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Financial Services for the Urban Poor

South Africa's E Plan

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Standard Bank of South Africa's innovative E Bank program demonstrates how a commercial bank can use market information to bundle services needed by the urban poor — and valued by the poorer clients to justify a fee high enough to cover costs.

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Summary findings

Much of the research on financial services in low-income countries has focused on microcredit programs. Much less attention has been paid to the design of depository services, although many more low-income people use depository services than get access to credit. Having access to depository services is important for household well-being: to safeguard funds, to save for large purchases, and as insurance against unexpected expenditures.

Economic reform programs in recent years have encouraged banks to push up nominal interest rates to keep deposit rates positive in real terms and to motivate savings in financial assets. But once deposit rates are positive in real terms, banks typically increase minimum deposit size or find other ways to discourage small depositors because of the high costs of maintaining and servicing low-balance accounts. Traditional passbook savings accounts, the main product used by low-income households, are being phased out because of high costs.

After South Africa's move to democracy in 1994, it was politically imperative that the country's major financial institutions help redress the historically weak system of services for low-income people. Paulson and McAndrews describe one of the more interesting experiments. In 1993 Standard Bank of South Africa created an affiliate, called E Bank, to deliver basic banking services to the urban poor.

E Bank provides a package of financial services designed specifically for low-income clients, offering greater convenience for the user while keeping under control the costs to the bank of providing services. E Bank combines the innovative technology of modified ATM services with staff available to help all clients. By rethinking the needs of the basic banking customer, E Bank was able to bundle services valued by poorer clients to justify a fee high enough to cover costs.

This paper — a product of the Financial Sector Development Department — is part of a larger effort in the department to explore ways to expand financial services in low-income countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ann Thornton, room F6K-258, telephone 202-458-0409, fax 202-522-3198, Internet address athornton@worldbank.org. The authors may be contacted at jpaulson@worldbank.org or Jamie.Mcandrews@NY.Frb.Org. November 1998. (22 pages)

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Introduction

Providing basic financial services to the poor is a challenge in all countries. But in South Africa the challenge is urgent because the country must find ways to reduce the entrenched inequality of incomes, economic opportunities, and access to services, left over from the years of apartheid. There is a political imperative that the major financial institutions help redress the historically weak system of services for lower income people. This note documents one of the most interesting experiments to come out of recent efforts by the formal sector to provide cost-efficient financial services for the poor. Standard Bank of South Africa created an affiliate, E Bank, in 1993 to deliver basic banking services to the urban poor in South Africa.

The Bankers and the Unbanked in South Africa

South Africa is fertile ground for experimentation with financial services. The country has four large old private banks, as well as about 50 smaller banks, with well-developed conventional banking skills and impressive banking technology, providing sophisticated banking services to the upper income minority population. The banks have competed to lower transaction costs for affluent consumers through extensive branching, automation and spread of ATMs in the richer areas of the country. But after years of international isolation and sanctions, without much domestic or international competition, the dominant banks have a high cost structure. Now exposed to more competition from new entry, and subject to the forces of globalization of financial markets, the banks are being forced to work towards economic efficiency, cut costs, automate, and attempt to rationalize pricing and end cross-subsidization. Financial institutions are under competitive pressure to cut costs, even while they are under political pressure to expand services to the majority low income population.

With a population of about 42 million, over half of the South African population falls below the poverty level and the median household income of the majority black population was less than US$4,000, while the median for white households was near $30,000 in 1991.[1] The 'previously disadvantaged population', i.e., non-whites, had very limited educational opportunities under apartheid and illiteracy rates are high. Wage levels are painfully low. Unemployment in the formal sector is roughly estimated at 40 percent. Approximately 32,000 jobs in the formal sector were created per year during the 1985-89 period, while roughly 400,000 people per year were entering the labor force.[2] Many must earn income in the informal sector, which is entirely cash-based. So the majority fall well outside the segment of the population courted by banks. Only a minority of the adult population has bank accounts.

But several forces pushed the banks to recruit business outside the traditional client base, including growing competition and political pressure. The banks have been subject to growing competition from the less regulated insurance companies for deposits and from other banks for corporate accounts. Banks have expanded the service lines to compete for corporate clients, including managing the payroll. Partially because of the high crime rate and partially because of the administrative burden, many employers have moved away from cash payrolls paid on site, to automatic payroll deposits, even for very low wage employees. This brought low income workers into the banking system and provided incentives for banks to lower the cost of providing depository services. Because of stiff competition for corporate clients, the fees charged for payroll services did not cover costs, and other retail clients were cross-subsidizing the small balance accounts used for payment of wages.

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[1] J. du Toit and H.B. Falkena, The Structure of the South African Economy (1994/1995), ABSA Bank, Southern Book Publishers (Pty) Ltd., Tables 5.1 and 13.1.

[2] ibid. pp.22-23.

Services for Low Income Customers

While credit/debt for low income people is discussed more in the development literature and figures large in the political dialogue, it has long been recognized that depository services to allow poor people to safeguard their savings and accumulate funds for larger purchases is just as, if not more, important. Many more poor people can be impacted by the quality, quantity, return, convenience, and safety of depository services than by scattered fragmented microfinance credit programs.

The use of bank deposit facilities by the urban poor in South Africa accelerated with the move to direct deposit of wages. The banks typically enroll all employees of a firm into savings accounts at that bank as part of the package of corporate services. The employees have little or no input in the choice of their bank and the employees can't easily reduce the transactions fees they incur by changing banks. So some families with two workers in the formal sector have accounts at two different banks.

Most wage laborers do not have high enough income, nor the need, to qualify for checking accounts, and instead use passbook savings accounts. The passbook savings account offers depositors safekeeping, interest earnings, and may offer some transfer (payment) capabilities. But passbook savings accounts can have high transaction costs since depositor must go to a teller with the passbook to withdraw funds, limiting the usefulness of the account. Many low income employees, living close to the subsistence level, queue in banking halls on paydays or at the end of the week to withdraw funds. It can take hours to transact even the simplest banking business or to retrieve pay, adding high transactions costs and another burden to a very long work week for the poor. With an hour or more in a queue to withdraw funds, rational cash management forces many wage laborers to withdraw their entire payroll just a few hours after it is deposited, almost always incurring a hefty service fee for using a teller.

The provision of banking services for low income clients is difficult to do profitably because of the low balances kept on deposit. Even if moderate balances are maintained, the clients may undertake many small withdrawals, driving up the costs of operating bank branches. Even with very low deposit interest rates, these clients usually generate losses. The patterns of bunching transactions on Fridays and on paydays is costly to the bank because it requires extra branch staff at those times, computing facilities and sufficient cash to handle the peak load, and it crowds the branches, imposing an externality on the other customers of the bank. The banks must either charge sizable transaction fees or subsidize low balance high volume accounts.

In recent years, banks in South Africa have tried to move passbook savings account holders onto card-based accounts that can be accessed from automated teller machines (ATMs) where costs are lower. But because of the high rate of illiteracy, said to be above 50 percent among the black population, the advent of card-based products is resisted by many who are illiterate, or who simply prefer a book-based account. Typically, an illiterate person who uses an ATM card either has to learn the sequence of transactions at an ATM by rote and be vulnerable to mistakes, or must go to a teller to complete a transaction.

E Bank successfully addressed these problems by developing a valuable package of banking products, including new services and greater convenience for the user, while keeping the costs to the bank of providing services under control. E Bank combines the innovative technology of modified ATM services with staff assistance available to help all clients with electronic basic banking.[3] The program exploits demand complementarities and bundles services that are sufficiently valued by poorer clients to justify a fee high enough to cover costs.

A Narrative History of the E Plan Product and Delivery System

In the early 1990s, the management of Standard Bank asked a small team to design a new product for the low-income market. Using their experience and some existing and new research, the team developed E Bank, later called E Plan. The

[3] E Bank technology won a Smithsonian award for innovation in 1997. The technology is described on the Web at http: // innovate.si.edu.

experience of the members led them to conclude that the standard deposit products were inappropriate for the low-income market and a new product package should be designed. Rather than just slashing costs and services or driving up service charges, the design team moved into innovative territory by offering an integrated combination of product and delivery features, including 'user-friendly' conveniently located branches and technology, and exploiting the cost savings of ATMs. To overcome resistance to card-based accounts, the product package included assistance for transactions, informative receipts, and a welcoming atmosphere in the E branches. Customers have several types of savings options consolidated into a single interest-earning depository account. Mr. Bob Tucker, who led the E Plan design team, points out that E Plan was not to be the low cost provider, but rather to be the 'real' value provider of basic banking services. In return, the customer is expected to be willing both to engage in more E Bank ATM transactions and pay fees slightly above the market norm and high enough to cover the full costs of the transactions. The E Bank design attempts to take advantage of demand complementarities among the components of the design to provide a high value service.

Physical Infrastructure.

- The E Bank outlets are in nontraditional kiosks, conveniently located, decorated with vibrant colors, with videos displays playing music, sports, or instructional videos, so the facility has a warm inviting feeling. All financial services are delivered through ATMs. Most bank branches in South Africa are built to maximize security with bars and bullet-proof glass, and entrants must pass through metal detectors. In contrast, in E Bank outlets all cash is loaded in the ATMs so there is less need for tight security. There are no entrance barriers and the outlets are open to the sidewalk.

- Each E Bank kiosk has three to four assistants, selected for their outgoing personalities and ability to speak several local languages, to help guide any unsophisticated user of the ATMs. The help is intended to be quick but pleasant and the assistants provide a friendly face to banking services. In this way a low balance customer may feel more of a relationship with the bank than a high balance customer who uses machines exclusively for speed.

- The ATMs have a simplified screen using graphics to illustrate usage, in addition to text.

Savings Instruments

- E Bank offers a single depository account with card-based access through ATMs and POS devices, i.e., no checking privileges and no passbook. All money in the account earns interest as long as the client maintains a minimum balance of R 250 (US$56).

- There are two "purses" in the account, cash and savings. Money in the cash purse can be withdrawn at an ATM on demand. The second purse, as described below, is for savings. In the future, the program also will offer a transmission purse so funds can be withdrawn by another designated cardholder, usually a relative living in a different region. This will be an important service in a country where there are few secure means of transferring money to rural relatives.

- To transfer funds into the savings purse, an E Plan depositor can follow menu-driven instructions at the ATM or arrange a standing order for automatic transfers at specified time intervals, but the funds cannot be withdrawn from the savings purse directly. To withdraw funds or to transfer funds to the cash purse, the depositor must go to one of the assistants, request the transfer, and sign a form after the assistant has verified the depositor's identity from the original account application and an identification card. If necessary, copies of the account application can be faxed from one branch to another so the transfer can be undertaken at any branch. The savings purse has three possible uses. First, the savings purse replicates, to some extent, the passbook, in which a person identifies the depositor prior to withdrawal. In this way the E Plan can be treated as a passbook savings account for those who prefer that product to a current account. Second, the transfer of funds into the savings purse provides an effective safeguard against the theft or misuse of a depositor's card and PIN. Finally, the use of the savings purse assists depositors' own resolution to build savings. Clients can sign a stop order to automatically transfer money at a specified interval into the savings purse and many account holders use this as a simplified contractual savings scheme.

- New clients can use their account facility immediately. The application process is automated and it takes less than five minutes to open an account and receive an ATM card. In addition the client is given a Stop Card that freezes the account when inserted in any ATM to protect the account in case the ATM card is lost or stolen.

Transaction Record

- The receipt provides a good transaction record showing the last six transactions and the total amount in the account as well as the amount in each purse, but no account statement.

Performance Premiums and Bonuses

- With a fully automated system, E Bank can monitor accounts and reward savings performance. E Plan pays an additional three percent interest premium over the base deposit rate of two percent to clients who maintain balances above the minimum of R 250 for over six months.

- Depositors who exhibit either regular savings behavior or who maintain a specified balance above the minimum, become eligible for drawings and prizes.

- Funeral expenses are a significant burden for families in South Africa, increasingly so because of the spread of AIDS. As an incentives to use E Plan, customers under the age of 61 who maintain a minimum balance of R 250 (US$56) or who do a minimum of three withdrawals per month and therefore generate transaction fees, automatically receive a modest amount, R 1500 (US$333), of life insurance coverage.

Fees

- E Bank users are subject to relatively high transactions fees, e.g., a fee for each ATM use, as well as fees for lost cards and other non-recurring actions of the depositors.

New Products

- Although not part of the original E Bank design, new products have been introduced through on-going innovation. Two products, limited checking and small loans, are described later in this paper.

E Plan is a unique approach to serving the banking needs of a low income technologically unsophisticated population by making banking more valuable to a customer in attractive, well designed, highly automated, safe, and entertaining banking centers, delivered through ATMs, but provided with assistance.

Cost Considerations / Supply

One key to making the electronic banking approach of E Plan viable is getting transactions per machine/outlet high enough to achieve economies of scale and lower costs per transaction. Several factors helped E Bank establish and expand the client pool.

The banking markets in South Africa are very concentrated and appear to give some market power to the four large banks. Standard Bank has a 25 to 30 percent market share, a strong starting point for sale of their consumer products. In addition, E Bank outlets have been located in convenient high traffic areas. The hours of operations vary, but are longer than in a bank branch. Assistance to customers speed transactions significantly and allows for intensive use of each outlet.

When E Bank was launched as a stand-alone affiliate of Standard Bank it was accepted by customers quite readily, with over 150,000 customers creating accounts in the first year of operation. However, running E Bank as a stand alone entity meant that all the costs of development, marketing, and operation of the service, including the construction of the outlets, had to be borne by E Bank customers. And for the first few years the number of transactions per machine was below the break-even point. This led the management to fold E Bank back into the Standard Bank Corporation. Once within Standard Bank it was easier to channel low balance clients into E Bank from other consumer services programs, and rationalized the allocation of customers among programs based on income. For example, another Standard program, Plus Plan, has features and services designed for moderate income consumers and small businesses with balances above R 1000 (US$223). Plus Plan, like E Plan, has a fee schedule that cover costs for service, encourages customers to maintain a minimum balance, and use ATMs instead of tellers whenever possible. Most fees for Plus Plan services are lower than E Bank fees because Plus Plan clients are to maintain higher balances. But of the 2.1 million Plus Plan accounts, 600,000 clients did not meet the R 1000 minimum deposit requirement There were possible cost savings in moving these clients to E Bank.

Merging Delivery Channels to Achieve Economies of Scale

With the merger of E Bank into Standard Bank in early 1996, E Bank clients were transferred to 'E Plan' and the E Bank facilities were renamed Auto Bank E outlets. Auto Bank is the name used for the Standard Bank ATM network. E Plan maintains the basic characteristics of E Bank, including personal service available to guide ATM use. There were several advantages for Standard Bank in folding E Bank in with other automated banking service plans, including expanding the service network and the merger eased migration of low balance accounts from more expensive delivery plans to E Plan.

Following the merger, E Plan clients can also withdraw funds from the ATM kiosks of other Standard Bank plans, or from the ATMs of other banks in South Africa, but the screen will not be the familiar visual presentation. However this does give E Plan clients some options if they need to make withdrawals after the E Plan outlets are closed. E Plan cards also can be used as POS (point-of-sale) cards and are accepted at a growing number of stores, including Pick and Pay, the largest retailer in the country.

There are significant cost savings for Standard Bank in moving small accounts from high cost delivery systems into E Plan since the cost of providing depository services through E Plan are considerably lower than through Plus Plan and traditional bank branches. For example, account maintenance costs in Plus Plan are double the costs in E Plan because Plus Plan carries higher branch costs, as well as the costs of the ATMs. The difference in account maintenance cost reflects both fixed and variable cost components. Fixed costs under E Plan are lower because the outlets are smaller and all cash is loaded in an ATM, so there is no need for a vault, and insurance and security costs are lower. Variable costs are lower because with automated E Plan transactions, E Plan assistants require less training and wages are lower than with tellers. Passbook account holders generate a "paper trail" which must be manually created, examined, and filed for each transaction. Each of these steps is costly. With automated transactions, these steps can be avoided in the normal course of events.

While it is cheaper to provide service via E Plan, the timing of client migration from other plans requires balancing the costs and benefits of different delivery channels within Standard Bank to achieve cost savings. Account holders must be given convenient service at Auto Bank E outlets if they are to migrate. But rapidly expanding the Auto Bank E network, which would assure convenient service, is costly. Furthermore, branches must be downsized as the Auto Bank E network grows or there will be little overall cost savings for the bank and some branches will be left with excess capacity. But quickly downsizing branches may leave some branch offices overcrowded, alienating clients if customers fail to migrate to the electronic alternatives. The migration process is very important in the business planning of the bank, since Standard Bank expects to drastically cut the number of current and savings account transactions that go through branches. Most of the growth in current and savings account transaction over the next five years is expected to flow through Auto Bank E outlets. To facilitate migration, most new E Plan outlets are located next to Standard Bank branches.

Present and Forecast Transaction Volumes in Current and Savings Accounts Standard Bank of South Africa, July 1997				
	1997 (number '000)	1997 (percentage of total)	2002 (number '000)	2002 (percentage of total)
Branch	15,113	20.0	7,699	6.4
ATM	34,531	45.7	37,495	31.4
Electronic Check	249	0.3	2,343	2.0
Auto Bank E	18,577	24.6	50,843	42.5
Magtape Transactions	7,137	9.4	8,805	7.4
Debit Card	0	0	12,349	10.3

Market Performance and Plans for the Network

The market performance of E Plan has been characterized by rapid growth in accounts, through new clients, and involuntary conversion or migration from other Standard Bank plans. In May 1997 Standard Bank converted 570,000 low-balance (less than R. 1000 or US $ 223) Plus Plan customers to the E Plan and met little resistance to this involuntary conversion. By transferring to E Plan, those clients will start to earn interest with a minimum balance of R 250, rather than the R 1000 required in Plus Plan. In addition E Bank attracted 600,000 new account holders in the 10 months between late 1996 and mid-1997 and the rate of account growth has increased since then. At a rate of roughly 60,000-70,000 new accounts per month, half are clients enrolled through direct deposit of wages and half are new "walk-in" clients. The rapid growth in the number of accounts has increased the utilization of the ATMs.

Transaction Volume at Standard Bank ATMs		
	Standard Bank ATMs	Auto Bank E ATMs
Total number of ATMs	2,020	165
Total number of transactions	12,697,754	1,987,294
Number of transactions per ATM	6,286	12,044

It takes about 8,000 transactions per month to break-even on the ATM machines, and the average for E Bank is now about 12,000. After roughly three years in operation, there are approximately 1.4 million E Plan account holders. Account growth has been so rapid that there is some risk that it could overwhelm the delivery channel, especially after the migration of low balance Plus Plan clients. Adding to the 70 Auto Bank E centers opened since 1994, Standard Bank plans to almost triple the number of Auto Bank E outlets in the next five years, from 70 to 190 by 2002.

Account balances have also grown, but the number of transactions per account has not. E Plan needs to increase the number of transactions per account to increase returns in operations. It costs about R 4.58 per month to maintain an account, including some capital costs as well as other costs. The number of transactions per account is growing slowly, averaging only about 2.8 per month, so many clients are using their accounts only to withdraw their wages. This means that the account maintenance and account opening costs must be spread over relatively few transactions.

Schedule of Fees for E Plan and Plus Plan Accounts Standard Bank, Feb. 1998			
	E Plan	Plus Plan (balance under R 2,000)	Plus Plan (balance over R 2,000)
Monthly Fee	R 2.70 *		
Cash Withdrawal			
-at Standard Bank ATM	R 2.70 #	R 2.50 for first R 100, then R 0.50 per R100	Free
-at ATM of another bank	R 3.50 + withdrawal fee of R 2.70 #	R 3.50 + withdrawal fee of R 2.50 for first R 100, then R 0.50 per R100	R 3.50
- from a teller	R 10.00	R 10.00	Free
Balance Inquiry			
-at Standard Bank ATM	Free	Free	Free
-at ATM of another bank	R 1.50	R 1.50	R 1.50
Provisional Statement	One Free then R 1.4	One Free then R 1.4	One Free then R 1.4
Inter-Account Transfer			
- at Standard Bank ATM	R 2.70 #	R 1.70	Free
- from a teller	N.A.	R 10.00	Free
Account Payment			
- at Standard Bank ATM	R 2.70 #	R 1.30 for first R 100, then R 0.50 per R 100 to max. of R 15	Free
- from a teller		R 10.00	Free
Debit Order	R 2.70 #	R 3.00	Free
Stop Orders			
- establish stop order	R 6.00		
- amend stop order	R 6.00		
- cancel stop order	R 6.00		
- handling	R 4.50	R 4.50	R 4.50
Auto-Cheques	R 5.00 + withdrawal fee of R 2.70	R 5.00 + withdrawal fee of R 2.50 for first R 100, then R 0.50 per R100	R 5.00
Debit Card Usage			
- purchase at merchant	R 1.55	R 1.55	R 1.55
- purchase & cash withdrawal	R 1.75	R 1.75	R 1.75
Interest (paid monthly in arrears)	2% per annum for bal. of R 250+ & bonus of 3% if bal. is maintained for 6 months	bal. less than R 500 earn no interest; 1.25% on bal. R 500-999 and 3.5% on bal. R 1000-4999.	graduated scale starting at 3.5% on bal. R 1000-4999 to 11.25% on bal. of R 100,000+

* E Plan monthly fee waived for customers over 60 years and 11 months.

Customers over 60 years and 11 months pay R 2.10 for these transactions.

All three plans are subject to the following fees: Replacement card R 6.00; Unpaid debits R 55.00; Bank cheques R 16.50; Stop payments R 10.55; Deposit of post-dated cheques R 34.20.

E Bank fees are applied to almost every transaction a customer is likely to undertake. The only exceptions are deposits, balance inquiries at an ATM, and account opening. The fees were raised in Feb. 1998, as shown in the table above. E Plan introduced a monthly account fee of R 2.70 and also gave all clients under the age of 61 life insurance coverage for R 1000. There is still the option of getting an additional R 1500 in life insurance coverage for clients who undertake three transactions per account or maintain a minimum balance of R 250. Customers age 61 and older, who cannot get the life insurance coverage, have the monthly fee waived.

Plus Plan clients are expected to use ATMs for many services, but without assistance. Many of the Plus Plan ATMs are inside bank branches so the customers can refer questions to a teller if necessary, but there are also Plus Plan ATMs kiosks in shopping centers, etc. Plus Plan clients are suppose to maintain balances of R 1000 and qualify for lower fees with balances above R 2000. For clients with balances between R 1000 and R2000 the fee schedule is graduated based on the size of the transaction. Clients will balances above R 2000 get free withdrawal services from Standard Bank ATMs or over the counter in a branch, and account payment and inter-account transfers are free.

E Plan transaction fees are high relative to income and higher than the market on some transactions. For example the ATM withdrawal fee charged by a competitor People's Bank of Nedcor Group was R 2.28 compared to R 2.70 in E Plan. To withdraw funds from a teller the People's Bank fee is R 7.98 while the fee for E Plan is R 10. But E Plan fees are not higher for all transactions. To withdraw funds from an ATM owned by another bank, the fee from People's Bank is R 5.70 while the fee from E Plan is R 5.5. And People's Bank charges a monthly ledger fee of R 3.42, while the monthly fee for E Plan is R 2.70.

Schedule of Fees at Competing Plans People's Bank and E Plan Feb. 1998		
	People's Bank 'Cashpoint'	E Plan
Withdrawal at ATM	(Bal < 1000) R 2.28 for first R100, then R0.34 per R100	2.70
Withdrawal at ATM of another bank	5.70	5.50
Cash withdrawal at teller	7.98	10.00
Monthly ledger fee	3.42	2.70
Replacement card	25.08	6.00

The E Plan fees on basic services had a relatively high price to cost margin as of July 1997 when these comparisons were made. With the marginal cost of a withdrawal estimated to be about R 0.89 (US$0.20) at the volumes then experienced in the operation, the fee for that service was about R. 2.5 so the fee for service was about three times marginal cost. But average cost was above marginal cost and part of the differential between marginal cost and price of withdrawal must cover the account maintenance and account opening fees. Relatively light competition assisted the bank in recovering costs.

Operating profits, defined as transaction fee revenue minus costs of account maintenance, including allocated capital costs, and transactions costs, were still negative. But interest earnings, which were not included in transaction fee revenue, helped E Plan to break even. Average daily balances for E Plan accounts was approximately R 320 (US$71). Average balances were slightly higher than what had been expected in the design of E Plan, and the differential greatly enhances the revenues of E Plan operations because of the current structure of interest rates. Interest was paid as long as the balance remains above R 250 (US$56). The basic deposit rate was 2 percent, while the money market rate in South Africa was about 14 percent. Hence, the relatively high interest rate environment, and the greater propensity to hold balances on account, has contributed to recovery of costs in the system. An accounting model of Standard Bank showed that there were positive net revenues per account holder of R 3 (US$0.67) per month.

Since the interest rate spread is expected to narrow in the future, revenue generation will gradually shift emphasis to transactions fees and higher transactions volumes per account through Auto Bank E outlets. Within three years Standard Bank expects to generate positive operating profits from E Plan. The business plan calls for the number of transactions per account to double to four transactions per month in 2002 through further marketing of the benefits of the savers' lottery, life insurance, further product education, and product expansions. The variable costs of transactions are expected to be flat or rise slightly over the next five years as transactions more than double. This conclusion reflects the belief that E Plan has achieved the scale economies of efficient electronic transaction volume and that the opening of new outlets will take place in an orderly fashion over the planning horizon. Account maintenance costs are expected to fall from R 4.58 to R 2.77 per month between 1997 and 2002, roughly a 40 percent drop. This reflects the migration of transactions out of full service branches into the E Plan outlets, and therefore lower allocation of branch costs to E Plan in the future.

Marketing and Innovative Product Design

Market research has been undertaken on the characteristics and behavior of the low income clients targeted by E Plan to help determine whether E Plan is successful in the market niche it expected to fill . The target market for the E Plan are individuals who earn less than R 3000 (US$667) per month. This puts the E Plan clients in the middle to lower end of the low income consumer market segment.

Some of the characteristics of the population that falls within the low income market, i.e., income of R 0-5000 per month (less than US$1,100), have been identified through market research. Only 27 percent of the low income consumers have a bank account of any sort, so over 70 percent are unbanked. In the consumer category, 81 percent earn less than R 3000 per month, the target market for E Plan. Following South African practice, the population that falls into the R 0-5000 income band has been identified in racial groups of roughly 17 percent "white," 67 percent "black," 13.7 percent "coloureds," and 3 percent "asians." In the low income category, 13 percent have no education, 32 percent have some high school, and only 2 percent have a college degree and 53 percent are employed full time, while 30 percent are unemployed or not working in the formal sector.

Of those that use banking services, most use a savings account and very few other banking services. However, those in the upper end of the low income category i.e., with income R 3000-5000 per month, may qualify for checking accounts and therefore have somewhat different product usage than the lower end which only has savings accounts. This stands in strong contrast to other market segments. For example, only five percent of the customers with incomes R 0-5000 have home loans, while 31 percent of those with income R 5,000-25,000 (US$1,100-5,500) and 64 percent of those earning more than R 25,000 per month have home loans. The marketing research shows that depositors in the low income market are more loyal to Standard Bank than the higher income customer segments, in that they do not utilize other financial service providers. Standard Bank concludes from this research that low income clients demand good savings facilities, but may not use other products. Indeed, they conclude that efforts spent to retain accounts or to cross sell products will be wasted and unprofitable. However, as will be discussed later, E Plan is still experimenting with other basic banking service products for this group. For example, while E Plan clients do not operate checking accounts, Standard Bank has developed innovative technology to give the clients some checking facilities.

The design of E Plan assumed that interest sensitivity for deposits is low, and this assumption has been confirmed by the E Plan experience. The deposit rate of 2 percent is low, and can be increased by 3.0 percent if the minimum deposit balance is maintained for at least six months. Depositors may be able to earn slightly higher rates by depositing in fixed or notice deposits, but then the penalty is stiff and it becomes quite expensive and cumbersome if the funds are needed before the term expires. Even though the rates are higher on a fixed term account, E Bank has found that the rate sensitivity is relatively low, and convenience of withdrawal, user-friendly outlets, and the complementary package of services are more important that the deposit rate.

Standard Bank does not face much competition for low income clients with low balance accounts. The main competition among banks is for corporate accounts, which requires providing a complete line of corporate banking services, including managing direct deposit of wages for workers. Few banks are interested in low income deposit services per se. However Nedbank also provides low income depository services through a separate affiliate bank, "Peoples Bank," that uses a relatively standard product set and delivery system of traditional branches to serve the market. There is also some competition from building societies, etc., but the E Plan now has a 57 percent market share for new low balance accounts with fees somewhat higher than others in the market.

In sum, market research and experience supports the design of E Plan. The E Plan outlets don't market other products heavily. The E Plan is essentially a single savings/transmission account, and the marketing efforts are spent in acquiring accounts, migrating customers from the full service branches to the Auto Bank E facilities, and encouraging savers to hold higher balances and undertake more transactions. Not all the features of E Plan are fully utilized by the account holders. For example, only four percent of clients currently use their savings purse; however, they hold roughly 10 percent of all balances in the savings purse. The savings purse is clearly an important feature of the plan; whether it is fully understood by the market is not known. There are relatively low rates of insurance pay out as well; again, it is not known whether account holders are aware of the conditions to qualify for insurance.

Market penetration has been fairly high. Standard Bank estimates that there are approximately 10 million bank customers in South Africa, and roughly 2.5 million fall in the low income consumer market segment. With 1.4 million accounts, E Plan has over 50 percent of those bank clients. There are also at least 10 million adults who do not have bank accounts. There are a variety of reasons for not having accounts, ranging from distance from a bank facility, or extreme poverty, or informal traders operating in the cash economy who may not wish to have their income monitored or recorded, etc.. There has been little advertising to promote E Plan to potential customers. Instead, E Plan has relied on its obvious market presence with its outlets, insurance, and prizes to generate word-of-mouth advertising. This "informal branding" has been useful in educating people on the existence of E Plan.

There have been a few experiments with the basic plan to respond to emerging problems. The use of a secret identification (PIN) number has been a problem because of the high illiteracy rate, and because South Africa has a very high crime rate and theft of ATM cards and identification numbers is not uncommon. E Plan has experimented with biometrics and facial image identification systems, but these have only been used in a few trial sites so far.[4]

Components of the Successful Experiment

Several issues stand out as critical for the success of the basic electronic banking design of E Plan, including the innovative approach taken to develop and continue to improve on the system, the technological infrastructure and capabilities, and the characteristics of the market that allowed the program to establish and expand the client base quickly. The success of the E Plan experiment depended on the infrastructure of a good telecommunications system and the skills needed to set up and maintain the system. Standard Bank created the E Plan ATM network as a sub-network of their existing extensive ATM system. All the ATMs are on-line and use wire telephone lines to communicate with the central computer. Significant down time because of failures of

[4] In another fascinating experiment for payment/depository services in South Africa, First National Bank developed the PayMaster program to deliver pensions into deep rural areas. They have loaded ATM machines onto pickup trucks to travel to established delivery points in rural areas to save the elderly from making the arduous journey into the larger cities to collect their pensions. That system has assistants present to help the elderly use the ATMs, but rather than a number for identification, biometric identification is used with the fingerprints scanned electronically before undertaking a transaction. The project won the Smithsonian award for innovative use of technology and can be seen on the Web at http://innovate.si.edu.

equipment, software systems, or telecommunication switching or operations, would seriously compromise the potential for cost recovery of the system.

The physical layout of some high density/traffic areas of South Africa also contributed to the success. For E Plan to work well and cover costs of the machine and an assistant, seven to ten thousand transactions must flow through each ATM per month. To generate that high a volume, machines must be placed where there is heavy traffic flow of the target, low income population, such as market or transportation centers where people cluster to keep transaction costs low for depositors to increase use.

The market position of Standard Bank and the high concentration in the banking markets of South Africa contributed to the success of the E Plan experiment. Standard Bank has a significant market share with about 4.5 m. accounts out of the estimated 10 m. total accounts in the country, that allowed it to achieve high levels of consumer acceptance relatively quickly. E Plan was also better supported because it generated cost savings for Standard Bank in migrating accounts from higher cost delivery channels. Standard Bank has been able to maintain a large share of the consumer deposit market, and competition for low income clients is weak. The light competition assists the bank in recovering its cost and maintaining a relatively high price cost margin.

Not only does the original design seem well tailored for the image that Standard Bank wants as a service provider to the target market, but also the Bank has continued to innovate and add new valuable services, including a limited checking facility and access to small lines of credit. Standard Bank has developed a check writing machine for use by Plus Plan and E Plan clients who need to process a payment by check but do not maintain a checking account. Clients type their account numbers, the amount of the check, and the name of the recipient into the machine. Within a minute the amount is debited from the client's account and a printed check is produced, similar to a cashier's check, for a fee of R 16.5 (US$3.67). There are now check writing machines in many outlets.

E Plan is also experimenting with a program so that regular savers can earn access to a small line of credit up to R 500 (US$112) in a 'way to pay' program One of the advantages of the automated accounts is that it can lower costs of processing loan applications. Information on past account balances and activity from E Plan can be used in a credit check/screening process to evaluate loan applications and South African banks use credit scoring models heavily for evaluation of consumer loans. But to date, the lending product is still not breaking-even[5] because it continues to require a great deal of staff time and intervention. But E Plan management is looking for ways to automate more parts of the delivery process and lower costs, e.g., so that the loan amount can be withdrawn from the ATM rather than from the staff. This seems to be a very promising approach to providing small loans to low income clients.

Looking ahead Mr. Bob Tucker outlined the strategy for E Plan to continue to push basic banking to more sophisticated cost effective delivery systems. To date, E Plan has moved from passbook to card, from teller to ATM, from ATM to POS in stores with cash back. In the future, it is expected that there will be additional movement from magnetic stripe card to off-line stored value smart card, and from bank ownership of deposit distribution centers to franchise in-store ownership.

Concluding Comments

We chose to document the E Plan program because it demonstrates how a commercial bank used market information to bundle services for low income clients. Further study will be needed to check on customer satisfaction or to investigate the impact on the clients. We did not have household survey data that would allow us to investigate whether the clients of E Plan evidenced different liquidity management or savings behavior from the rest of the population in a similar income band. Standard Bank was extremely open and provided all information requested, but we did not dwell on the structure of costs or fees. It was also beyond the scope of this case study to determine if

5 The usury law of South Africa sets a ceiling on interest for loans above R 6000. The usury limit is not technically applicable to the E Plan loans below R6000, but Standard Bank has kept the interest on E Plan loans below the ceiling.

portions of the product plan such as the design of outlets, well structured accounts, performance bonuses, and insurance, combined with the transaction fee emphasis could be transferred without reliance on heavy use of technology to achieve cost. However, we hope that this case study outlines some design considerations for low income depository services and others will explore the issue of transferability further.

The most notable feature of E Plan of Standard Bank of South Africa, and perhaps its most important lesson in providing basic banking services, has been the focus on demand enhancement. The E Plan has many carefully crafted features that enhance demand for the service, and provide incentives for customers to increase balances and use the ATMs provided. More common are efforts to provide basic banking services that focus on reducing the costs of traditional banking services that were designed for a higher income market. By rethinking the needs of the basic banking customer, i.e., the demand side, a new product emerged that has proven to be valuable to the low income consumer, while providing a way to lower the costs of offering the service. The delivery system is not 'cheap' and the plan relies heavily on service charges to cover costs. But the experiment has shown that even low balance customers can be profitable for banks, and E Plan has continued to expand and add financial services for the poor. That lesson should be transferable to other experiments in providing basic financial services for the poor.

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