



JUST HOW TRANSFORMATIONAL IS M-BANKING?

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EXECUTIVE SUMMARY

1. This paper asks how mobile banking (m-banking) has changed, or will change, access to basic banking accounts. It analyses recent data from South Africa on financial service use and attitudes, using the access frontier approach.
2. The paper updates an earlier analysis (Porteous 2005), which calculated the access frontier for transaction banking in South Africa using 2004 data.
3. Since that analysis, two material developments in the market for transaction banking could have shifted the frontier of access in that country:
 - a. The Mzansi class of basic bank accounts was launched by the major retail banks and Postbank, and around two-million clients have opened accounts.
 - b. Several banks, and non-banks in alliance with banks, have launched m-banking services. Over the same period, mobile phone users have increased by around five million.
4. FinScope™ SA 2006 shows that Mzansi accounts have led to more than 1.2-million unbanked people becoming banked. The profile of Mzansi users is different from the traditional banked customer who is formally employed and/or relatively wealthy. In anticipation of this effect, the earlier study argued that the introduction of Mzansi had shifted the access frontier decisively outwards in 2004. Furthermore, the evidence to date of cannibalisation by Mzansi of existing bank accounts shows that this is relatively limited.
5. In 2006, there were around half-a-million m-banking users in South Africa. The most popular m-banking offerings at present are those of FNB and ABSA. These are *additive*, in that they add the mobile phone as an additional channel through which to operate an existing bank account, alongside or instead of internet or ATM, for some functions. However, two m-banking offerings, MTN Banking and WIZZIT, bundle the opening of a new debit card-based bank account with the m-banking features, and have the potential at least to reach unbanked people. These accounts are usually slightly more expensive than the basic debit card only account, depending on the usage profile, but they offer the convenience that statements and balances can be accessed via the phone, and electronic transfers can be made to any bank account via the phone.

6. This paper updates the access frontier for transaction banking in South Africa in 2006 in two parts.
 - a. First, the same criteria developed in 2004 for the various market zones are applied using 2006 data. The main zones show consistency in rank-order of size of people who currently use, have access now, are likely to have access within three-to-five years, choose not to use, and the residual who are left in the so-called supra-market group (SMG), which is beyond the foreseeable reach of current and foreseeable solutions. Although larger in percentage terms, the SMG in 2006 has a similar profile to that in 2004: mainly younger, single people with little personal income. A material factor, however, is that one third have cellphones.
 - b. Second, information on the current m-banking offerings and data on attitudes to m-banking among users and non-users are analysed to decide whether or not the introduction of m-banking has structurally shifted the access frontier. The conclusion is that they have not: the account features are similar to existing bank accounts, and if anything, they may cost more. There is evidence of substantial ignorance about mobile banking even among presently banked customers, and also considerable mistrust of banking using these devices. However, the observation that one third of the unbanked people in the SMG, outside of what was considered the future reach of the banking market in 2005, have cellphones suggests that the *future* access frontier may indeed be shifting outwards to include these people in time. However, present product offerings do not target them.

7 The implications of these findings are:

For policymakers: The updated profile of the supra-market group still suggests that no special policy action is warranted to promote access to transactional banking, beyond existing policies of seeking to bank welfare grant recipients (and effectively providing a subsidy to maintain these accounts) and of encouraging greater levels of competition among new and existing banking providers.

For m-banking providers: Substantial barriers around trust and ignorance must be overcome to encourage even existing banked people to use mobile phones. A common approach to general education may help to overcome this; and a common approach to consumer protection, such as rapid dispute resolution and a guarantee that consumer loss resulting from fraud will be limited. Persuading existing banked customers, who already

appear satisfied to some extent with their existing banking channels, to use mobile banking may in fact be harder than targeting unbanked customers, including those in the SMG. The business models which can do this profitably have yet to be proven, however.

For market researchers: The accumulating FinScope™ SA data sets make it possible to track the adoption of m-banking over time. Additional survey instruments such as the FinScope™ Mobile Banking Pilot surveys, developed and tested in 2006, on m-banking users and non-users can complement the national profile, and may be worth repeating at regular intervals. This research suggests several avenues of investigation for FinScope™ SA 2007. One is to understand better the profile of unbanked cellphone users, for example how they pay for or receive airtime, given their low levels of personal income. This could assist providers to develop strategies to target this group.

1. INTRODUCTION

Transformational m-banking is the provision of banking services using a mobile phone (m-banking or cellphone banking) in such a way that currently unbanked people are targeted. The term was first coined to differentiate this type of offering from additive m-banking options, where the mobile phone is simply another channel¹. If m-banking extends financial access at sufficient scale to unbanked people, then the retail financial sector of a country is likely to be transformed. But just how transformational is m-banking; or, since it is relatively new, just what is its transformational potential?

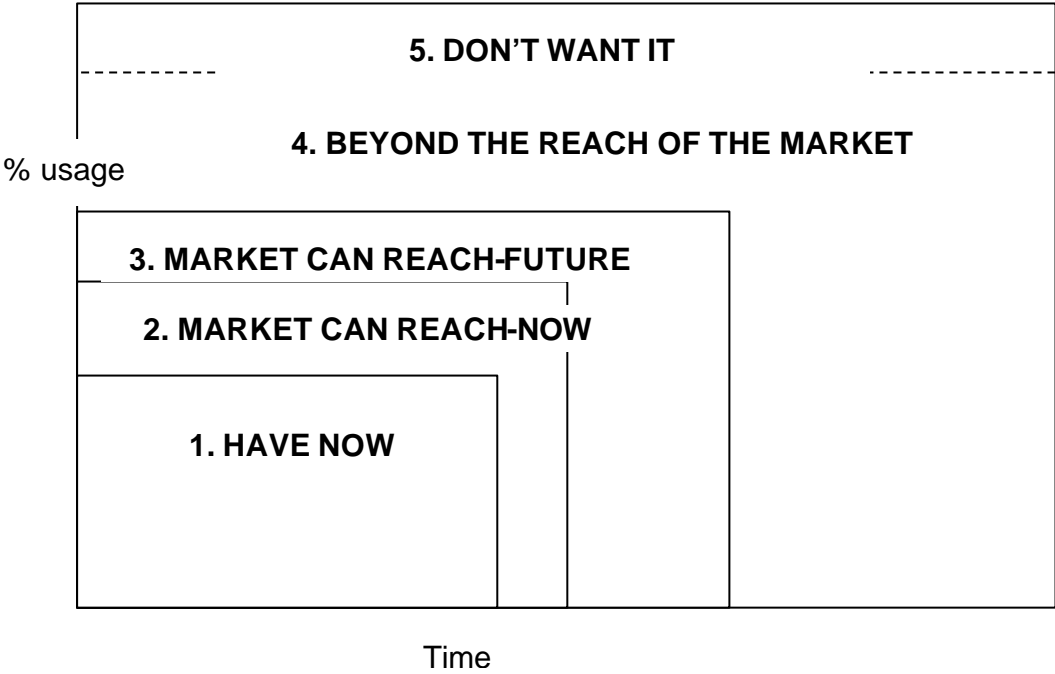
One way to answer these questions is to use the access frontier methodology. This approach seeks to distinguish use of a product or service from access to it; and seeks to understand the impediments which may prevent everyone from accessing that product or service. In simple terms, the access frontier approach segments a market into different zones. These are simplistically summarised in the market map in Figure 1.

This paper does not explain the access frontier methodology in full again as it is fully available elsewhere (Porteous 2005).²

¹ See Porteous (2006)

² Note that the approach developed in Porteous (2005) is similar in intent to Beck and de la Torre (2006), and even to some extent in nomenclature; but the focus of these World Bank authors was on developing rigorous microeconomic foundations, whereas my approach focused on policy applications.

Figure 1: Market Map using access frontier approach



In the original paper setting out the access frontier methodology, I applied the approach to the market for transactional banking in South Africa using 2004 data. My conclusion then was broadly that only a small number of South African adults chose not to have bank accounts. Furthermore, important product developments, such as the *Mzansi* basic bank account launched in 2004 by a consortium of the big four SA retail banks and the Postbank, had substantially shifted outwards the number of people who then had access to basic banking services.

Since that original analysis, the access frontier approach has been applied by other analysts to other sectors in South Africa such as housing finance (Meltzer 2006a), insurance (Meltzer 2006b), savings (Meltzer 2007) and health care (Leach 2005); and outside South Africa to insurance markets in Georgia (Matul 2005).

This paper revisits the transactional banking market in South Africa using new (2006) data sets, to establish what difference m-banking offerings have made, or may make, to the access frontier in that country.

Even though the same approach could be applied to any market with adequate data, South Africa remains an important example to use to answer the question about the transformational impact of adopting m-banking, for these reasons:

- First, adequate reliable data is necessary over time to enable the tracking of trends and the identification of any sampling-related errors on household surveys. In South Africa, a series of datasets on financial service use is now available, which have in general proven their consistency. These are the nationally representative FinScope™ surveys, undertaken annually since 2003, which provide detailed information on the patterns of usage and, importantly, reasons for non-usage. Furthermore, the Consultative Group to Assist the Poor (CGAP), United Nations Foundation and Vodafone Foundation collaborated with FinMark Trust to undertake a smaller FinScope™ Mobile Banking Pilot survey on current m-banking users of an offering targeted at the low end of the market, compared with a national control group with generally similar income and geographic profile (Ivatury & Pickens 2006). This paper draws on all these data sources, A description of the main parameters of these datasets is contained in Annex 1.
- Second, in South Africa, there are m-banking offerings in three of the four main categories identified in Porteous (2006) – only the so-called telco-driven model, involving the issuance of e-money by non-banks, is not allowed by bank regulators. Furthermore, these offerings have now been in the market for almost two years in most cases; and the number of m-banking users is close to half-a-million, or 3% of the banked population, up from almost none in 2004 when the first surveys were done. This is still a small number in a national survey, therefore likely to be less statistically precise, but at least the user base is spread across a range of types of m-banking offering, both transformational and additive.

This paper follows the following structure. Section 2 summarises the access profile of the transaction banking market in South Africa and updates it with 2006 figures. Section 3 profiles the m-banking models in the market and assesses how they affect the access frontier. The final section concludes with implications.

2. TRANSACTIONAL BANKING IN SOUTH AFRICA: TRENDS AND CHANGES

The market in this paper is defined as the market for all bank accounts (or more broadly, stores of monetary value) from which it is possible to transact on a regular basis through various channels, including mobile phones. This market includes particular account types such as chequing accounts, transmission accounts and card-based savings accounts. In some cases, what is called a savings account may also be used as a transaction account. The test is therefore the intent and the actual frequency with which the user accesses the account: any access on a monthly basis or more frequency qualifies that account as a transaction account.

The market is defined to include adults 16 years and older, since South African law allows a person 16 years or older to open an account in his or her own name. Before that age, the child must be assisted by a legal guardian, hence is not an independent user.

FinScope™ segments the adult population into three main groups:

Table 1: Banked profiles compared

Category	2004	2006
1. Currently banked	13m (48%)	15.9m (51%)
Unbanked Made up of:	14.1m (52%)	15.3m (49%)
2. Previously banked	3.6m (13%)	3.6m (11.5%)
3. Never banked	10.5m (39%)	11.7m (37.5%)

Source: FinScope™ SA 2004, 2006

Table 1 shows that there has been substantial progress in the two years: close to three-million more people are now banked, although this is partly due to a natural increase in the population size. More significantly, there are now more banked (51%) than unbanked people in South Africa.

One reason for the increase is the opening of Mzansi basic bank accounts in November 2004. While the latest available release reported that a total of 3.3-million new Mzansi accounts had been opened by August 2006,³ FinScope™ 2006 suggests that there are around two-million individual users of Mzansi. This means that either some of these users opened multiple accounts across financial institutions or there was a lack of awareness that the account was in fact a Mzansi product (which is particularly likely with the Post Bank as it converted its entry level accounts to Mzansi). Of the two-million account holders, around 1.2-million were previously unbanked, while 521 000 opened Mzansi accounts in addition to another bank account, and a further 265 000 in place of their previous bank account.

The profile of Mzansi users is also different to non-Mzansi users (see Table 2). Mzansi clients are significantly more likely to be unemployed or informally employed, and to live in informal dwellings (backyard rooms, shacks, etc) than other banked people. In short, Mzansi clients represent a transitional profile between relatively higher-income people banked through other products and the large, poorer unbanked segment. These findings reinforce the conclusion in the 2005 document that the Mzansi product pushed out the access frontier of basic banking in SA by including groups which were previously effectively (if not directly) excluded from access.

³ See August press release available from www.allafrica.com/stories/200608300052.html. Data from The Banking Association suggests that the total number of Mzansi accounts had risen to 3.6-million by January 2007.

Table 2: Mzansi client profile

	Banked not Mzansi	Banked- Mzansi	Unbanked
Dwelling: live in a			
Formal house	86.3	72.6	65.5
Informal house	13.2	24.6	33.8
Employment			
Formal sector	51.2	30.1	4.9
Informal sector	9.2	16.0	6.6
Non labour market (student, retired, etc)	20.3	12.6	34.6
Unemployed	15.8	35.2	51.0
PERSONAL INCOME⁴			
No income	6.6	12.3	43.7
<R1499	30.0	54.3	48.8
R1500-R2999	14.4	4.6	2.1
R3000-R7999	17.3	7.6	0.9
LSM			
LSM1-5	41.4	61.0	83.4

Source: FinScope™ 2006, P1.1

Note: LSM refers to Living Standard Measures, the standard means of market segmentation in SA. In general, LSM1-5 households live on less than \$2 per person per day.

Initially, banks restricted Mzansi account functions; for example, stop orders and debit orders were not allowed on these accounts. This was due mainly to fears that Mzansi would cannibalise the higher-fee revenue from the banks' entry level accounts. In fact, the evidence of cannibalisation has been limited: fewer than 13% of people opened an Mzansi account to replace an existing bank account. Several banks have in the past year introduced stop order and debit order facilities on their Mzansi account. These features enhance the ability to make electronic payments and transfers, and the overall usefulness of the account.

⁴ Currency conversion rate as of end Jan 07: approx 7ZAR=1 US\$.

These developments confirm that the introduction of Mzansi did indeed shift the access frontier. Whether this shift will be sustained over time hinges on its profitability to the issuing banks. As yet this is unknown (or at least undisclosed) and is related to the volumes and patterns of use. A recent survey of the cost of basic bank accounts, using a standardised user profile, shows that in general Mzansi accounts are indeed among the cheapest, with the average user paying around ZAR16/\$2.30 in fees.⁵ However, the same survey also shows the increasing range of pricing: on the same bundle of services, fees varied from R16 to R33 a month. In general, this variation is a welcome sign of bank offerings and strategies differentiating in this product category, which was initially highly standardised.

A key feature of the access frontier approach is understating the reasons for non-use, so as to be able to distinguish unbanked categories. In the FinScope™ survey, unbanked respondents are asked to select the reasons for being unbanked from a pre-coded list (including don't know and other). These reasons are listed in Table 3 for 2004 and 2006, where they have been grouped into four main categories relevant to the assessment of the access frontier.

⁵ See www.bankmonitor.co.za

Table 3: Reasons for South African individuals not having a bank account

% of individuals; reasons given are as stated in the survey but grouped by the author

	2004	2006
A. Income reasons	78	90.9
I don't have a regular income	40	25.5
I don't have a job	63	52
I earn too little to make it worthwhile	6	5.6
I don't have money to save	20	44.9
B. Access related	13	15
I don't have an identity document/ basic docs	3	3.3
I was declined	na	1.0
I don't qualify to open an account	7	4.2
You have to keep a minimum balance	0.5	na
I don't know how to open an account	1.5	3.1
I don't want to pay service fees	0.5	na
Bank charges are too high	1.5	Na
It's too expensive to have a bank account	na	4.2
The bank is too far from where I live	2.7	1.8
It's expensive to have a bank account	3.7	na
They don't speak my language	0.2	na
C. Choice	9	7.1
I don't need a bank account	5	4.9
I prefer dealing in cash	4.6	3.1
I don't trust banks	1	Na
D. Other	3	2.1
Other and don't know		

Source: SA: FinScope™ 2004, Q.3a; FinScope™ 2006, Q RN1

Notes:

1. Category heading % are not aggregates of the underlying %; overlap within the group was eliminated since multiple selections were allowed.
2. na = not asked in that year; questions asked differ slightly between 2004 and 2006, but conform to the same general categories.

While the underlying questions have changed somewhat across the two years, Table 3 shows that the category ordering remains essentially the same, as do the orders of magnitude in each category. By far, most unbanked people are unbanked primarily for “economic reasons” (2004: 78%; 2006: 91%), which relate in part to their work status and in part to their perceptions; for example, the most common reason given (“I don’t have a job”) appears to relate to a perception of formal employment being a prerequisite, and perhaps the driver (the employer insisting) for opening a bank account, which no longer applies.

Access-related reasons are the next most important, although they affect only around 15%. The most significant sub-category relates to qualifying for an account, which is declining in importance; very few (1%) have applied and been declined. The choice of not wanting to have a bank account affects less than one in ten, although interestingly this number shows some variation depending on how it is asked: while a combined 7% agreed with the two choice-related statements as reasons for not having a bank account (“I prefer dealing in cash”, “I don’t need a bank account”), when a similar question was asked in a section on “reasons for wanting a bank account – I don’t want one”, the proportion of the unbanked agreeing rose to a substantial 19%. This could suggest some difference between need and want, i.e. it is a grudge purchase which more need, than want; or else some inconsistency as a result of framing which future questionnaires should consider.

The stability of this categorisation of barriers to obtaining a bank account suggests the importance of addressing the underlying economic perceptions and realities, and not only the particular access barriers. Having a bank account relates to the value proposition of the account. In 2006, FinScope™ added a useful new category of questions on the positive side: the reasons for wanting a bank account, which was asked of all people, banked and unbanked. Table 4 summarises the results across the different categories of banked and unbanked.

Table 4: Reasons for South African individuals wanting a bank account

% of individuals in each column; reasons given in the survey are grouped into the stated categories by the author

Reasons for wanting a bank account (grouped)	All currently banked	Mzansi account holders	All unbanked	Cellphone banking
To save	70.6	75.9	65.1	68.7
To deposit, withdraw conveniently	68.5	65.3	39.8	84.7
To keep money in a safe place (i.e. to guard against theft)	55.3	58.1	39.0	60.9
To access credit/build credit record	20.2	20.4	10.4	40.9
To facilitate payments	25.7	18.7	6.5	56.4
Don't want one	0.3	0.0	19.6	0.0
Other	2.4	3.7	0.6	2.3

Source: FinScope™ 2006, P1 1/12 and B1

Note: Reasons in B1 have been grouped to eliminate duplication in forming the main categories above.

The rank ordering and the general magnitudes in Table 4 are in general consistent across the groups – for example, savings is the most important rationale for all groups. But there are some noteworthy differences:

- The propositions of convenience and safety are less appealing to the unbanked; and
- Cellphone banking customers are much more driven than banked people in general by convenience, both in terms of deposits and withdrawals (85% vs 69%) and in terms of making payments (56% vs 26%).

Finally, there are two parts to updating the access frontier for bank accounts for South African adults for 2006 from the earlier 2004 estimation:

- First, and most importantly, considering the implications of product features which may have structurally shifted the frontier: since the effect of Mzansi was taken into account in the previous paper, the only other possible structural change in the 2004-2006 period is the launch of m-banking services, the effect of which will be considered more fully in the next section.

- Second, updating the frontier for a changing underlying demography.

Table 5 shows the effects of using the same access frontier criteria used before for 2004 on 2006 data; that is, performing for now the second update only.

Table 5: Access frontier analysis for transaction banking in SA

Group and criteria used	2004	2006
% of total adults		
1. Current usage	48%	51%
2. Current access frontier (post-Mzansi)		
• Receive regular (at least monthly) income from formal sources	19.9%	13.8%
3. Future access frontier		
• Regular (at least monthly) income from informal sources (including family and friends)	10.7%	6.3%
4. Supramarket group—none of the other groups	16.2%	26.4%
5. Non-users by choice		
• People responding “I don’t want a bank account”	5.2%	3.5%
	100%	100%

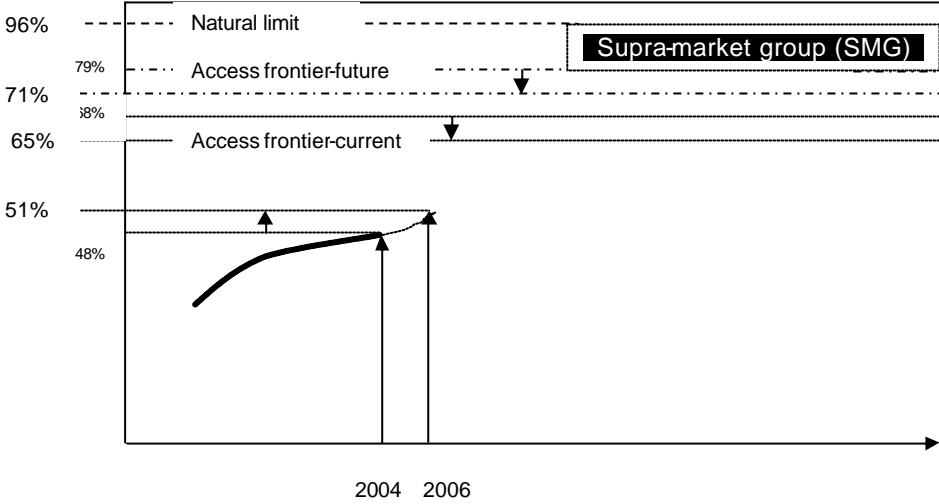
Source: author’s calculations, using FinScope™ 2004 and 2006 data. See Annex B for data sources

Using the same criteria as before, the broad categories of the access frontier remain similar across the two years. The decline in the proportion with current access (68% to 65%) is small enough to be due to sampling error; or else to underlying demographic shifts. There were 1.5-million more people in the 18-24 year old category in 2006 than in 2004. These young people tend not to have bank accounts, and see less need for them. The group with future access has also shrunk from 11% to 6%; it would appear for similar reasons.

As a result, the main difference between 2004 and 2006 is that the size of the supra-market group has grown to around a quarter of the population. This group is the unbanked, not by choice, who do not receive some income from any source at least monthly.

This table may be depicted using the graphical tool developed earlier, as in Figure 2.

Figure 2: Mapping of the South African transaction bank account market 2006



Note: small font represent previous (2004) figures; the numbers in larger font come from applying the 2006 data set on 2004 access frontier criteria. The arrows show the direction of change.

Who is in the supra-market group in 2006? Table 6 compares the salient characteristics of this excluded group across the two periods, together with the unbanked group as a whole and the banked group for comparison. In general, the profile is stable across the years. This is heartening since big changes would have suggested that the data was unreliable or unstable. The biggest change appears to be a general increase in household income, which has reduced the percentage of households with income less than R1,499 consistently across all three groups. This can be explained in part by inflation, which would have boosted families with relatively formal incomes out of this lowest income band. Meanwhile, personal income for people in the SMG remains low: 85% receiving less than R500 a month, as in 2004.

Table 6: Profile of supra-market group, comparing 2004-2006

	SMG		Unbanked		Banked	
	2004	2006	2004	2006	2004	2006
% of each column group which meets row definition						
Household income <R1500	55.58	31.5	55.84	34.4	23.14	13.5
Personal income <R500	88.61	84.8	69.4	66.7	15.93	19.2
Unemployed	66.91	59.3	49.18	51.0	12.58	18.2
Rural	45.32	55.5	41.53	55.7	23.6	24.9
Single	68.55	73.0	52.97	58.2	37.39	43.7
Live in squatter shack	19.56	17.8	15.68	17.1	6.86	11.0
Age 16-24 years	40.86	45.3	30.79	32.8	14.03	16.6
Head of h/h has bank account	36.71	37.0	29.17	46.9	27.88	46.9
Has cell phone account		32.2		31.6		73.7

Source: FinScope™ 2004, 2006; various demographic questions

The characteristics of people in the SMG remain essentially as concluded, based on the 2004 data: they are relatively young, mainly single people with little or no personal income, often living in a household in an urban or rural area

Finally, the last row of Table 6 contains a striking observation not tested in 2004: despite their status as being beyond the reach of the banking market, almost a third of people in the SMG have a cellphone account, in line with the proportion of the unbanked group as a whole, of which they form about half. This observation segues nicely to the next section, which considers explicitly the potential impact of m-banking.

3. WHAT DOES M-BANKING DO TO THE ACCESS FRONTIER FOR TRANSACTIONAL BANKING?

3.1 Background

As Table 7 shows, the number of mobile phone users has continued to rise rapidly over the period 2004-2006, while, inexplicably, the number of personal internet users appears to have declined.⁶ Although the question was not explicitly asked in the same way in 2004, the number of m-banking users has risen from a negligible figure in 2004 to around 450 000 by

⁶ This deserves further investigation to ensure that it is not the result of sampling or weighting error.

2006. While this is a rapid increase from a near zero base, less than 3% of banked customers use the mobile channel for banking. It is possible that the FinScope™ number is a slight undercount: an ABSA Bank press release around the same time as the FinScope™ 2006 fieldwork estimated that there were 700 000 m-banking users in the country.⁷ However, another source reported 400 000.⁸ The real number is therefore likely to lie between these extremes, around the half-million mark.

Table 7: Communications channels

Category Numbers/ % of all adults	2004	2006
Personally use cellphones (2006: prepaid and contract combined)	11.4m 42%	16.4m 53%
Internet users at home	1.3m 5%	0.6m 2%
M-banking	Negligible*	0.5m 1.6%

Source: FinScope™ SA 2004, 2006

*2004: not asked directly: rather inferred from numbers of people transacting using cell phone for account to account transfers, account payments, electronic bank transfers.

To understand more about m-banking users and potential users, this paper follows a segmentation approach based on the two key variables: banked status and having a cellphone. Figure 3 and Table 8 show in different ways the four different possible combinations of being banked/unbanked and having/not having a cellphone. The similarity in the proportion of adults with cellphones and with bank accounts is striking: the proportion in both categories has now swung into a narrow majority of 51% in each case. From the point of view of this paper, the most interesting group is the shaded one: unbanked people with cellphones, since they would be the logical target group for transformational m-banking. This group is growing in absolute numbers (now 4.8-million people) and in percentage terms (14.8% to 15.5% of the total adult population, or almost a third of all unbanked people). Similar studies in other countries have also found this group to be large: in Botswana, for example, 36% of the unbanked have a cellphone.⁹ Combined with the earlier observation that each of the two services – banking and mobile telephony – has increased its

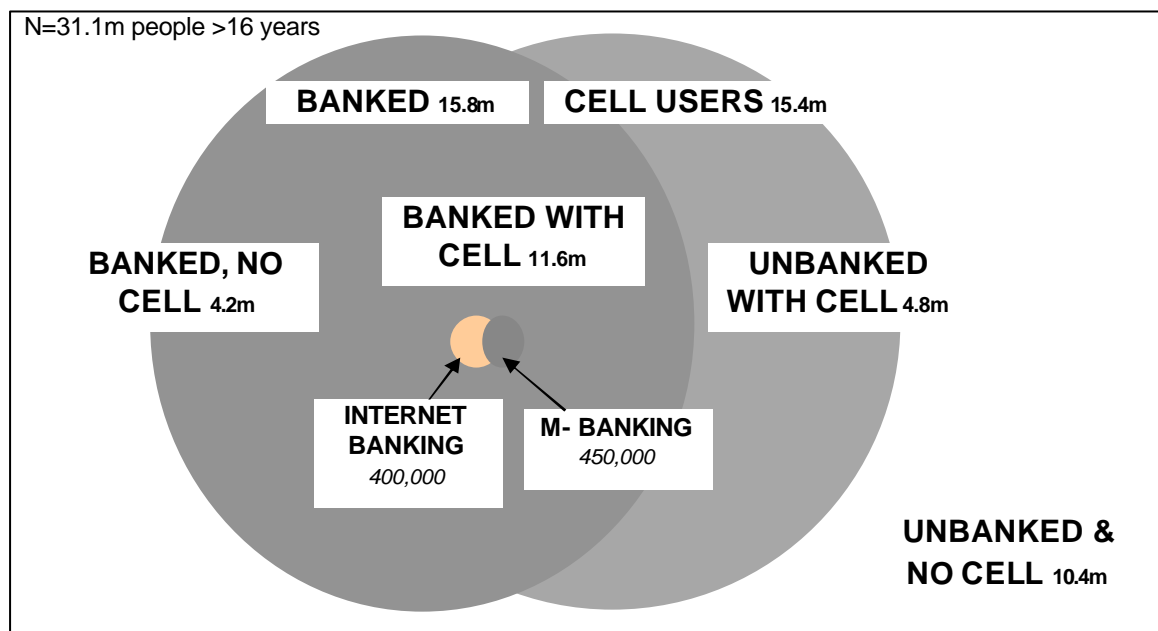
⁷ <http://www.itweb.co.za/sections/QuickPrint/Print.asp?StoryID=165875>

⁸ "Banks burn cash on cell banking", Bruce Whitfield 29 October 2006, www.Fin24.co.za/articles

⁹ Leach presentation (2006)

penetration to similar levels, this suggests at the very least that each is reaching out to slightly different markets.

Figure 3: The overlap of banking and mobile use



Source: FinScope™ 2006

Table 8: Banking and mobile phones

% of adults with:	Banked		Unbanked		Row Totals
	2004	2006	2004	2006	
Cellphone	30.4%/	37.3%	14.8%	15.5%	45.2%/51%
No cellphone	17.8%	13.7%	37%	33.65	54.8%/49%
Column Totals	48.2%	51%	51.8%	49%	100%

Source: FinScope™ 2004, 2006

3.2 M-banking offerings and users

All South Africa's major retail banks offer some type of m-banking service. Of the 450 000 m-banking customers reflected in FinScope™ 2006, most were clients of ABSA or FNB, which have large existing client bases and arguably the best visible services. These m-banking offerings may be described as *additive* in that they provide for customers already with a bank account at the bank to register their cellphone as an additional transaction channel. Additive m-banking can nonetheless be a logical and even profitable place for an

existing retail bank to start: FNB reported in February 2006 that “Mobile banking is now one of FNB’s fastest growing businesses”, and was already profitable with 160 000 customers.¹⁰

Only two m-banking offerings in South Africa at present bundle the opening of a new bank account together with access to m-banking in a way that has the potential to be transformational. These are MTN Banking and WIZZIT, the customer numbers of which are not reflected separately in the FinScope™ 2006 survey, and are not disclosed by the companies, but are almost certainly lower than those of the major banks named above. Both are alliance banking models in which a telco (MTN) or a third party (WIZZIT) ally with a bank (Standard and Bank of Athens respectively) to provide a separately branded and marketed basic transactional bank account with a debit card. Both rely heavily on existing channels such as ATMs or branches for top-up or cash withdrawals; although all offer the functionality of balance requests and making person-to-person payments to any other SA bank account holder.

Table 9 distinguishes the features of the current m-banking offerings. Note that there is little difference in functionality, which is grouped into three categories below: information, payments, and cash access. M-banking has made no difference yet to the last category, as customers are reliant on bank branches, ATMs or point-of-sale arrangements for handling cash.

¹⁰ <https://www.fnb.co.za/news/archive/2006/20060223cellphone.html>

Table 9: Description of major m-banking offerings in South Africa

	FNB ¹¹	MTN Mobile Money	Wizzit
Bank at which account is held	FNB	Standard	Bank of Athens
Account also linked to a debit card for ATM/POS use	Yes	Yes	Yes
M-banking functionality			
1. Informational (balance enquiry, SMS alert, etc)	Yes	Yes	Yes
2. Payments (inter account transfers, P2P transfers, bill pay, airtime purchase)	Yes	Yes	Yes
3. Cash access (deposit and withdrawal via ATM or branch)	Yes	Yes	Yes
Cost per month*	R46/R41	R33/R29	R29/R23
Category of m-banking ¹²	Bank-led	Hybrid--JV	Hybrid—non-bank driven
Reference	https://www.fnb.co.za/personal/transact/accessyouraccounts/cellphonebanking.html	http://www.mtnbanking.co.za/	http://www.wizzit.co.za/

* Cost per month: this is reported based on (i) standard Deloitte user profile used by Bankmonitor; and (ii) Wizzit customer transaction profile as reported in Talkie (2006). See Annex C for detailed calculations.

Table 9 shows that there is some difference in the monthly cost, although this is sensitive to the transaction profile used. WIZZIT, which of the three most explicitly targets the unbanked in its marketing, is the cheapest, although at R23-R29 a month, WIZZIT is more expensive for these user profiles than a basic Mzansi account, which comes with a debit card but without mobile access. It is clear that current mobile offerings do not significantly alter the affordability of basic bank accounts, and that their transformational potential must lie in other characteristics.

¹¹ Note that ABSA's m-banking offering is substantially similar to FNB's: http://www.absa.co.za/absacoza/content.jsp?VGN_C_ID=e0ee515f3a2f1010VgnVCM100000ce17040aRCRD&VGN_CI_ID=9c90515f3a2f1010VgnVCM100000ce17040aRCRD

¹² See Porteous (2006) for a fuller description of these categories

The transactional patterns of these early adopters of m-banking are important as clues both to why they are using the service and to its future fee-earning potential, and hence viability. Table 10 shows the most popular transactional uses of the mobile channel for banking.

Table 10: Usage patterns of m-banking

In order of priority from most common transactions as reported by users

FNB 2006	Wizzit 2006
Airtime purchases (65%)	1. Buy airtime
Balance enquiries (23%)	2 Balance enquiry
Transfers & payments (6%)	3. Transfers & payments
https://www.fnb.co.za/news/archive/2006/20060223cellphone.html	From Table 1: Ivatury & Pickens using Talkie database answers

Who are the current users of m-banking? Table 11 compares, in the two shaded columns, the demographic, employment and income profile of m-banking users in general and of WIZZIT users in the FinScope™ Mobile Banking ‘Talkie’ sample (which was restricted to those in LSM1-5 only), with banked people who have cellphones in general, and with unbanked people with cellphones.

Several distinctions are evident. First, m-banking users in general have a higher income, are more likely to be urban and formally employed, as well as slightly older, than banked people with cellphones in general. In other words, the early adopter profile appears to correlate more with desired functionality (such as the need to make payments) than with factors which imply risk tolerance, such as age. This is in line with the findings of a separate 2006 survey of m-banking adoption in SA, reported in a November 2006 article titled “Youths shun cell banking”.¹³ Interestingly, the overlap between internet banking, which has been available for longer in South Africa, and mobile banking appears limited: fewer than one in five users of internet banking also currently use m-banking.

WIZZIT m-banking customers are closer than other m-banking users to the national banked profile in several respects. However, they are still wealthier than the national average and certainly than the unbanked in general. As Ivatury and Pickens (2006:1) remark, “WIZZIT

¹³ http://www.fin24.co.za/articles/companies/display_article.aspx?Nav=ns&lvl2=comp&ArticleID=1518-1786_2030256

customers tend to have more income and assets and to be more financially and technologically sophisticated than other low-income South Africans.”

Table 11: A profile of M-banking users

	Banked and cell FinScope™ 2006	Cellphone banking FinScope™ 2006	WIZZIT customers Talkie 2006	unbanked and cell FinScope™ 2006
Column Totals	11,599,284	453,100	<i>na</i>	4,819,495
Dwelling				
Live in formal house	88.8	96.4	<i>na</i>	73.8
Area				
Urban %	79.1	95.5	<i>na</i>	53.6
Gender				
Male	50.2	57.2	<i>na</i>	35.8
Marital Status				
Single	45.5	40.3	<i>na</i>	68.3
Age				
18-24 years old	19.4	14.0	24.2	43.0
25-40 years old	51.2	58.6	59.5	34.2
Employment status				
Formal sector job	52.8	72.6	75.3	8.2
Informal sector occupation	10.3	11.7	7.0	7.0
Not in labor market	16.0	7.7	5.6	27.0
Unemployed	17.5	8.5	15.3	52.4
Personal income				
No personal income	7.2	5.7	8.4	41.3
P Income <R1499	27.8	3.8	44.7	49.3
P Income R1500-R2999	12.4	3.2	27.0	2.9
P Income R3000-R7999	17.9	18.8	18.6	0.4

Household income				
HH Income <R1499	9.9	2.3	29.8	31.4
HH Income R1499-R2999	16.2	2.8	24.7	19.5
HH Income R3000-7499	22.4	6.4	29.3	18.6
LSM 1-5	36.6	6.0	100.0	75.1

Source: FinScope™ 2006 PD, HD, ID sections;

Second, comparing the unbanked with cellphones (last column) with the others, these people are likely to be poorer (41% report no personal income, although they use a cellphone and must therefore purchase or receive airtime in some manner), single and younger. This of course reflects in part the profile of the supra-market group, implying that cellphones have made in-roads, notwithstanding the low-income level of the individuals. Their reasons for not having a bank account correspond quite closely to the national norms, presented in the previous section, with only a slightly higher proportion (5.7% vs 3.5% in the national unbanked average) giving reasons which implied that they were non-banking users by choice.

3.3 Reasons for using cellphone banking

In addition to probing attitudes towards other banking channels such as branch, ATM and internet, FinScope™ 2006 has added a new section for banked people only, specifically asking about attitudes towards m-banking. These results are shown in Table 12. The columns in that table contrast banked people with cellphones to those without, and with current m-banking customers (a sub-set of the first group).

In terms of attitudes towards banking channels, the table shows the by-now expected pattern of results: most people feel comfortable using a bank branch, and prefer banking face-to-face; in particular, disapproval of ATMs is high. However, despite being considered “ideal” in many ways, branch banking also “takes up too much time” for most people. In contrast, m-banking barely registers: only the small proportion of current users seemed able to express an opinion on its possible attributes, such as convenience (the highest rated by 41.7% of current users). The proposition around convenience is in line with sentiments expressed by WIZZIT users, as Ivatury and Pickens report (2006:1): “WIZZIT’s low-income customers give m-banking high marks for its convenience, accessibility and affordability”.

Table 12: Attitudes towards m-banking and reasons for not using it

% is of total in each column

	Banked cell	Current users of m-banking	Banked no cell
A. BANK CHANNELS			
You feel comfortable with:			
Branch	59.6	60.2	70.6
Internet banking	4.6	27.6	0.5
M-banking	2.2	44.0	0.1
Your Ideal way of banking:			
Branch	54.0	47.3	63.0
Internet banking	4.8	20.5	0.6
M-banking	1.8	26.4	0.1
Take up too much time:			
Branch	46.3	44.7	48.9
Internet banking	5.3	12.0	2.3
M-banking	5.0	1.8	2.1
B. ATTITUDES TO M-BANKING			
Don't know how to/don't understand	27.5	Na	18.6
Never heard about it	11.8	Na	17.9
Don't believe in it	15.9	Na	13.2
Do not trust it	21.7	Na	21.2
Typing Sms's takes too long	2.9	Na	0.6
Don't need it	19.0	Na	16.2
Use other banking methods	17.5	Na	7.7

Source: FinScope™ 2006; A: B6.74, .80, .83; B: RN9

A high proportion of banked people either don't understand m-banking or else have never heard about it (close to 40% say they know very little about it, and around one in seven have never heard of it). Despite these high levels of ignorance about m-banking, banked people still have strong disapproving attitudes, with around one in five doubting its trustworthiness, or simply "don't believe in it". When the issue of trust related to institutions was probed

further with the statement “Cellphone banking can be trusted if backed by a cellphone company like Cell C, MTN etc”, about the same proportion of banked and unbanked people with cellphones agreed as disagreed. Only the existing users overwhelmingly (72%) agreed with this.

3.4 Effect on the access frontier for transactions banking

In this section we return to the key question of whether m-banking has caused, or is likely to cause, a structural shift in the access frontier for transactions banking.

As noted, a structural shift in the access frontier can happen as the result of a significant change in product offering, such as with the introduction of Mzansi accounts in 2004. The access frontier can shift substantially regardless of a low number of users (after all Mzansi had just been launched and had very few users during the previous analysis) since the very concept of access relies on underlying product features, not usage.

Has m-banking caused such a shift? The preceding analysis suggests not. Rather, the features of even the most transformational offerings resemble the Mzansi account profile, and are even slightly more expensive than most Mzansi offerings. In other words, m-banking may accelerate take-up or usage of banking, but *within* the access frontier created by Mzansi product features.

While that may be the case at present, it is not the final answer. As pointed out earlier, almost one-third of people in the supra-market group, or some 9% of the total adult population (2.8-million), who are currently considered beyond even the future access frontier of banking, have cellphones. As this analysis makes clear, this group tends not to have much or any personal income, but clearly have and use their mobile phones.

Even though this group is not being targeted by providers and is not among early adopters of current m-banking offerings, the mobile phone is clearly the key to unlocking, or reducing, the SMG. Insofar as m-banking has the potential to reach this subset of the SMG in the next 3-5 years, the future access frontier has shifted out by 9% compared with 2004; and the remaining SMG reduced accordingly to 18% of the population. In terms of Figure 2, this means that the future access frontier would rise by 9% to 79%. This happens to be the same level as in 2004, despite the structural difference, implying that such structural changes have to work hard to keep up with unfavourable demographic shifts.

The main transformational potential of m-banking has probably not yet been realised: in my opinion, this potential is that m-banking can make real-time person-to-person transfers commonplace. This is already reportedly happening on a limited basis among Wizzit users who can “text” each other money in return for cash. Once these type of transfers are widely accepted, the great reliance on the cash-handling channels of banking (mainly branch and ATM today) will change: on the one hand, there will be less need for cash if people widely accept instant bank transfers, verified by receipt of text message; and on the other, people may serve as each other’s human ATMs, giving cash in exchange for a credit transfer which is validated on the phone in real time. Such a shift would have a decisive effect on geographic barriers to access, since cash would become as accessible as the next m-banking user; and on the cost of banking services, since cash deposits and withdrawals together currently constitute half or more of the typical monthly cost of running a basic bank account. The transformational potential will be significant, therefore. But this lies in the future, not in the present reach of access.

4. CONCLUSION

This analysis has concluded that m-banking to date has not shifted the access frontier for transactional banking in South Africa, but that it may be shifting the future access frontier – in time, bringing within reach those at present beyond the reach of market-provided solutions for basic banking. Monitoring and testing this proposition will require careful analysis of financial use and attitude data over time. Fortunately, the annual FinScope™ SA surveys provide a means of doing this.

This report has different implications for different groups of reader:

For policymakers: the profile of the supra-market group again suggests that no special policy action is necessary to promote access to transactional banking, other than the existing policy of seeking to bank welfare grant recipients (and effectively providing a subsidy for this) and ongoing monitoring of levels of competition among new and existing providers.

For m-banking providers: there are substantial trust and ignorance barriers to be overcome in encouraging even existing banked people to use mobile phones. These barriers may be amenable to a common approach to general education; and to a common approach to dispute resolution which ensures that there is no perception that people have lost money. Persuading existing banked customers, who already appear satisfied to some

extent with their existing banking channels, may be as hard as targeting new customers, including those in the SMG. The business models which can do this profitably have yet to be proven, however.

For market researchers: The accumulating FinScope™ SA data sets allow adoption of m-banking to be tracked over time. Additional survey instruments such as the Walkie or Talkie databases developed specifically for m-banking users and non-users in 2006 as part of the FinScope™ Mobile Banking Pilot can complement and extend the national profile, and may be worth repeating in 2007 or 2008. This research suggests several avenues of investigation worth pursuing, even in the 2007 national FinScope™ SA, such as understanding better how unbanked low-income people with cellphones pay for or receive airtime. A sharper profile of this sub-group could assist providers to develop marketing and distribution strategies to target it better.

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ANNEX A: DATA SETS

Name of data set	Year	Sampling basis	Topic Coverage	Data available from
FinScope™	2004	Nationally representative sample of adults 16 years and older	All financial services	www.finscope.co.za (on a query basis only to non-syndicate members)
FinScope™	2006	4800 people; Nationally representative sample of adults 16 years and older	All financial services	www.finscope.co.za (on a query basis only to non-syndicate members)
FinScope™ Mobile Banking Pilot: Walkie	2006	215 Wizzit customers in LSM1-5	Financial services, focussing on m-banking	http://www.finscope.co.za/mobilebanking.html
FinScope™ Mobile Banking Pilot: Talkie	2006	300 non-Wizzit customers in LSM1-5	Financial services, focussing on m-banking	http://www.finscope.co.za/mobilebanking.html

ANNEX B: ACCESS FRONTIER CALCULATION

	Definition/ Filter used	FinScope™ Question reference 2004	FinScope™ Question reference 2006
1. Current usage	None	Q2a	P4
2. Access frontier (post-Mzansi) <ul style="list-style-type: none"> Regular income from formal sources 	Unbanked receiving income at least monthly from employment (incl full, part time, self), or from state (pension, child grant, UIF, workman's compensation etc)	Regularity of income & sources: Q23	SOM1-4:10,14,15,16,17; 174: 1,2,4,5,13; 175:W,M
3. Future access frontier <ul style="list-style-type: none"> Regular income including family and friends 	As for 3 above, but broadened to include those who receive some money at least monthly from family and friends	Q23.16	174: 8,W,M
4. Supramarket group	Residual of 100%sum(groups 1,2,3 & 6) Analysed as: Unbanked not by choice, not receiving monthly income from employment, govt or F&F		
5. Non-users by choice	Unbanked, to whom choice factors: I don't need a bank account I prefer dealing in cash (I don't trust banks—04 only)	Q3a	RN1, I06,08

ANNEX C: COST OF M-BANKING ACCOUNTS

M-Banking offerings	Typical client profile		Bank fees per transaction				
	Transactions pm		FNB phone Banking/ Smart	Cell phone banking/ Megasave	ABSA cell banking/ Megasave	MTN Banking	Wizzit
Source and date of pricing	D&T 2003	Wizzit 2006	Internet: 1/16/07	Internet: 1/16/07	Internet: 1/16/07	Internet: 1/16/07	Internet: 1/16/07
Registration for service	Bank-monitor 2006	Ivatury & Pickens 2006	R 0.00	R 0.00	R 0.00	R 0.00	R 0.00
Monthly Service fee			R 7.50	R 5.90	R 0.00	R 0.00	R 0.00
<i>Cash access</i>							
ATM withdrawals –on us (w/d: R100 each)	2.4	1.70	R 5.00	R 2.70	R 5.00	R 5.00	R 1.99
ATM withdrawals –SASWITCH (w/d: R100 each)	0.7		R 10.75	R 9.00	R 10.00	R 10.00	R 4.99
Deposit (R1,000) - cash/ cheque at counter	0.31	0.90	R 12.50	R 10.50	R 15.00	R 15.00	R 10.00
<i>Payments</i>							
Purchases at POS (R100)						R 1.00	
Debit orders – external	1	0.40	R 6.00	R 4.75	R 5.00	R 5.00	R 4.99
Electronic payments - (R100 each): to account at another bank—mobile	1	0.40	R 6.50	R 0.00	R 3.00	R 3.00	R 4.99
Electronic payments - (R100 each): to account at another bank—internet			R 6.50	R 2.10			
Electronic payments - (R100 each): to account at same bank				R 0.00	R 3.00	R 3.00	R 2.99
Electronic transfer between accounts at same bank		0.80		R 0.00			
Bill payment				R 0.00	R 3.00	R 3.00	R 2.99
Buy pre-paid airtime		3.70	R 1.50	R 0.00	R 0.00	R 0.00	
<i>Informational</i>							
Balance enquiry—phone		2.70	R 0.50	R 0.00	R 1.00	R 1.00	R 0.99
Statements requested – ATM	1.2	0.70	R 2.00	R 1.50	R 1.00	R 1.00	R 4.99
Statements requested – Counter	0.11		R 3.50	R 4.80			R 4.99
Statements requested – Phone			R 2.00	R 0.00			
Payment history			R 2.00				
SMS transaction alert			R 0.00				
	6.72	11.3					
TOTAL MONTHLY COST: D&T standard profile	?		R 46.19	R 29.01	R 32.85	R 32.85	R 27.89
TOTAL MONTHLY COST: Wizzit profile			R 40.55	R 22.89	R 28.60	R 28.60	R 22.54

Shaded cells: Data on basic banking accounts drawn from bankmonitor.co.za

Note: calculations above do not include the cost of the SMS messages which are required for certain offerings (FNB, ABSA, MTN Banking) since these are bundled and charged in different ways: ABSA currently free but may change; MTN bundled together with free call centre calls.

Glossary:

Access frontier: The maximum percentage of people in a given market or society who can access a particular product on current terms and conditions.

Market enablement policies: Those policies which close the gap between current usage levels and the current access frontier.

Market development policies: Those which promote the movement outwards of the frontier (i.e. the growth in access or potential usage).

M-banking: The provision of banking services, notably a bank account or store of value, which can be accessed via a mobile phone.

Mzansi: A brand used for a class of basic bank accounts offered by major banks in South Africa, launched in 2004

Natural limit: The maximum extent of usage possible after eliminating those who can, but choose not to, use the product.

Supra-market group: The consumers in a market who are beyond foreseeable reach of market-based solutions.

Transformational m-banking: The provision of banking services using a mobile phone in a way targeted to cater for currently unbanked people.

Usage: The percentage of eligible people in a defined market who use a particular product