table>

Source: Genesis estimates, 2006
The costs also impact directly on the cost of providing social protection payments for the government. The use of ATM channels is therefore not ideal in disbursement if transaction volumes are low, which would be the case in rural areas. Banks would need to use an alternative low-cost channel to disburse payments at low cost.

The implications for government of a rise in transaction costs from Ksh30 to Ksh70 is a 50% increase in fees per customer. This implies that one million recipients would cost Ksh480 million more every year. The increase in transaction fees charged to the government does not result in profitability for ATM channels, and only improves the proposition for POSs.

### Table 7: Total cost for government, annual – million

<table>
<thead>
<tr>
<th>Cost to social protection payment provider, annual – million</th>
<th>Pilot</th>
<th>Full rollout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>High- and medium-density rural</td>
<td>Low-density rural</td>
</tr>
<tr>
<td>At Ksh60 per month per recipient</td>
<td>KES 0.9</td>
<td>KES 4.3</td>
</tr>
<tr>
<td>At Ksh80 per month per recipient</td>
<td>KES 1.2</td>
<td>KES 5.8</td>
</tr>
<tr>
<td>At Ksh100 per month per recipient</td>
<td>KES 1.4</td>
<td>KES 7.2</td>
</tr>
</tbody>
</table>

Source: Genesis, 2006

### 9.1 SCENARIO 1: OFF-BANK NETWORK SOLUTION

'Scenario 1' outlines the impact on private sector provider profitability using off-bank network solutions, similar to those used in South Africa. The charge to the government is Ksh80 per transaction (equivalent to the cost of transferring and withdrawing the payment through an account in on-bank solutions). The solution is marginally profitable in urban areas, but becomes increasingly unprofitable the less densely populated the service area becomes.

### Table 8: Cost/revenue model for off-bank networks at Ksh80 transaction fee per cash disbursement

<table>
<thead>
<tr>
<th></th>
<th>Pilot</th>
<th>Full rollout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>High- and medium-density rural</td>
<td>Low-density rural</td>
</tr>
<tr>
<td>Cost per transaction (from interviews with South African banks)</td>
<td>KES 150</td>
<td>KES 200</td>
</tr>
<tr>
<td>Recipients</td>
<td>1,200</td>
<td>6,000</td>
</tr>
<tr>
<td>Total costs</td>
<td>1,200</td>
<td>6,000</td>
</tr>
<tr>
<td>Total revenue</td>
<td>KES 0.18</td>
<td>KES 1.20</td>
</tr>
<tr>
<td>Total net revenue</td>
<td>KES 0.10</td>
<td>KES 0.48</td>
</tr>
<tr>
<td>Annual net revenue</td>
<td>KES 0.08</td>
<td>KES 0.72</td>
</tr>
</tbody>
</table>

Source: Genesis, 2006; Department of Social Welfare, South Africa, 2006; Interviews with South African banks, 2006
### Table 9: Cost/revenue model when using proprietary ATM networks and total revenue per recipient = Ksh80

<table>
<thead>
<tr>
<th></th>
<th>Pilot</th>
<th>Full rollout</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>High- and medium-density rural</td>
</tr>
<tr>
<td>Transactions per POR</td>
<td>9,000</td>
<td>3,750</td>
</tr>
<tr>
<td>ATMs per POR</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Payment transactions</td>
<td>16</td>
<td>1,200</td>
</tr>
<tr>
<td>Non-SPP-related transactions</td>
<td>3,584</td>
<td>300</td>
</tr>
<tr>
<td>Total transactions per ATM</td>
<td>3,600</td>
<td>1,500</td>
</tr>
<tr>
<td>Cost per transaction (KES)</td>
<td>18.18</td>
<td>68.66</td>
</tr>
<tr>
<td>Processing cost (KES)</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Payment-related income, million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total cost for SWG (KES)</td>
<td>0.03</td>
<td>0.44</td>
</tr>
<tr>
<td>Total revenue (KES)</td>
<td>0.04</td>
<td>0.18</td>
</tr>
<tr>
<td>Net revenue (KES)</td>
<td>0.01</td>
<td>-0.26</td>
</tr>
<tr>
<td>Net revenue (KES)</td>
<td>0.11</td>
<td>-3.07</td>
</tr>
<tr>
<td>Other transaction income, million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total cost (KES)</td>
<td>0.04</td>
<td>0.63</td>
</tr>
<tr>
<td>Total revenue (KES)</td>
<td>0.02</td>
<td>0.18</td>
</tr>
<tr>
<td>Total net revenue, annual (KES)</td>
<td>-0.31</td>
<td>-5.37</td>
</tr>
<tr>
<td>Total net income from social protection payments (KES)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total net revenue from channel, annual (KES)</td>
<td>0.11</td>
<td>-3.38</td>
</tr>
<tr>
<td>Total net revenue from hosting and EFT (KES)</td>
<td>0.22</td>
<td>1.08</td>
</tr>
<tr>
<td>Net position (KES)</td>
<td>0.33</td>
<td>-2.30</td>
</tr>
</tbody>
</table>

*Source: Genesis, 2006*

### 9.2 Scenario 2: On-bank Proprietary Solution Using ATMs

'Scenario 2' outlines the impact on private sector provider profitability using on-bank proprietary ATM solutions at Ksh30 per cash withdrawal (other transactions income, such as transfer into account, balance enquiry and monthly maintenance fees is not included).

For proprietary networks, it was assumed that of the five large providers in Kenya, half would deploy infrastructure at each POR. This dramatically decreases the number of transactions at machines. As transaction costs at ATMs are very sensitive to transaction volumes, especially at low volumes, ATM profitability is severely affected.

### 9.3 Scenario 3: On-bank Solution Using Interoperable ATMs

'Scenario 3' outlines the impact on private sector provider profitability using on-bank interoperable ATM solutions at Ksh30 per cash withdrawal (other transactions income, such as transfer into account, balance enquiry and monthly maintenance fees is not included).
Table 10: Cost/revenue model when using interoperable ATM networks and total revenue per recipient = Ksh100

<table>
<thead>
<tr>
<th></th>
<th>Pilot</th>
<th></th>
<th>Full rollout</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>High- and medium-density rural</td>
<td>Low-density rural</td>
<td>Urban</td>
</tr>
<tr>
<td>Transactions per POR</td>
<td>9,000</td>
<td>3,750</td>
<td>2,500</td>
<td>9,000</td>
</tr>
<tr>
<td>ATMs per POR</td>
<td>1.25</td>
<td>1.25</td>
<td>1.25</td>
<td>1.25</td>
</tr>
<tr>
<td>Payment transactions</td>
<td>32</td>
<td>2,400</td>
<td>1,600</td>
<td>72</td>
</tr>
<tr>
<td>Non-SPP-related transactions</td>
<td>7,168</td>
<td>600</td>
<td>400</td>
<td>7,128</td>
</tr>
<tr>
<td>Total transactions per ATM</td>
<td>7,200</td>
<td>3,000</td>
<td>2,000</td>
<td>7,200</td>
</tr>
<tr>
<td>Cost per transaction</td>
<td>KES 14.6</td>
<td>KES 43.3</td>
<td>KES 62.6</td>
<td>KES 14.6</td>
</tr>
<tr>
<td>Processing cost</td>
<td>KES 12.0</td>
<td>KES 12.0</td>
<td>KES 12.0</td>
<td>KES 12.0</td>
</tr>
</tbody>
</table>

Payment-related income, million

<table>
<thead>
<tr>
<th></th>
<th>Pilot</th>
<th></th>
<th>Full rollout</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total cost for SWG</td>
<td>KES 0.03</td>
<td>KES 0.33</td>
<td>KES 4.47</td>
</tr>
<tr>
<td></td>
<td>Total revenue</td>
<td>KES 0.04</td>
<td>KES 0.18</td>
<td>KES 1.80</td>
</tr>
<tr>
<td></td>
<td>Net revenue</td>
<td>KES 0.00</td>
<td>KES -0.15</td>
<td>KES -2.67</td>
</tr>
<tr>
<td></td>
<td>Net revenue</td>
<td>KES 0.05</td>
<td>KES -1.82</td>
<td>KES -32.09</td>
</tr>
</tbody>
</table>

Other transaction income, million

<table>
<thead>
<tr>
<th></th>
<th>Pilot</th>
<th></th>
<th>Full rollout</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total cost</td>
<td>KES 0.07</td>
<td>KES 0.89</td>
<td>KES 1.11</td>
</tr>
<tr>
<td></td>
<td>Total revenue</td>
<td>KES 0.04</td>
<td>KES 0.36</td>
<td>KES 0.60</td>
</tr>
<tr>
<td></td>
<td>Total net revenue, annual</td>
<td>KES -0.36</td>
<td>KES -6.42</td>
<td>KES -6.07</td>
</tr>
</tbody>
</table>

Total net income from social protection payments

<table>
<thead>
<tr>
<th></th>
<th>Pilot</th>
<th></th>
<th>Full rollout</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total net revenue from channel, annual</td>
<td>KES 0.05</td>
<td>KES -2.19</td>
<td>KES -38.51</td>
</tr>
<tr>
<td></td>
<td>Total net revenue from hosting and EFT</td>
<td>KES 0.22</td>
<td>KES 1.08</td>
<td>KES 10.80</td>
</tr>
<tr>
<td></td>
<td>Net position</td>
<td>KES 0.27</td>
<td>KES -1.11</td>
<td>KES -27.71</td>
</tr>
</tbody>
</table>

Source: Genesis, 2006

As banks share infrastructure, overlapping networks are reduced from an average of 2.5 machines per POR to 1.25 machines. This dramatically increases the number of transactions per machine. However, transaction volumes are still low by international benchmark standards, resulting in relatively high transaction costs. Interoperable ATMs remain unprofitable at a Ksh30 per payment-related cash withdrawal. If transactions per machine were higher, Ksh30 would cover costs and profit margin.

9.4 SCENARIO 4: ON-BANK SOLUTION USING INTEROPERABLE MINI-ATMS

'Scenario 4' outlines the impact on private sector provider profitability using on-bank interoperable POS solutions at Ksh30 per cash withdrawal (other transactions income, such as transfer into account, balance enquiry and monthly maintenance fees is not included).
### Table 11: Cost/revenue model when using interoperable POS networks and total revenue per recipient = Ksh100

| transactions per POR | ATMs per POR | Payment transactions | Non-SPP-related transactions | Total transactions per ATM | Cost per transaction | Processing cost | Payment-related income, million | Total cost for SWG | Total revenue | Net revenue | Total net revenue, annual | Total net revenue from channel, annual | Total net revenue from hosting and EFT | Net position |
|----------------------|--------------|---------------------|----------------------------|---------------------------|---------------------|----------------|----------------|----------------|----------------|-------------|----------------|--------------------------|---------------------------------|----------------|----------------|
| Urban                | High- and medium-density rural | Low-density rural | Urban | High- and medium-density rural | Low-density rural |  |  |  |  |  |  |  |  |  |
| 9,000                | 3,750         | 2,500               | 9,000 | 3,750 | 2,500 |  |  |  |  |  |  |  |  |  |
| 1.25                 | 1.25          | 1.25                | 1.25 | 1.25 | 1.25 |  |  |  |  |  |  |  |  |  |
| 32                   | 2,400         | 1,600               | 72   | 2,400 | 1,600 |  |  |  |  |  |  |  |  |  |
| 7,168                | 600           | 400                 | 7,128 | 600 | 400 |  |  |  |  |  |  |  |  |  |
| 7,200                | 3,000         | 2,000               | 7,200 | 3,000 | 2,000 |  |  |  |  |  |  |  |  |  |
| KES 2.9              | KES 8.8       | KES 13.2            | KES 2.9 | KES 8.8 | KES 13.2 |  |  |  |  |  |  |  |  |  |
| KES 12.0             | KES 12.0      | KES 12.0            | KES 12.0 | KES 12.0 | KES 12.0 |  |  |  |  |  |  |  |  |  |
| KES 0.02             | KES 0.12      | KES 1.51            | KES 0.74 | KES 2.08 | KES 7.56 |  |  |  |  |  |  |  |  |  |
| KES 0.04             | KES 0.18      | KES 1.80            | KES 1.50 | KES 3.00 | KES 9.00 |  |  |  |  |  |  |  |  |  |
| KES 0.02             | KES 0.06      | KES 0.29            | KES 0.76 | KES 0.92 | KES 1.44 |  |  |  |  |  |  |  |  |  |
| KES 0.22             | KES 0.66      | KES 3.45            | KES 9.07 | KES 11.04 | KES 17.27 |  |  |  |  |  |  |  |  |  |
| KES 0.13             | KES 0.69      | KES 717.32          | KES 2.21 | KES 3.45 |  |  |  |  |  |  |  |  |  |  |
| KES 0.22             | KES 0.79      | KES 4.14            | KES 9.07 | KES 13.25 | KES 20.72 |  |  |  |  |  |  |  |  |  |
| KES 0.22             | KES 1.08      | KES 10.80           | KES 9.00 | KES 18.00 | KES 54.00 |  |  |  |  |  |  |  |  |  |
| KES 0.43             | KES 1.87      | KES 14.94           | KES 18.07 | KES 31.25 | KES 74.72 |  |  |  |  |  |  |  |  |  |

Source: Genesis, 2006

While transactions per machine remain the same as interoperable ATMs, the reduced cost of the machine, maintenance and the elimination of cash loading allows POSs to function in lower transaction volume environments and remain profitable. In the full deployment scenario across all geographical formats, total social protection provider transaction revenue is equivalent to Ksh144 million (rural areas only) and net revenue margin equals 12%.

The dramatic improvement in profitability in comparison to alternative channels highlights the advantages POSs have in low transaction environments in comparison to ATMs.
Access to financial services has been shown to encourage development and economic growth at a microeconomic level. Individuals with bank accounts can save, receive and remit funds, pay for services (including insurance and education), and eventually access credit. This has a positive impact on economic development at a macroeconomic level.

Social protection payments provide an opportunity for vulnerable individuals to manage income risks more effectively. They have become an increasingly important tool in promoting development, as individuals are able to use these regular payments to plan beyond a day at a time. If designed correctly, SPPs can also provide access to transactional banking services.

In Kenya, the social protection payment programme is part of a larger programme aimed at alleviating poverty for orphans and vulnerable children and poor families based in arid and semi-arid areas of Kenya. The programme will aim to increase the number of learners in schools, improve levels of health, increase food security and assist in registering individuals to improve information on these groups.

Kenya’s payments system is relatively underdeveloped in comparison to other emerging markets. Card payments are in their infancy, remote delivery channels (ATMs and POSs) are limited to major urban centres, and transactions are expensive for the low-income individuals targeted for payments. This situation is exacerbated by limited interoperability between bank payment acquiring infrastructures. These constraints hamper the ability of banks to effectively deliver payments to recipients. However, the banking sector does have the funds, technology and payments know-how to deliver these payments. This analysis has demonstrated that with some relatively limited changes to the way the payments environment operates, banks could provide transactional services to recipients at prices that are less than the cost of creating alternative infrastructure. Using the banks to provide social protection payments would have the additional advantage of bringing these individuals into the payment system more generally, giving them access to a range of other financial services, and changing the terms on which they access existing financial services such as money transfers. The banking infrastructure that would need to be created in smaller towns to support the SPP programme would also enable a far wider group to access financial services.

To achieve this outcome, stakeholders need to reassess their current modus operandi in order to provide low-cost access to financial services, thereby enabling payments through the banking system:

1. Financial sector participants need to:
   a. Agree on strategies to lower the cost of interbank transfers for retail transactions related to cash withdrawals: Current switches are either expensive, or have high interchange fees for ATM withdrawals. Lowering these charges would increase transaction volumes on ATM infrastructures, and make off-us transactions affordable for low-income customers.
   b. Consider low-cost cash advance machines located in retail outlets: Low-cost cash advance machines that can redistribute cash as it accumulates in retail locations utilising POS, Mini ATM or mobile phones offer a mechanism for lowering the cost associated with transporting and loading cash and using-high cost ATMs. The industry needs to facilitate the use of Mini-ATMs in particular, by agreeing payment rules that eliminate the potentially negative impact of cash withdrawals at merchants on the traditional credit card business model. These limits include caps on the maximum withdrawal value and restricted geographical locations in rural areas.
   c. Increase cooperation between institutions with direct access to the national payments system and those without access: Commercial banks and building societies could increase coverage by sponsoring MFI and SACCOs in the national payments system. Banks could issue cards to MFI and SACCO customers as well as acquire these cards on their networks of ATMs, POSs and potentially Mini-ATMs.

2. Financial institution regulators should consider:
   a. Re-evaluating regulations governing the operation of bank branches and agencies: The Central Bank of Kenya (CBK) should consider alternative, potentially lower-cost regulatory interventions for the regulation of bank branches and agencies. These alternatives could include an insurance-based risk management model, or a combination of direct regulation and insurance. The key criteria would be to encourage the development of a lower-cost regulatory environment that encourages banks to operate branch and agency infrastructure in lower-density areas outside Nairobi.
   b. Evaluate alternatives for intervening in the payments system to reduce transactions costs: The CBK has in the past put pressure on banks to reduce fees and commissions earned from retail customers. The CBK, in concert with other regulators such as the Monopolies and Pricing Commissioner, could consider a more thorough investigation of the pricing of interchange in the Kenyan market.
3. Government and donor backers of social payment system:

a. **Prioritise intermediation of grants through the financial sector to maximise the impact of the social protection payment programme on increasing overall access to financial services in Kenya:** By intermediating payments through the financial system, financial institutions have an incentive to develop infrastructure in areas not previously covered by financial institutions. This infrastructure could be used by other individuals and businesses previously excluded from the financial sector. Increased access to financial services at low cost will increase financial intermediation, access to other financial services for low-income individuals and SMMEs, and improved economic performance in rural areas.

b. **Identify cost hurdles in the use of disbursement channels:** The report has provided benchmark channel costs for channels used by banks. Key to the findings of the cost comparison is that the use of lower-cost channels can significantly reduce the cost of disbursements.

c. **Encourage research into alternative regulatory frameworks for branches and agency operations:** Key in increasing access to full service banking to low-income communities in rural areas is reducing the costs associated with operating branches and agencies. GDB can provide support and funding to the CBK to explore alternative regulatory and non-regulatory systems to manage risks at branch and agency level.

d. **Encourage partnerships between banks and other financial institutions:** Informal financial institutions provide a useful mechanism for increasing access to peri-urban and rural areas without using high-cost branch and agency infrastructure. These institutions would benefit from access to the payments system. Banks and informal institutions would benefit from partnerships aimed at increasing outreach for banks and decreasing payments-related costs in informal financial institutions.

e. **Encourage debate regarding the use of channels supporting cash advance such as ATMs, POSs (on a limited basis), Mini-ATMs and M-Commerce channels:** Further research and facilitation will be required to encourage the adoption of low-cost channels to disburse grants. Key to these discussions should be addressing concerns surrounding the potential threat to current revenue streams from new channels.
11
FUTURE RESEARCH

This report has primarily focused on the supply of financial services. It has highlighted the need for more information on the following:

- The current usage and behaviour of targeted households and individuals. This work is already underway and preliminary results will shortly be presented. In particular, the research will highlight where individuals spend their money, and the extent to which they use any current financial service provider.

- The current distribution and cash capacity of retailers in areas close to identified targeted households. This research should highlight how realistic are the assumptions made in this report of the ability of retailers/merchants to support cash advance models using some of the technologies reviewed.

- The CBK and the banks should more formally investigate branch regulations and options for using market-based insurance to reduce the costs of branch operations. This should probably include a study tour of relevant jurisdictions.
APPENDICES

A) INDIVIDUALS AND BUSINESSES INTERVIEWED

Central Bank of Kenya
Steve Mwaura – Head of Payments
Matu Mugu – Bank Supervision

Banks
Kimanthi Mutua – K-Rep
Sam Kamiti – Equity Bank
Samy Itemere – KCB
Fred Odiahambo – Barclays, Kenya
Ken Fergus – Barclays, Africa
Peter Scholtz – Stanbic

Switches
Anthony Situma – Kenswitch

Other payments institutions
Kathleen Ithau – PesaPoint
Susie Leone – Safaricom
Craif Kilfoil – Paym8

FMCG manufacturers
Simon Kanyari – Unilever, Kenya
Willy Kagicha – East African Breweries
Alice Muiruri – Independent wholesaler
B) CURRENT MINIMUM STANDARDS WHEN OPENING A BRANCH, CBK, 2007

1. Title deed/lease agreement:-
   - The institution should obtain a copy of the title deed if it is registered as owners of the premises. They should obtain a copy of the lease agreement signed by both parties if leasing the premises. The lease should be registered and the duration checked to see if it is long enough to allow for economical use of the permanent improvements. They should check whether the landlord approves for interior design/alteration.

2. Approval by relevant authorities:- They should obtain approval from the following:
   - Local authority.
   - Security firm – regarding physical security of staff, premises and assets.

3. Banking Hall:- It should suit the type of business to be undertaken in the premises.

4. Staff Operating Area:- Space should be allowed for each individual employee equal to or more than 350 cubic feet.
   - Sanitary conveniences for employees should be provided and kept clean.

5. Ventilation:- Ventilation should be adequate for security and circulation of fresh air in the premises.

6. Lighting:- There should be sufficient and suitable lighting in every part of the premises.

7. Displays:- The following should be displayed:-
   - Approved business hours.
   - Audited accounts.
   - Current banking licence.
   - Banking tariffs.
   - Names of senior officers.
   - Certificate of contribution from DPF.

8. Outer doors/wall/windows:-
   - The outer doors should be heavy-duty metal or reinforced wood.
   - There should be a minimum of two locks of good quality.
   - There should be an arrangement of an observer holder or panel chain to be used after normal business hours.
   - The windows and glass walls should be reinforced with metal grills or made of anti-burglar/bullet-proof glass.

9. Strongroom (safe/vault):-
   - There should be a strongroom.
   - The room should border with the outside walls.
   - There should be adequate space to cater for the need of the institution.
   - There should be duplicate keys stored off the premises.
   - There should be dual control for entry.

10. Free-Standing Safe:-
    - The space should be fireproof.
    - Access to the safe and the room where the safe is kept should be under the control of more than one person.
    - The safe should be in a windowless room and secured by a heavy-duty locked door of fire resistant material.

11. Record room and stationery store should be fireproof.

12. Cash loading area:-
    - It should be protected from public view and access.
    - Cash in transit should be protected by police/security firm.
    - There should be security guards at the premises at all times – day and night.

13. Cashiers’ Till should be restricted to the individual cashiers during working hours.

14. Alarm system should be installed in the premises. It should be connected to police/security firm and the switches should be located in the:-
    - Strongroom.
    - Cashiers’ cubicles.
    - Manager’s office.
15. There should be a documented emergency plan. Fire extinguishers should be at appropriate places, i.e. water type, non-water type, and the smoke/heat detectors.

16. The computer room should be located in a secure area. It should have passwords, access to the computer room restriction, back-ups made and stored outside the premises.

17. Safe deposit lockers should be in a separate place with sufficient and suitable verification space and not in the strongroom.

18. Insurances: Certificates of the following insurances should be obtained:
- Fire and other perils.
- Burglary and theft.
- Public liability.
- Fidelity.
- Cash and valuable in premises.
- Motor vehicles in premises.
- Other assets – obtain a list of other assets and their values.
- Employers’ liability.

For each of the above, verification should be done by an insurance firm licensed with the commissioner of insurance.

The insurance company should not be connected in any way with the institution’s:
- Directors.
- Management.
- Shareholders with more than 5% of the institution’s shares.

If there are other insurances that are required to be taken under the lease agreement, e.g. glass windows, these should be taken.

### C. INTERNATIONAL COST COMPARISONS – ADDITIONAL INFORMATION

#### Table 12: International channel pricing benchmarks – identifying the right benchmark price

<table>
<thead>
<tr>
<th>Source</th>
<th>Sample area</th>
<th>Cost allocation</th>
<th>Rate USD</th>
<th>Branch</th>
<th>Telephone (IVR)</th>
<th>ATM (on and off-us averages)</th>
<th>POS (on and off-us averages)</th>
<th>Selected value</th>
<th>Basis of calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAI (Booz, Allen and Hamilton) USA</td>
<td>1996</td>
<td>Direct</td>
<td>$1.00</td>
<td>$1.07</td>
<td>$0.85</td>
<td>$0.47</td>
<td>$0.07</td>
<td>$0.088</td>
<td>Average of direct cost values</td>
</tr>
<tr>
<td>Norges Bank Norway</td>
<td>2001</td>
<td>Direct and indirect</td>
<td>$0.68</td>
<td>$2.12</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>$0.53</td>
<td>Average of direct and indirect costs</td>
</tr>
<tr>
<td>Swedish Riksbank Sweden</td>
<td>2002</td>
<td>Direct</td>
<td>9.72 kr</td>
<td>7.08 kr</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>$0.30</td>
<td>Average of direct and indirect costs (except Norway)</td>
</tr>
<tr>
<td>N/A</td>
<td>2003</td>
<td>Direct and indirect</td>
<td>$0.89</td>
<td>$0.27</td>
<td>$0.21</td>
<td>N/A</td>
<td>$0.07</td>
<td>$0.07</td>
<td>Average of direct costs</td>
</tr>
<tr>
<td>Forrester Top banks in Europe</td>
<td>2006</td>
<td>Direct and indirect</td>
<td>UGX 1,833.39</td>
<td>$0.22</td>
<td>N/A</td>
<td>N/A</td>
<td>$0.07</td>
<td>$0.07</td>
<td>Average of direct costs</td>
</tr>
<tr>
<td>Genesis Analytics Ugandan banking sector</td>
<td>2006</td>
<td>Direct and indirect</td>
<td>UGX 1,833.39</td>
<td>$0.22</td>
<td>N/A</td>
<td>N/A</td>
<td>$0.07</td>
<td>$0.07</td>
<td>Average of direct costs</td>
</tr>
</tbody>
</table>

What makes Norway so expensive? Answer: labour costs and remoteness.
D) FINANCIAL INSTITUTION PROFILES

D.1. KENYA COMMERCIAL BANK (KCB)

KCB is the oldest bank in the country established in 1896 as Grindlays Bank, and one of the 'big three'. In 2005, it had a profit before tax of Ksh.1.95 billion and total capital of Ksh.9.8 billion with an ROE of 19.32%.

The government later acquired the branch network in 1971. Although the government retains a substantial and strategic equity stake of 26%, the majority equity is now privately held on the Nairobi Stock Exchange. The largest shareholder of listed shares is the government-owned pension fund.

The bank is just coming out of a difficult phase of restructuring brought about by past mismanagement and government interference, and is now back on the path of profitability having cleaned up its books in 2003 and 2004.

The bank has had difficulties with upgrading its core banking system (TC3). It has a countrywide ATM network and the largest branch network. It has one of the largest ATM footprints, has a presence in Tanzania and South Sudan, and is targeting Uganda as part of its regional expansion plans. Branches do not have a real-time link to the core banking platform. Branches that were closed down in 1998-2000 have been reopened. It is aiming to open 10 - 20 branches to deepen its retail presence.

It has the widest range of product offerings in the banking sector having introduced two card products specifically targeted at the mass market: the salary account and pension payments.

KCB is the first Bank in Kenya to roll out the prepaid card programmes in the Kenyan market, comprising four Visa prepaid products. This positions Kenya as the fifth country to issue these cards in Africa. It also issues three types of credit cards, a debit card and two types of MasterCard credit card.

INFRASTRUCTURE

BRANCHES

Inairobi (15)
- Capital Hill
- Eastleigh
- Gigiri (UN)
- Industrial Area
- Jogoo Road
- KICC
- Kipande House
- Milimani
- Moi Avenue
- Corporate Banking
- River Road
- Sant Centre
- Tom Mboya Street
- University Way
- Village Market

Central Province (18)
- Gatundu
- Githunguri
- Kangari
- Kangema
- Karatina
- Kerugoya
- Kiambu
- Kanyaga
- Kikuyu
- Kirita (kimende)
- Mukuruweini
- Muranga
- Nyeri
- Othaya
- Ruiru
- Sabasaba
- Thika
- Wanguru

<table>
<thead>
<tr>
<th>Financials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ksh, billion</td>
</tr>
<tr>
<td>Total assets</td>
</tr>
<tr>
<td>Total deposits</td>
</tr>
<tr>
<td>Profit before tax</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of branches</td>
</tr>
<tr>
<td>Number of sub branches</td>
</tr>
<tr>
<td>Number of ATMs</td>
</tr>
<tr>
<td>Number of Customers (estimate)</td>
</tr>
</tbody>
</table>

Sources: Market Intelligence, 2005; bank website; FIS 2006
Rift Valley Province (29)
- Bomet
- Eldama Ravine
- Eldoret
- Gilgil
- Iten
- Kabarnet
- Kajiado
- Kapenguria
- Kapsabet
- Narok
- Nanyuki
- Narok
- Njabini
- Nandi Hills
- Nakuru
- Maralal
- Londiani
- Naivasha
- Lokichogio satellite
- Loitokitok
- Flamingo Savings
- Kapsovar
- Njoro
- Kericho
- Nyahururu
- Kitale
- Ongata Rongai Mbagathi
- Sotik
- Uganda Road, Eldoret

Coast Province (14)
- Hola
- Taveta
- Kilifi
- Treasury Square
- Kilindini
- Ukunda
- Lamu
- Voi
- Malindi
- Wundanyi
- Mariakani
- Mpeketoni
- Mvita
- Mtwapa

Eastern Province (15)
- Chogoria
- Matuu
- Chuka
- Meru
- Embu
- Moyale
- Kibwezi
- Mtito Andei
- Kitengela
- Mwingi
- Kitui
- Nkubu
- Marsabit
- Tala/Kangundo
- Wote

Nyanza Province (13)
- Bondo
- Luanda
- Homa Bay
- Migori
- Kehancha
- Nyamira
- Keroka
- Oyugis
- Kisumu
- Siaya
- United Mall KSM
- Kisii
- Ugunja

Western Province (8)
- Bungoma
- Mbuale
- Busia
- Mumias
- Kakamega
- Webuye
- Kimilili
- Malaba

North Eastern Province (3)
- Garissa
- Wajir
- Mandera
ATMS
• Nairobi (27)
• Mombasa (4)
• Nakuru (3)
• Kisumu (3)
• Eldoret (3)
• Nyeri
• Machakos
• Kericho
• Kisii
• Narok
• Nanyuki
• Nandi Hills
• Kapenguria
• Malindi
• Wëbuye
• Ukunda
• Karatina
• Gilgil
• Kilifi
• Tala
• Homa Bay
• Kabarnet
• Githunguri
• Meru
• Naivasha
• Wundanyi
• Ongata Rongai
• Kiambu
• Voi
• Bondo
• Kapsabet
• Bungoma
• Migori
• Kitui
• Ruuru
• Chukka
• Lokichoggio
• Wote

C.2 BARCLAYS BANK OF KENYA

Barclays was established in 1916, is the biggest bank in terms of balance sheet and profitability, and is the second largest in terms of branch network. In 2005, it had a profit before tax of Ksh5.4 billion and total capital of Ksh11.4 billion with an ROE of 40.99%.

It closed down a large number of branches and restructured its business focus in the late 1990s, shedding activities such as asset management and de-emphasizing investment banking. Recently however, the bank has begun to focus on retail banking again. Consumer loans have become a major product focus in recent years.

The bank is now looking at expanding its branch network again, planning to open 30 branches in the next two years, including in rural areas where it previously closed branches. All its branches are fully networked online real-time. It uses the Bankmaster core banking platform. Barclays has an independent countrywide ATM network and is the market leader in trade finance, asset finance, credit card business, and holds the Visa franchise. It issues two types of Visa credit cards, a Visa debit card and two types of MasterCard credit cards.

<table>
<thead>
<tr>
<th>Financials</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ksh, billion</strong></td>
</tr>
<tr>
<td>Total assets</td>
</tr>
<tr>
<td>Total deposits</td>
</tr>
<tr>
<td>Profit before tax</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of branches</strong></td>
</tr>
<tr>
<td><strong>Number of ATMs</strong></td>
</tr>
<tr>
<td><strong>Number of Customers (estimate)</strong></td>
</tr>
</tbody>
</table>

Sources: Market Intelligence, 2005; bank website; FIS 2006

INFRASTRUCTURE
BRANCHES

Nairobi (26)
• ABC Place
• Enterprise Road
• Haile Selassie Avenue
• Harambee Avenue Prestige Centre
• Hurlingham
• Hurlingham Prestige
• JKIA
• Karen
• Karen Prestige Centre
• Lavington Green
• Market
• Moi Avenue
• Moi Avenue Prestige
• Muthaiga
• NIC House
• Plaza Corporate Service Centre
• Plaza Premier Banking Centre
- Plaza Prestige Centre
- Queensway House
- Queensway Prestige
- Ruaraka
- Sarit Centre
- Village Market
- Warwick Centre
- Westlands
- Yaya Centre

Coastal Province (11)
- Bamburi
- Changamwe
- Diani
- Digo Road
- Kilifi
- Malindi
- Malindi Prestige Centre
- Nkrumah Road
- Nyerere Avenue

Central Province (11)
- Embu
- Karatina
- Kerugoya
- Kiambu
- Limuru
- Machakos
- Meru
- Muranga
- Nanyuki
- Nyahururu
- Nyeri

Rift Valley Province (8)
- Eldoret
- Eldoret Centre
- Kitale
- Nakuru, West
- Sotik
- Naivasha
- Molo
- Nakuru

Western Province (3)
- Bungoma
- Kakamega
- Webuye

Nyanza Province (4)
- Homa Bay
- Kisumu
- Kisii
- Kisumu Centre

ATMS
Nairobi (34)
- ABC Place
- Aga Khan
- Avon Centre
- Buruburu
- Enterprise Road
- Haile Selassie Avenue branches (2)
- Harambee Avenue
- Hurlingham
- JKIA
- Karen
- Lavington Green
- Market branches (2)
- Moi Avenue branches (5)
- Muthiga
- Nakurnatt Ngong Road
- Nakurnatt Uhuru Highway
- NIC House
- Plaza Corporate Banking Centre (2)
- Queensway House branches (6)
- Ruaraka
- Village Market
- Westlands

Coastal Province (9)
- Diani
- Bamburi
- Changamwe
- Digo Road (2)
- Nkrumah Road (2)
- Malindi
- Kilifi

Rift Valley Province (9)
- Eldoret (2)
- Kericho
- Kitale
- Naivasha
- Nakuru, East (2)
C.3. CO-OPERATIVE BANK (CO-OP)

Co-operative Bank was initially established in 1966 to exclusively serve as the banker to the cooperative sector. This had both inherent advantages and disadvantages. It provided the bank with access to the huge resources of the sector, but was exposed to risks associated with a single sector-owner, manager and client.

<table>
<thead>
<tr>
<th>Financials</th>
<th>Ksh, billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>51.83</td>
</tr>
<tr>
<td>Total deposits</td>
<td>44.09</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>0.71</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of branches</td>
</tr>
<tr>
<td>Number of ATMs</td>
</tr>
<tr>
<td>Number of Customers (estimate)</td>
</tr>
</tbody>
</table>

Sources: Market Intelligence, 2005; bank website; FIS 2006

The bank diversified into the wider market, offering the full range of banking services, although the cooperative sector remains its core clientele and owner of the bank. In 2005, it had a profit before tax of Ksh714 million and total capital of Ksh5.6 billion with an ROE of 17.56%.

Though not quoted on the stock exchange, it is a private bank with a large shareholder base mainly in the cooperative sector. The bank has been recovering from a difficult period partly brought about by the destruction of the Head Office during the bomb blast of 1998 and bad debts caused by poor performance in the agricultural sector in the 1990s. It issues Visa branded debit and credit cards, and all its branches are connected online real-time.

It has 31 branches and 73 ATMs. Almost 50% of the ATMs are located in Nairobi. The bank will be investing in another 40-50 ATMs in the next year.

It issues three types of Visa credit cards and a Visa debit card.

INFRASTRUCTURE
BRANCHES

Nairobi (10)
- Co-operative House
- Cannon House
- University Way
- Stima Plaza
- Kimathi Street
- Industrial Area
- Nacico
- Kariobangi
- China Centre
- Ukulima

Upcountry (21)
- Thika
- Mombasa
- Nakuru
- Meru
- Kisumu
- Eldoret
- Kisii
- Nyeri
- Kiambu
- Embu
- Kericho
• Muranga
• Karatina
• Machakos
• Bungoma
• Kerugoya
• Athi River
• Chuka
• Nyahururu
• Mumias
• Kitale agency

ATMS

Nairobi (35)
• Co-operative House (6)
• Cannon House (2)
• University Way (2)
• Stima Plaza (2)
• Kimathi Street (2)
• Industrial Area (1)
• Nacico (1)
• Kariobangi (1)
• Buruburu (2)
• City Hall (4)
• Githurai agency (2)
• Donholm Caltex (1)
• Mobil Mombasa Road (1)
• China Centre (2)
• Ukulima (2)
• Caltex, Westlands (1)
• Nakumatt Lifestyle (1)
• Nairobi West Shopping Centre (1)
• Total Mombasa Road (1)

Upcountry (38)
• Thika (2)
• Mombasa (6)
• Nakuru (3)
• Meru (2)
• Kisumu (4)
• Eldoret (2)
• Kisi (3)
• Nyeri (1)
• Kirinyaga (1)
• Embu (2)
• Kericho (1)
• Murang’a (1)
• Karatina (1)
• Machakos (1)
• Bungoma (1)
• Kerugoya (1)
• Athi River (1)
• Chuka (2)
• Nyahururu (1)
• Mumias (1)
• Kitale agency (1)

C.4. EQUITY BANK

Equity was established as a building society in 1984. It converted to a commercial bank in 2004, floating its shares on the Nairobi Stock Exchange in 2006. In 2005, it had a profit before tax of Ksh501 million and total capital of Ksh1.4 billion with an ROE of 31.40%. During 2006, it grew its balance sheet and has the highest number of customers of any bank at close to 900,000 and was targeted to reach one million by early 2007.

Financials
Ksh, billion

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>11.46</td>
</tr>
<tr>
<td>Total deposits</td>
<td>9.05</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>0.50</td>
</tr>
</tbody>
</table>

Outreach

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of branches</td>
<td>36</td>
</tr>
<tr>
<td>Number of ATMs</td>
<td>100</td>
</tr>
<tr>
<td>Number of Customers (estimate)</td>
<td>800,000</td>
</tr>
</tbody>
</table>

Sources: Market Intelligence, 2005; bank website; FIS 2006

Equity has just replaced its Bank 2000 core banking system with Finacle from Infosys. The bank completed the installation of a new core banking software in 2005 to make all its branches fully networked online in real-time.

Its focus is on the mass market, specialising in cash crop producing areas (tea and coffee). They process payments for the tobacco industry and British American Tobacco.

The bank has 36 branches and 100 ATMs, and is expected to reach 50 and 200 in the next two years respectively.
INFRASTRUCTURE
BRANCHES

Nairobi (8)
• Kimathi
• Harambee
• NHIF Community
• Emperor Plaza
• Fourways
• NHIF Community Corporate
• Data Centre
• Kariobangi

Rift Valley Province (9)
• Nakuru (2)
• Naivasha
• Eldoret
• Kericho
• Kitale
• Molo
• Narok
• KNUT House

Central/Eastern (18)
• Thika
• Meru
• Nyeri
• Nyahururu
• Embu
• Karatina
• Kerugoya
• Kangema
• Kangari
• Kiraiini
• Muranga
• Othaya
• Nanyuki
• Nkubu mobile branch
• Mwea mobile branch
• Matuu mobile branch
• Murarandia
• Chuka

Nyanza/Western Province (1)
• Kisumu

ATMS
Nairobi (6)
• Kimathi
• Harambee
• NHIF Community
• Emperor Plaza
• Fourways
• NHIF Community Corporate

Rift Valley Province (5)
• Nakuru (2)
• Naivasha
• Eldoret
• Kericho

Central/Eastern Province (13)
• Thika
• Meru
• Nyeri
• Nyahururu
• Embu
• Karatina
• Kerugoya
• Kangema
• Kangari
• Kiraiini
• Muranga
• Othaya
• Nanyuki

Nyanza/western (1)
• Kisumu

C.5. STANDARD CHARTERED

It is one of the big three banks, and the second oldest bank in the country, established in 1910. The bank was the first major banking institution to undergo restructuring and introduce ATMs in the Kenyan market in 1990s. In 2005, it had a profit before tax of Ksh3.5 billion and total capital of Ksh8.5 billion with an ROE of 36.63%.

It closed a large number of its upcountry branches. Unlike the other major branch network banks that did the same, there are no plans to reopen them. Standard Chartered issues Visa-branded debit and credit cards, and it has retail products that target the middle to upper classes and the corporate sector.

It has 39 branches and 62 ATMs.
### Financials

**Ksh, billion (Market Intelligence, 2005)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>72.84</td>
</tr>
<tr>
<td>Total deposits</td>
<td>59.80</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>3.51</td>
</tr>
</tbody>
</table>

### Outreach

**Bank website, Market Intelligence, 2005**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of branches</td>
<td>39</td>
</tr>
<tr>
<td>Number of ATMs</td>
<td>62</td>
</tr>
<tr>
<td>Number of Customers</td>
<td>250,000</td>
</tr>
</tbody>
</table>

Sources: Market Intelligence, 2005; bank website; FIS 2006

---

### Infrastructure

#### Branches

**Nairobi (21)**

- Harambee Avenue
- Kenyatta Avenue
- Koinange Street
- Old Mutual building
- Moi Avenue
- Westlands
- Westlands - Mobil Mart
- Sarit Centre
- Industrial Area
- Mobil Mart - Enterprise Road
- Total petrol station - Mombasa Road
- Buruburu
- Karen
- Langata
- Muthaiga
- Ngong Road - Mobil Mart
- Ruaraka
- Village Market
- Yaya Centre
- Shell petrol station - Kenyatta Market
- Shell petrol station - Hurlingham

**Coast (6)**

- Makupa
- Malindi
- Maritime
- Treasury Square
- Shell petrol station - Digo Road
- Nyali Mobil

**Upcountry (12)**

- Eldoret
- Kabarnet
- Kakamega
- Kiambu
- Kisumu
- Kitale
- Machakos
- Meru
- Nakuru
- Nanyuki
- Nyeri
- Thika

**ATMS**

**Nairobi**

- Harambee Avenue
- Kenyatta Avenue
- Koinange Street
- Old Mutual building
- Moi Avenue
- Westlands
- Westlands - Mobil Mart
- Sarit Centre
- Industrial Area
- Mobil Mart - Enterprise Road
- Total petrol station - Mombasa Road
- Buruburu
- Karen
- Langata
- Muthaiga
- Ngong Road - Mobil Mart
- Ruaraka
- Village Market
- Yaya Centre
- Shell petrol station - Kenyatta Market
- Shell petrol station - Hurlingham

**Coast**

- Makupa
- Malindi
- Maritime
- Treasury Square
- Shell petrol station - Digo Road
- Nyali Mobil
C.6. NBK (NATIONAL BANK OF KENYA)

The bank was established as a fully-owned government bank in the late 1960s. It has traditionally served government institutions. It remains a major channel for government payments especially for teachers and civil servants.

The bank became insolvent as a result of carrying a huge non-performing loan portfolio to public institutions and politically-connected individuals. It continues to operate through government support. However, plans are underway to recapitalise and eventually privatise the bank.

They have, in the last five years, undertaken a major upgrading of their core banking system platform.

<table>
<thead>
<tr>
<th>Financials</th>
<th>Ksh, billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>32.58</td>
</tr>
<tr>
<td>Total deposits</td>
<td>26.80</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>0.86</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Number of branches</td>
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</tr>
<tr>
<td>Number of Customers (estimate)</td>
</tr>
</tbody>
</table>

Sources: Market Intelligence, 2005; bank website; FIS 2006
K-REP BANK

Kenya Rural Enterprise was established in 1999 and transformed into a commercial bank from a microfinance NGO in 2003. Its primary objective was to gain access to the deposit resource base and reduce its reliance on donor funding.

In 2005, it had a profit before tax of Ksh48 million and total capital of Ksh790 million with an ROE of 6.09%.

K-Rep has focused on the microfinance industry. They have developed outlets that have lower cost than traditional banks by applying for exemptions from the current branch regulatory regime. It has expanded its branch network by transforming many of its agencies and marketing offices it set up as an MFI into full-time branches, but continues to serve specifically the low-income and small business sectors of the economy.

They have replaced their Banker’s Realm IT system with Globus (Equinox). All its branches are connected online real-time. It is a member of the Kenswitch consortium, however usage is limited. It has issued 40,000 ATM cards for its 200,000 customers.

KPOSB

Kenya Post Office Savings Bank is the largest single provider of retail banking services in Kenya. The bank provides a basic savings product, using passbooks to record transaction information on the account. A small minority of customers have Visa credit cards. KPOSB is a principle member of Visa.

The bank has recently joined Kenswitch. The impact is expected to be limited. KPOSB’s retail customers do not have ATM cards, and KPOSB has none of its own ATMs.

<table>
<thead>
<tr>
<th>Financials</th>
<th>Ksh, billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>32.58</td>
</tr>
<tr>
<td>Total deposits</td>
<td>26.80</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>0.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outreach</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of branches</td>
<td>124</td>
</tr>
<tr>
<td>Number of agencies</td>
<td>12</td>
</tr>
<tr>
<td>Number of ATMs</td>
<td>15</td>
</tr>
<tr>
<td>Number of Customers (estimate)</td>
<td>na</td>
</tr>
</tbody>
</table>

Sources: Market Intelligence, 2005; bank website; FIS 2006
Efforts to link all KPOSB branches to a real-time core banking platform are underway. This is expected to improve service levels as well as allow the bank to introduce debit cards.

<table>
<thead>
<tr>
<th>Financials</th>
<th>Ksh, billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td>14.62</td>
</tr>
<tr>
<td>Total deposits</td>
<td>10.79</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>0.14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outreach</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of branches (agencies in PCK branches)</td>
<td>71 (384)</td>
</tr>
<tr>
<td>Number of ATMs</td>
<td>0</td>
</tr>
<tr>
<td>Number of Customers (estimate)</td>
<td>950,000</td>
</tr>
</tbody>
</table>

Sources: Market Intelligence, 2005; bank website; FIS 2006