



USAID | **UGANDA**
FROM THE AMERICAN PEOPLE

LOW COST PAYMENT SYSTEM

FINAL REPORT



June, 2006

This publication was produced for review by the United States Agency for International Development. It was prepared by Genesis Analytics Ltd, subcontractor of Chemonics International



Rural SPEED

Rural Savings Promotion & Enhancement of Enterprise Development

LOW COST PAYMENT SYSTEM

FINAL REPORT

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Rural SPEED
A USAID funded project
Contract No. PCE-I-00-99-00003-00, TO 826

This report submitted by Chemonics International Inc. /June, 2006

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EXECUTIVE SUMMARY

USAID/Rural SPEED approached Genesis Analytics to provide a position paper on how the banking industry could provide transactional banking services to rural areas on a sustainable basis. The focus has been on the feasibility of using Point of Sale devices, MiniATMs¹ and mobile telephones to provide these services.

The research has focused on understanding the dynamics of the rural economy in Uganda. The research has found that:

- Only about 6.3 million individuals, out of a population of 27 million, are able to take advantage of transactional banking services as they receive payment for labour services in cash. The balance of the working population participates in the non-monetary economy and therefore has no cash that could be intermediated by financial institutions (FIs). Within this monetized group, demand is significant and is driven primarily by the need to save and receive remittances from urban areas. Impediments to uptake include accessibility to banking infrastructure, cost of current services offered and fears about security of saved funds.
- The majority of businesses in rural areas are small retail shops and fast moving consumer goods (FMCG) distributors. Demand for transactional banking from businesses is driven from the need to pay suppliers and manage large stocks of cash currently accumulated by the large distribution networks of FMCG manufacturers.
- Supply to rural areas is constrained by the high cost of current infrastructure deployed by banks. In the case of ATMs, banks are subsidizing the cost of the infrastructure in order to shift transactions out of branches.
- Most FIs have proprietary networks available only to their own customers. Interoperable bank networks are provided at a high cost to the issuing bank which discourages usage.
- Most FIs have not deployed card based solutions, restricting access to branch infrastructure.
- This report proposes that a number of solutions be implemented concurrently in order to solve problems of access and utilisation by potential rural customers:
- Account issuing should focus on providing a standardized card based transactional banking product which could be distributed at FI Points of Representation (PORs) or through retailers.
- FIs deploy low cost infrastructure into rural areas that are priced to incentivise deployment (i.e. are profitable for FIs). Two primary card acquiring channels are proposed, Mini-ATMs and Mobile-Commerce (M-Com) solutions through mobile phones.
- FIs undertake to share access to infrastructure through a low cost national switch.
- Acquiring FIs should undertake to provide the infrastructure at a profitable, but low rate so that banks have an incentive to deploy infrastructure and customers have an incentive to use it. This can be achieved by deploying Mini-ATMs as the low cost channel. This will keep infrastructure profitable, but at low cost to consumers
- The report used an internationally accepted benchmark of transactional banking service affordability (2% of gross income) to estimate market demand based on the use of the proposed lower cost channels, full infrastructure interoperability and low switching and interchange costs. Market demand was estimated to be in excess of 2.3 million new transactional banking customers, up from the current 1.7 million.
- Using a higher cost switch dramatically affects penetration, reducing the potential new customer base by about 900,000 to approximately 1.4 million new customers.
- A presentation of the findings was made to the banking industry and other stakeholders on Wednesday the 21st of June 2006. A copy of the presentation slides is available on Rural SPEED's website:
http://www.speeduganda.org/pdf/USAIDRuralSPEED_Payments_Systems_Presentation_2006.06.21.pdf

¹ A 'Mini ATM' is a Point of Sale device that has been configured to operate as a low cost ATM, but with the cash handling performed by the retailer hosting the device.

1 BACKGROUND

1.1 Introduction

USAID/Rural SPEED aims to provide Ugandans with access to financial services in areas outside the towns of Kampala, Entebbe and Jinja. Previous reports identified a number of potential solutions to provide transactional banking services. One of these proposed solutions was the use of mobile telephone infrastructure to provide Mobile-commerce (M-Com) solutions.

This report builds on the findings of previous reports and recommends a range of solutions aimed at improving access to transactional banking services. Most importantly, however, the report emphasizes how solutions that achieve interoperability with the rest of the payment systems are more likely to be widely accepted. Equally important in determining success is for interoperability to be achieved at low cost. The report recommends an open access solution involving the full range of Financial Institutions (FIs) operating in Uganda. The report also highlights the need to consider alternative delivery channels in conjunction with M-Com solutions as a way of providing an interlocking network of transactional banking infrastructure.

1.2 Objective

The objective of the consultancy was to identify and suggest mechanisms for the deployment of transactional banking services in rural areas. Any solution would need to meet the following criteria:

Meet Bank of Uganda's 'know your customer' (KYC) requirements for new account openings (ideally by having BOU adopt an approach similar to that of their South African counterpart's 'Exemption 17' ruling²)

- Allow customers with limited literacy and forms of identification to participate in a basic transactional solution that is provided by Financial Institutions (FIs)
- Provide a large network of FI Points of Representation to facilitate:
 - Cash deposit
 - Cash withdrawal
 - Access to account information
 - Person to Person payments (which include remittances and bill payments)
- Ensure the lowest cost channels are used to create this network
- To ensure that the network is accessible to all FI customers
- To ensure that the proposed products are profitable and viable for all FIs, ensuring a sustainable solution to Uganda's current lack of transactional banking services in rural areas.
- To ensure that the solutions foster a competitive environment between FIs by reducing costs of providing services to customers and increasing the competitive space in which banks operate
- Any solutions proposed would need to take into account: the high level of cash utilisation in the economy; the predominance of low value transactions in the retail environment; and the highly dispersed nature of retail outlets.

1.3 Methodology

Genesis Analytics has adopted a macro and micro-economic perspective to understand the inter-linkages between FIs and other role players in the economy. This enabled estimates of:

- Current demand for transactional banking services
- Current supply of transactional banking services in rural areas
- The structure of employment in rural areas
- The role of FMCG distribution networks in intermediating funds in rural areas

From this Genesis was able to identify:

- Whether banks are providing sufficient value added services to customers (individuals and businesses)

² Financial Centre Intelligence Act, 2001

- Whether there may be opportunities for further expansion by banks into areas that are not currently serviced
- What mediums are currently used to make
 - Retail transactions
 - Transfers between individuals
 - Transfers between businesses

In conjunction with research on local conditions, Genesis evaluated the successes and failures of various international efforts to provide transactional banking services. Internationally, card based transactional banking solutions have proved cost effective and suitable. Genesis also evaluated some card based transactional banking products have failed.

Similarly Genesis evaluated a number of internationally available Mobile-Commerce (M-Com) solutions to identify why a large proportion had failed. The report set out a number of criteria which fosters the adoption of M-Com solutions in successful M-Com solutions.

2 ACTIVITY SUMMARY:

2.1 What was done

Genesis, in conjunction with USAID/Rural SPEED, conducted a survey of FIs (Tier I/II/III), prominent FMCG manufacturers and distributors, regulators at the Bank of Uganda (BOU), M-Com providers, mobile phone operators, the national switch (Bankom) and the international card associations (Visa and MasterCard).

2.2 Why was it done

2.2.1 Economy

Genesis needed to establish a foundation of understanding of the rural cash based economy. Genesis sought to understand current transactions characteristics. This involved investigations into both individual consumer and retailer behaviour. Understanding how these two groups consumed and transacted provided the basis from which a range of transactional banking solutions could be identified to meet their needs.

2.2.2 Industry

Genesis sought to understand the current cutting edge in innovation in retail banking, especially in the areas of card issuing and acquiring.

3 CONCLUSIONS AND RECOMMENDATIONS

This section outlines the findings of the research and proposes solutions for the limited access to financial services in rural areas.

3.1 Demand for financial services

3.1.1 Individuals

Uganda had an estimated population of 27.2 million in 2005 (World Bank Health Nutrition and Population (HNP) survey 2006). Uganda’s population is based predominantly outside the Kampala district, less than 5% live within Kampala District (Uganda Bureau Of Statistics (UBOS, 2006). Using the broader definition of urban areas as the districts of Wakiso, Kampala, Mukono and Jinja, over 86% (23.4 million) of the population live in rural areas.

Uganda’s adult population was estimated to be approximately 13.5 million in 2005 (HNP, 2006). The workforce (defined as individuals between the ages of 15 and 65) was estimated at 13 million (HNP, 2006). A substantial proportion of this workforce is involved in subsistence agriculture and as such is involved in economic activities outside the cash economy. As a result Uganda’s monetized labour force is very small in comparison to the total population. A 2004 estimate puts the monetized labour force at about 6.3 million individuals (UBOS, Labour Force Survey; 2004). A further 2.9 million individual’s work for no pay in activities linked to their family (such as subsistence agriculture, domestic work).

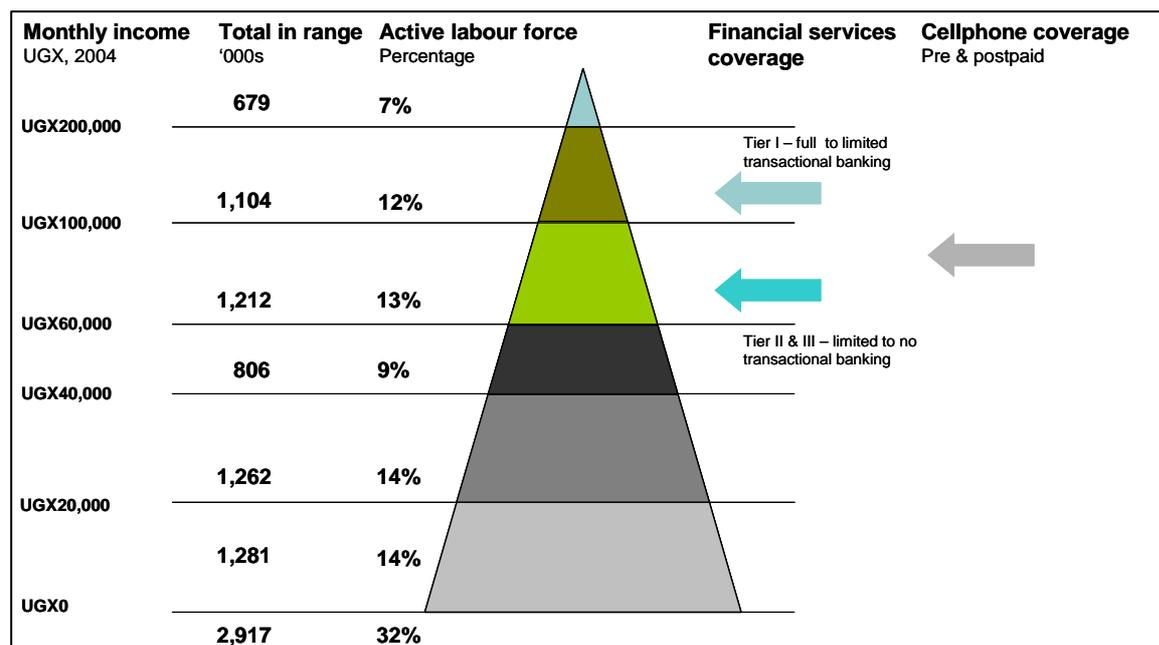


Figure 1: Working population income distribution, financial product penetration and mobile telephone penetration

Source: UBOS, 2004; FI industry interviews; Genesis calculations

Research conducted by Genesis in Emerging Markets on affordability (Genesis Analytics for Finmark Trust, 2004) has identified that transactional banking becomes unaffordable at above 2% of gross income. The box below outlines the current level of demand for transactional banking products at different price and income levels:

Monthly income	Maximum bank charges	Estimated market, thousands
UGX100,000	UGX2,000	1,782
UGX60,000	UGX1,200	2,994
UGX40,000	UGX800	3,800
UGX20,000	UGX400	5,062

Table 1: Monthly income, maximum transactional banking costs and estimated target market
 Source: UBOS, 2004; Genesis calculations

Key drivers for product selection/use

USAID/Rural SPEED, in a recent survey of rural savings (Savings habits and needs in rural Uganda, 2005) identified drivers for acquiring a transactional/ savings products as well as criteria for selection of the product provider for potential rural customers.

Rural savers are primarily driven by the need to pay for education, as well as risk based reasons related to health and unforeseen negative shocks to income.

Potential savers typically base their choice of provider on issues relating to the riskiness of the provider as well as issues of access.

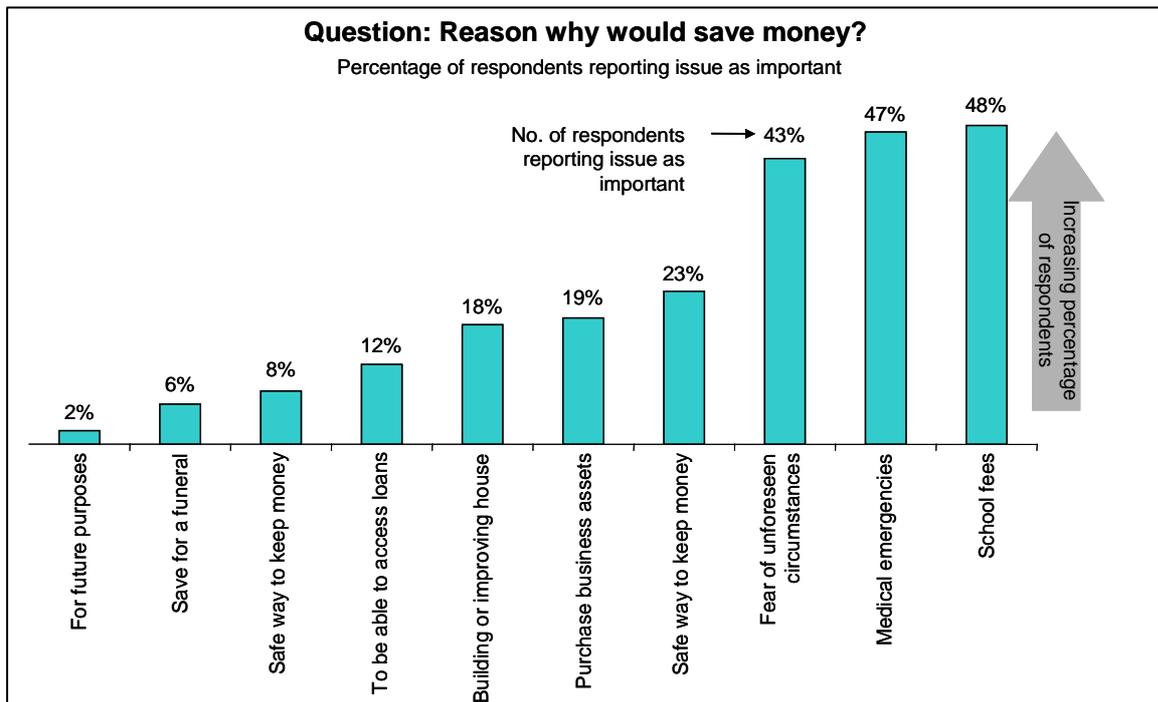


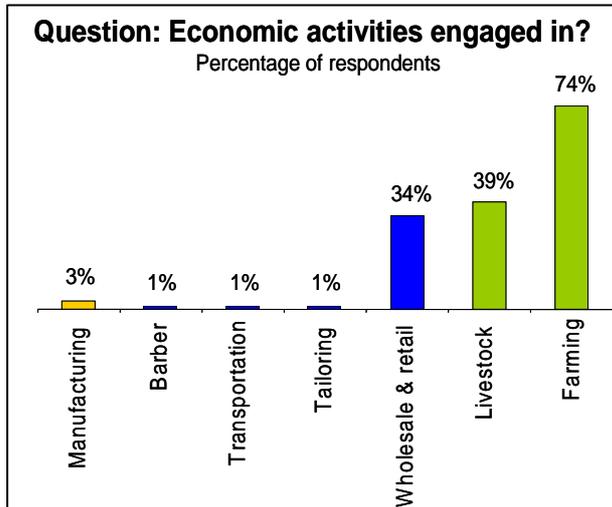
Figure 2: Reasons for saving in rural Uganda
 Source: USAID/Rural SPEED, 2005

3.1.2 Businesses

The wholesale and retail sector is the largest employer outside agriculture in rural Uganda.

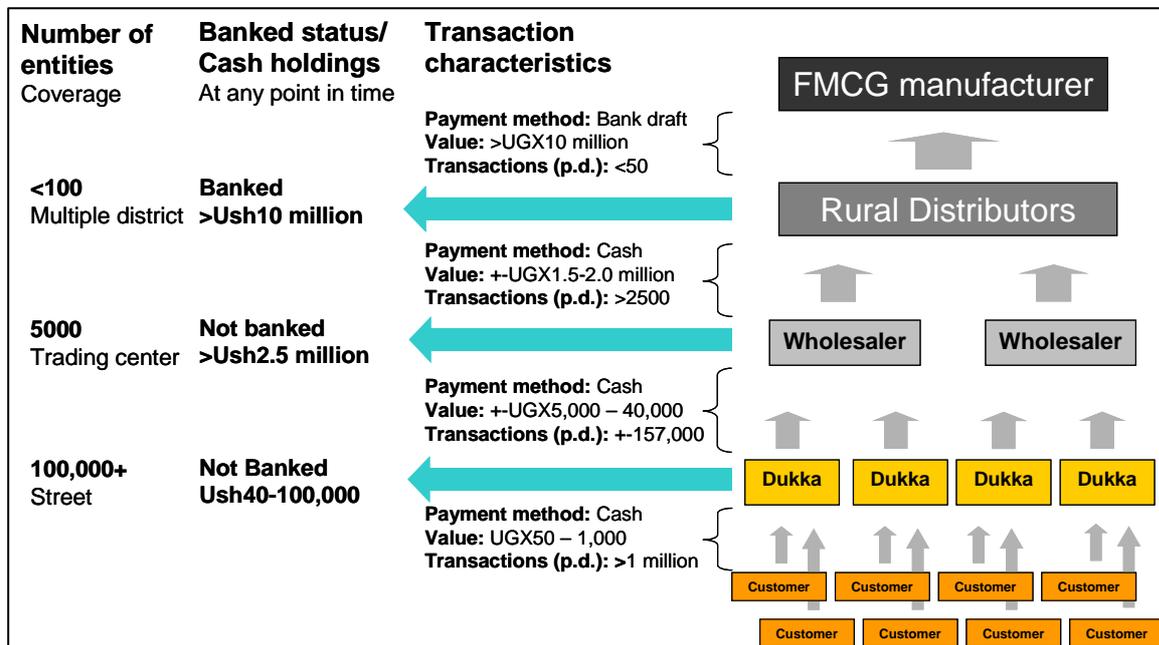
The sector is dominated by the distribution networks of the major FMCG manufacturers. These distribution networks have up to 4 tiers to the retailer. This is because retailing is a highly dispersed, low volume per outlet business in comparison to other countries.

Figure 3: Economic sector employment in rural Uganda



Source: USAID/Rural SPEED, 2005

Figure 4: FMCG distribution network in rural Uganda



Source: Industry interviews; UBOS; Genesis estimates

This distribution network is the largest cash accumulator in rural areas. Wholesalers operating in all the major trading centers typically hold in excess of UGX1.5 million at any one time. These businesses are also not typically banked, but would be if a sufficient value proposition was provided to them.

Retail transactions remain too small in value and too dispersed across low volume outlets to be intermediated by retail POS devices. However, individuals operating these businesses could be intermediated as individual savers/transactors.

3.1.3 Domestic remittance market

Income earned by the urban workforce is sent back to rural families to supplement incomes generated in rural areas through agriculture and retailing.

Currently, non-banked customers have a limited set of options available through the formal sector. Either a money transfer or a deposit into a familiar persons account is typically used. Both can be very high cost, above UGX10,000 per transaction. For banked customers, costs can be slightly lower.

In both cases access to funds by the recipient can be an issue. Currently only the Post Office provides significant infrastructure in rural areas. Banked customers need to access funds through their bank, implying significant time and cost in withdrawing funds.

Approximately 3 million individuals estimated as remitting every year. With an average remittance value of UGX100,000 this equals an annual remittance flow of between \$800-1,500 million. A significant proportion of this is remitted through the informal sector, implying further intermediation of remittance could be possible if issues around disbursement costs are addressed.

3.2 Supply of financial services to rural areas

Transactional services are currently provided through high cost branch and ATM channels. Tier I banks provide transactional banking through Branches and ATMs while Micro Deposit-taking Institutions (MDIs) and Savings and Credit Co-operatives (SACCOs) offer limited remittance and savings services through branch networks. Both groups are limited in their geographical reach.

Transactional banking service provision to areas outside Kampala is severely constrained. While the trend towards banks network deployment is outside Kampala, in 2004 for example, 60% of ATMs had been deployed in Kampala (BOU, Distribution of ATMs Countrywide: 2004). A number of factors have hampered the delivery of viable and ubiquitous transactional banking products to low income people in Uganda:

- **Lack of card based transactional banking solutions:** Most FI's still issue passbooks, which has limited customers' access to accounts to branches.

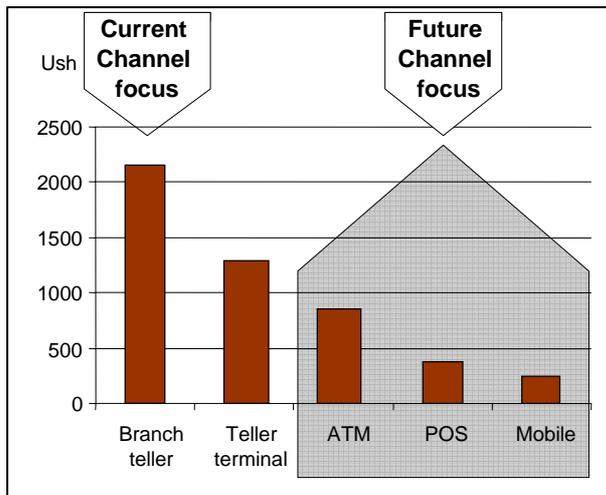
Only a small number of FIs, mostly Tier I banks, have rolled out card based transactional banking products.

- **The high cost of current FI infrastructure:** Current FI infrastructure is Branch or ATM based. In comparison to alternative acquiring channels transactions costs can be very high at branches and ATMs. This excludes individuals who are unable to afford the higher cost channels.

FIs in Uganda have responded to affordability concerns by pricing ATMs at a lower cost than the actual cost of the infrastructure. This has meant that banks make a loss on their acquiring infrastructure. This has a long term negative impact on their willingness to deploy more ATMs by the banks, and probably also explains the reticence of banks to educate customers to migrate to ATMs.

Figure 5: Bank infrastructure transactions costs

Source: BIS, Genesis calculations



- **Lack of interoperable branch and ATM networks:** Interoperable ATM networks provide two significant advantages over proprietary networks:
 1. Banks with interoperable networks do not need to provide infrastructure in areas where other banks have infrastructure. A bank customer is able to make an ‘off-us’ transaction at another banks ATM. ‘Off-us’ transactions can be revenue generating for the acquiring bank, as interchange fees are charged to issuing banks for using the acquiring banks infrastructure.
 2. Transactions volumes are higher on a particular ATM. Banks who may typically have had a high number of marginally profitable ATMs on a proprietary network can have very profitable ATMs on a shared network. This improves incentives for banks to rollout more ATMs into areas not currently covered by other banks. Geographical spread of ATMs is improved as a result.

There are two ‘effective’ switches that are used by Tier I/II banks. The Bankom switch has approximately 50 ATMs offering interoperability for member bank clients. The Visa switch, which processes transactions outside Uganda, has approximately 24 interoperable ATMs. The two switches combined represent less than 30% of the total ATM infrastructure deployed. The majority of ATM networks are provided on a proprietary basis to a specific bank’s customers.

- **High switching costs when interoperability is available:** both switches levy a switching fee. Switching fees are paid either to the issuing (Bankom) or the issuing and acquiring bank (Visa/MasterCard). Switching fees are determined on the basis of volumes processed by the member bank, and the type of transaction that is processed. In the case of card associations, switching fees can be as low as \$0.04 for a POS originated transaction. In the case of Bankom, current switching fees for members are between \$0.20-26 per transaction.
- **Low interchange fees when interoperability is available:** Interchange is a fee charged to the issuing bank for the use of the acquiring banks infrastructure.
- Interchange fees and switching costs make ‘off-us’ transactions more expensive than ‘on-us’ transactions because of the three fold increase in parties to the transaction, i.e. the acquiring bank, switch and issuing bank. Current ‘on-us’ cash withdrawal fees range between UGX100 and 500 (BOU, Sept. 2005). Interchanges rates are currently too low to stimulate roll-out, but too high to stimulate demand.

Bankom’s current interchange fee is \$0.26 or UGX470 for members.

Visa's international pricing system (which is currently in force between all Ugandan Visa members) has an interchange fee of \$1.00 or UGX1,800. Member banks have typically passed these costs onto their clients creating a significant disincentive for bank customers to transact in an 'off-us' environment.

3.2.1 Identifying the correct pricing level for ATMs

One estimate suggests that transactions cost of an ATM is approximately UGX458 without any profit margin or contingencies for lower transactions volumes on the ATM network. Based on a minimum opportunity cost of capital rate of 20% (Bank Prime Lending Rate) banks would need a further margin of UGX92. The interchange fee should therefore be between UGX550 – 800.

Combining the interchange fees with switching costs and issuing bank costs and margins of another UGX230-330 means that a realistic price for an 'off-us' transaction to a customer at a 'low cost' ATM channel would be between UGX780-1,130.

Recommended ATM transactions fees remain well above the affordability levels of most income earning Ugandans. Based on the current channel strategy of deploying ATMs, banks will continue to under-provide transactional banking services to poorer rural communities in Uganda. An alternative set of channels for acquiring need to be identified.

3.3 Proposed solutions for banks and rural customers

Any solution must be able deal with issues surrounding:

- **Account issuing:** FIs need to be able to open accounts in the most efficient, low cost manner.
- **Transacting:** the account needs to be accessible in as many environments as possible. This increases the value proposition to customers.
- **Acquiring:** FI's need to be in a position to provide acquiring services in as wide a range of locations as possible to ensure maximum utilization on the account. This also needs to be achieved in the lowest cost manner possible and at a profit to banks.
- **Risk management:** solutions need to improve risk management.

3.3.1 Bank account issuing strategy

FIs have a limited number of Points of Representation in rural areas. New transactional account applicants have to go to FI branches to fill out the requisite documentation. Potential customers are required to provide a range of information in order to open accounts that fulfill KYC/AML requirements set out by the BOU or the FI. Account issuing is a therefore a costly and time consuming activity for the potential customer as well as the bank.

An alternative account issuing strategy could take advantage of the standardization of transactional banking product opening by issuing a starter pack solution similar to those issued to mobile phone subscribers. Retail outlets as well as Tier I/II/III/IV Points of Representation could be used to distribute the packs. The starter pack could contain:

- A debit card
- A PIN number to be used when transacting
- An instruction manual

Account activation could involve either linking the card to a mobile phone number using an M-Com solution at a FI PoR, or issued as a stand alone product. The card would be fully interoperable through a national switch.

This will only work if providers are exempted from normal KYC requirements.

Potential rural savers characteristics mean they are low risk customers from an AML perspective. If these customers are also only saving, then KYC risks are also small if the customer is able to identify themselves correctly when transacting.

3.3.2 Identifying a solution for transacting

To facilitate transactability banks should deploy a chip/magnetic stripe card as the interface. The card's magnetic stripe or chip provides the link between various channels within a bank and the cards number provides identification across banks through a switching entity.

To be successful any solution needs to be:

- Fully interoperable, with
- A low cost switch

3.3.3 Identifying solutions for acquiring

Acquiring infrastructure needs to be:

- **The lowest transactions cost channel:** this will enable lower transactions charges to customers while still remaining profitable for banks.
- **Lowest cost in servicing and maintenance:** infrastructure that requires extensive maintenance will substantially raise costs, especially for infrastructure placed in geographically dispersed areas.
- **Operates in a low transactions volume environments:** the device needs to be profitable at low transactions volumes that are anticipated in rural areas.
- **Facilitate cash advance:** allowing local retailers to recycle cash rather than face costs of taking it to the bank.

Genesis identified two new transactional channels with substantially lower costs than the current infrastructure deployed by most banks in Uganda, POS devices and mobile phones. In both cases infrastructure costs on these channels can be between 50 - 70% cheaper than ATMs providing a channel solution for banks wanting to develop Points of Representation in rural Uganda.

3.4 POS devices

POS devices have become a useful channel for acquiring card transactions in both Developed and Developing markets. POS devices can be configured to provide a range transactional and account services.

Type	Virtual voucher dispenser	Retail POS	Mini-ATM
Transactions supported	Virtual vouchers (mobile top-up; public transport; events etc.)	Retail card acquiring; balances; mini-statements; top-up; 'cash-back'	Retail card acquiring; balances, mini-statements; 'cash advance'; cash deposit; top-up; remittance
Communication	Daily - vouchers are uploaded onto the device	Real-time - using fixed or mobile phone links	Real-time - using fixed or mobile phone links
Interface with device	Manual	Card + PIN/Signature	Card + PIN
Cost of device	\$50-100	\$200 – 800	\$1,000 - 2,000

Table 2: POS device uses

Source: Industry interviews, Genesis

In a card environment, retail POS and Mini-ATM solutions provide alternative transacting and acquiring channels for transactions.

3.4.1 Retail POS

Retail POS has a very established business model around pricing and deployment. These devices are used principally to acquire debit and credit card transactions made for purchases in retail environments. The transactions cost is charged to the merchant using a merchant discount fee of a percentage of the value of the transaction. The fee is then shared between the issuing and acquiring bank to incentivise banks to issue cards and acquire transactions.

Internationally, POS devices make sense for merchants when the total value of transactions is in excess of \$30,000 per annum. In the case of debit transactions, a certain percentage of the transaction cost can be recovered from the cardholder.

3.4.2 Mini-ATM

What is a Mini-ATM?

Mini-ATMs take advantage of cash held by merchants to minimise cash handling for the bank (and merchant). A POS device located in a merchant environment prints a voucher for a customer which is redeemed at the merchant for cash. Mini-ATMs are branded separately to standard Retail POS devices which aid in recognition by customers and increase footfall for merchants.



Mini-ATMs have been introduced in response to demand for a 'cash advance' solution in areas which are unable to support ATMs. These areas conform with the characteristics of rural areas in Uganda:

- **Low income:** individuals cannot afford transacting at an ATM
- **Low transaction volumes:** population concentration means that an ATM would transact less than its ideal minimum of 5,000 transactions per month.

3.4.3 Mini-ATM conflicts with Retail POS

Mini-ATMs conflict with traditional Retail POS devices because of the revenues or fees accruing to the merchant who supports the device. Retail POS transactions charge a discount fee to the merchant, while Mini-ATMs have either no fees or a payment to the merchant. Merchants would therefore ideally prefer customers to withdraw funds to pay for goods and services, thereby avoiding the discount fee.

Genesis proposes that Retail POS devices are placed in high value transaction areas in middle and upper income areas, while mini-ATMs are deployed in lower income areas where transactions are low value.

Mobile phone based transacting and acquiring

Most mobile phone based transactional banking solutions have failed to significantly penetrate the mass market. A number of issues have been identified that have hampered adoption and the value proposition for customers:

1. **Low transactions cost:** new bank channels, including M-Com solutions through the mobile phone channel, need to provide lower cost transacting than current channels.
2. **Low cost of adoption for customers:** Switching to a new channel must not be costly in terms of time and money for customers. If adoption costs are high for customers, they will not adopt the new channel.

3. **Works on widely available mobile telephones/communication protocols:** WAP and 3G are not available in Uganda.
4. **User friendly:** Programming strings of data to effect a transaction will never work.
5. **Cross channel and bank interoperability:** mobile telephones solutions should continue to involve a card so that customers can interact with the ATM and POS network.
6. **Multifunctional:** the M-com solution needs to be able to support a range of transactions including person to person payments, mobile top-up, balance inquiries and mini-statements and other value added services required by customers (credit applications, account enquiries).
7. **Security of transacting:** Levels of security should be appropriate to the level of transactions.

Genesis interviewed three providers of M-Com services that appeared to meet these criteria: Wizzit; Paym8; and Cointel/Simplus.

M-Com solutions offered by these providers integrate with specific banks or a range of banks. Each solution could be designed for a specific set of FIs in Uganda and their needs. Lower Tier FIs suffer from a range of impediments that make an integrated card management and acquiring channel solution attractive. In contrast upper Tier FIs have the choice of a bespoke M-Com solution with the maximum range of transactions, or a generic solution offering transactions restricted to those supported by the national switch.

4 Summary: Rural delivery channel comparison

In the table below, the costs of the various channels are compared.

	ATM	POS	Mini-ATM	Mobile
Least transactions cost	UGX 403	UGX 76	UGX 128	UGX 154
Low cost device, maintenance, deployment	●	●	●	●
Operates in a low transactions environment	●	●	●	●
Cash advance is easy to manage by bank	●	●	●	●
Cash advance has low impact on traditional channel revenues	●	●	●	●
Overall score	●	●	●	●

Table 3: Identifying possible channels for 'cash advances'

Mini-ATMs provide an ideal channel for supporting 'cash advance' transactions:

- They have one of the lowest transactions costs of all the channels
- They can operate profitably in a low transactions environment
- They require minimal maintenance and upkeep, as cash dispensing is provided by the retailer and the device is small with minimal moving parts.
- 'Cash advance' can be managed by correct assessments of retailers in which the device is located as well as minimal training of customers used to ATMs.
- Mini-ATMs can be separated distinctly from Retail POS transactions which attract a merchant discount. They can also be installed in restricted locations which would not affect Retail POS acquiring.

M-Com solutions provide an alternative solution to Mini-ATMs in rural areas. They benefit from similar low cost/maintenance characteristics for banks but have the advantage of being 'anywhere' and enabling Person-to-Person transactions.

4.1 Risk management and KYC

There are 2 primary advantages for FIs adopting card based solutions:

1. **Improved monitoring:** All transactions can be standardized and tracked across the acquiring network. Transaction information can be centralized, with reports drawn on a real time basis, tracking individual customers, groups, regions and devices enabling better risk management and a reduction in fraud.
2. **KYC:** Ability to centrally monitor and limit the number and value of transactions reduces the risk of Money Laundering.

5 Potential market for transactional banking

To estimate the combined benefit of the range of interventions/solutions proposed in the report, three generic transactions profiles were developed to model the number of customers who could potentially afford the proposed transactional banking solutions:

- **Basic saver:** is a person who uses their account to save funds for school fees and unexpected events. The account is typically deposited with funds at least once a month, with a withdrawal being made every 2-3 months.
- **Farm laborer:** is a person who is paid electronically into their account. Funds are then withdrawn to pay for living expenses and provide support to a family based in another region of rural Uganda. The farm laborer would typically establish funds in the account before withdrawing them.
- **Farmer:** the account is used to provide a saving facility as well as facilitate purchases at wholesale outlets for farming inputs such as seed or implements. Alternatively, if the farmer was also a Dukka owner, the monthly retail POS transaction could be used to pay suppliers for goods to be delivered. A mobile phone would provide immediate access to the account for non-cash transaction purchases.

In the case of all these transactions profiles, adoption of a product is based on the 2% of gross income cut-off. Using this, as well as current penetration of bank products identifies the point at which transactional bank products would be adopted in the income pyramid of the employed work force.

Assuming all transactions are made across the lowest cost switch and profit margins on transactions costs are 40%, the transactions profiles yield an extra 2.3 million individuals who were not previously banked. This increases the total banked market from its current 1.7 million to a potential 4 million customers.

Net revenue generated from these new transactions would yield UGX8,585 million per year. This excludes revenues from on-lending deposits at 19-20% per annum, peripheral servicing fees and a range of bank-assurance product revenues that could be sold to this customer base as well as for remittances.

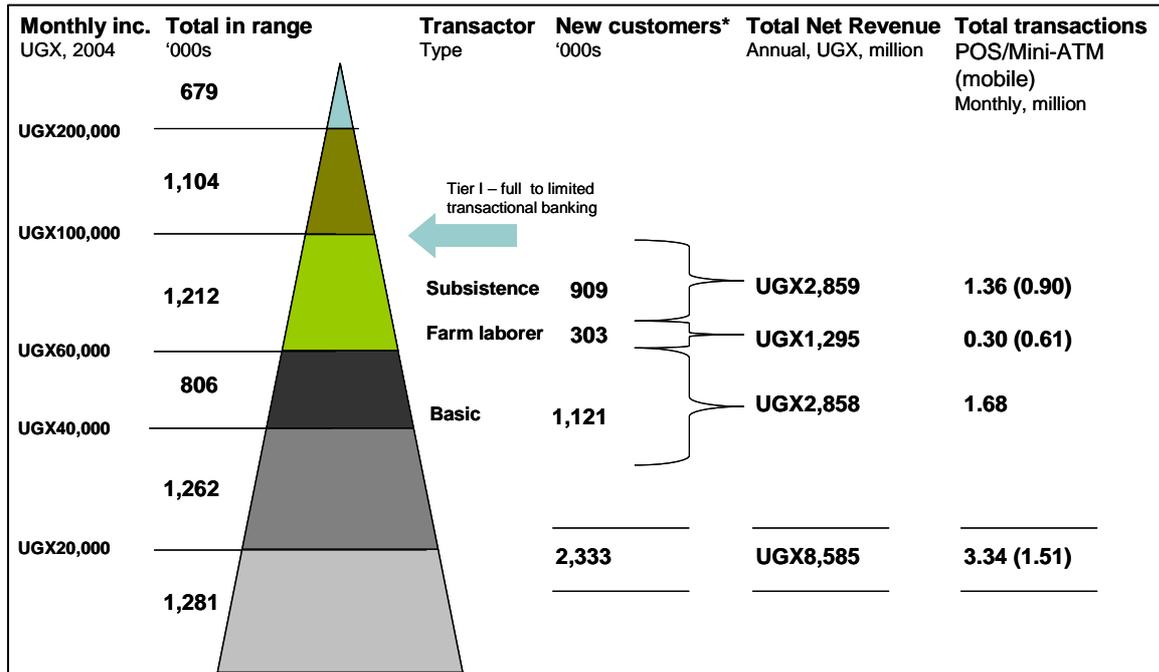


Figure 6: Potential new market penetration based on proposed solutions for issuing, transacting, acquiring and risk management

Source: UBOS, 2004; industry interviews; Genesis calculations

Raising the switching cost by \$0.10 per transaction however, decreases potential market penetration by 900,000 individuals. Net revenues also decrease by about UGX2.1 billion per annum.

6 Concluding remarks

Uganda’s transactional banking sector coverage is approximately 1.7 million individuals. This is primarily because transactional banking products have failed to provide a compelling value proposition to low income earning individuals or businesses based in rural areas. Not only are bank charges very high, but bank infrastructure has been limited to major urban centers.

Bank infrastructure is expensive to deploy, needs high transactions volumes to be profitable and services products that are paper based and labour intensive. Many banks still provide passbook type solutions to customers, who then need to access accounts at a teller.

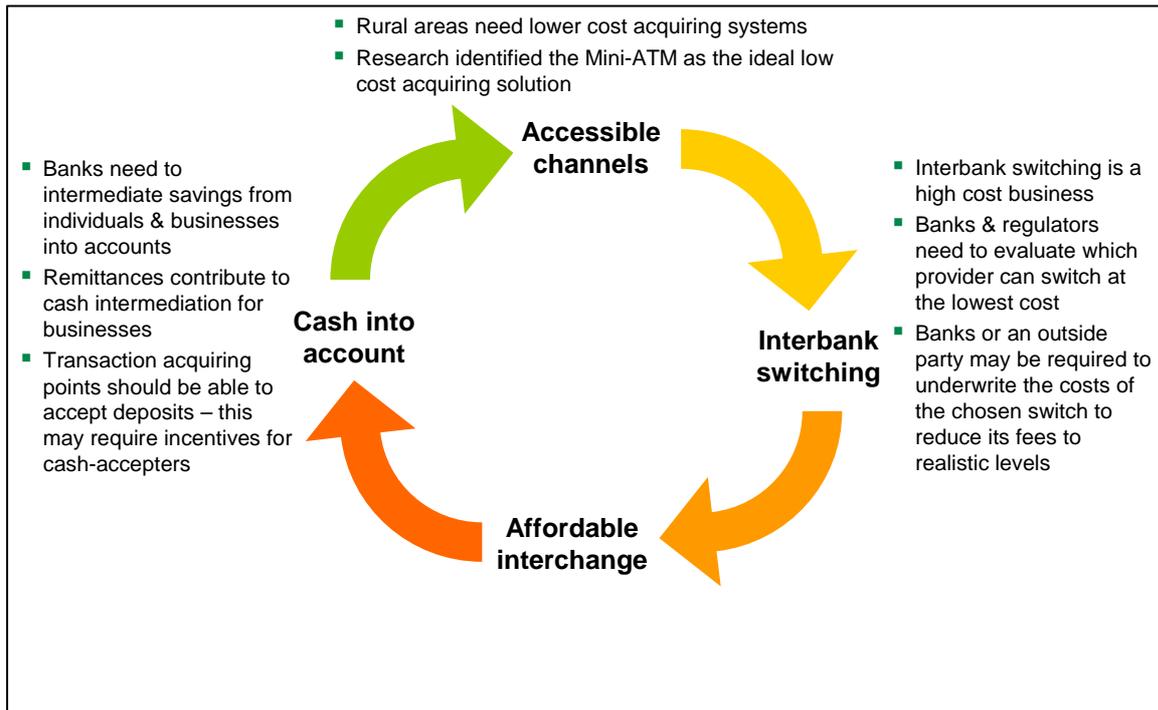


Figure 7: The positive reinforcing cycle of low cost cash-in, accessible channels, interbank switching and affordable interchange

By using lower cost channels to acquire card transactions and adopting lower cost issuing strategies, FIs could provide access to a potential market of 4 million individuals. However, a number of factors need to be addressed in order to provide access to these individuals:

- Fully interoperable payments system allowing issuers and acquirers to benefit from economies of scale.
- Low KYC to encourage low cost issuance
- An industry solution that reduces the cost of switching transactions to the lowest price that can be achieved through an international or domestic switch
- Industry agreement on interchange fees at a level that stimulates deployment of more devices
- Industry agreement to define Mini-ATMs as a separate channel for (lower) interchange pricing purposes

These recommendations are expected to provide an enabling environment for the adoption of transactional banking services.

Appendix 1 Reading Materials in Preparation for the Consultancy

- Bank of Uganda, 2003 “Uganda bankers automated clearing house. Clearing house rules and procedures” Bank of Uganda, Kampala
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