



**FINANCIAL SERVICE ACCESS AND USAGE
IN SOUTHERN AND EAST AFRICA:
WHAT DO FINSCOPE™ SURVEYS TELL US?**

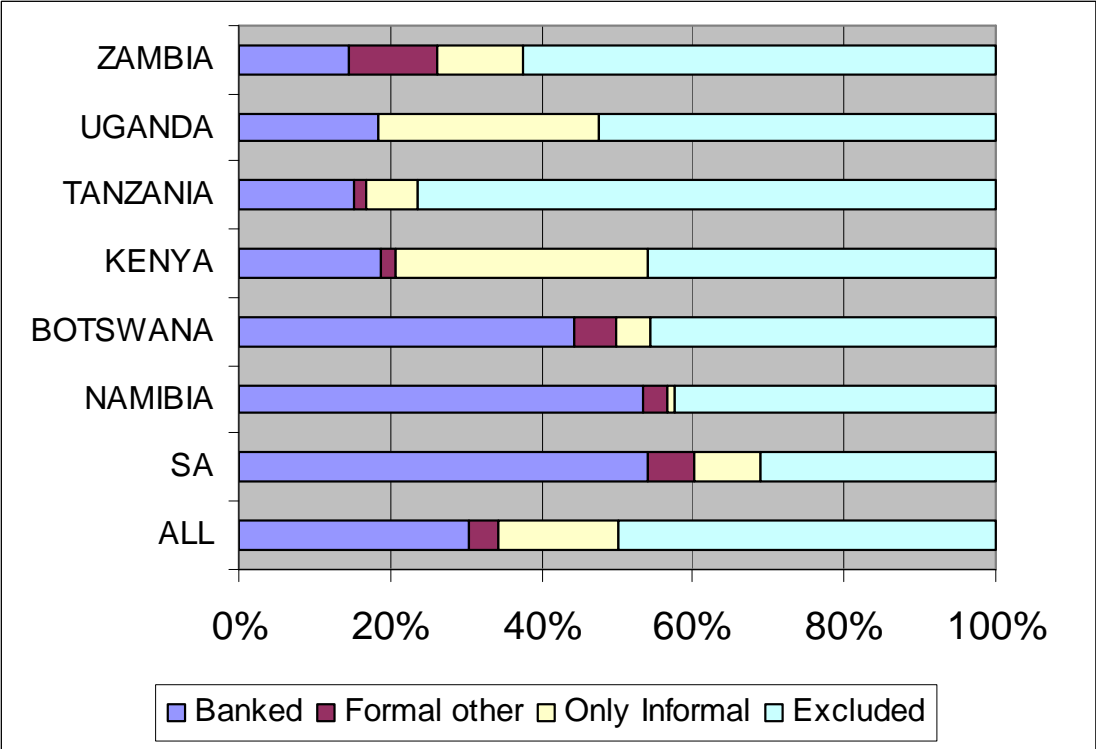
This report was commissioned by FinMark Trust
and co-funded by the International Finance Corporation
(the FIRST Initiative supported the development of the FinScope roll-
out)

Bankable Frontier Associates LLC
www.bankablefrontier.com
Final version: 2 August 2007

EXECUTIVE SUMMARY

1. FinScope™ surveys have been developed by FinMark Trust in order to track patterns of usage of, access to and attitudes towards financial services in a country on a nationally representative basis.
2. To date, FinScope-type surveys have been concluded in seven African countries—Botswana, Kenya, Namibia, South Africa, Tanzania, Uganda and Zambia—and are underway in others. FinScope™ has been repeated annually for four years in South Africa, but not yet in the other countries.
3. This report aims to analyze the data from the most recent FinScope™ surveys available in each country on a consistent basis, in order to examine similarities and differences across these countries. Together, 22 400 respondents participated in the seven surveys, representing 91 million adults across southern and East Africa.
4. While the FinScope™ surveys are similar in intent and in sampling methodology (which aims to give national representation), they differ with respect to questionnaires used in each country—what modules are included, which questions are asked in each and how these questions are asked—since the questionnaire is decided at country level. In this report, we construct meta-labels across similar categories of data to enable meaningful analysis.
5. *A priori*, the seven countries group naturally into middle income southern African countries (Botswana, Namibia and South Africa) and low income countries, mainly in East Africa (Kenya, Tanzania, Uganda and Zambia).
6. These groupings are significant in explaining patterns of usage and access. For example, in the former group, typically around 50% of adults is banked, whereas in the low income countries, the percentage banked is below 20%. However, in the lower income countries, usage of informal financial institutions, such as rotating savings and credit associations (ROSCAs) or accumulating savings and credit associations (ASCAs) among many others, is generally higher.
7. *Landscape of access*: in general, far more adults in southern Africa use transaction banking and insurance products than in the other countries; but in east Africa, more people report usage of savings products. The reported usage of credit products may well be understated.
8. *Access strands*: Figure 0 below shows the access strand for each of these countries based on the application of internally consistent definitions.

Figure 0: Access strands across these countries



9. *Access frontiers:* Although this report does not include the full supply side analysis which is necessary to construct detailed analyses of the potential market access frontier in each country, a simple stripped down approach indicates a potential market of some 25 million individuals across these countries who are presently unbanked, do not choose this status and are not too poor to be banked. Further analysis of the profile of this potentially eligible group suggests that if the total cost of using a basic bank account were only \$2 per month (rather than current norms of \$4 and higher even for basic accounts), some 5 million more people could afford it, and most of these would not be restricted from opening the account by other supply-side related access factors.
10. *Links to other work:* Honohan’s synthetic indicators of the percentage banked prove to be reasonably accurate for the FinScope™ countries in which they have been calculated. These countries also exhibit standard relationships posited by other World Bank authors such as a positive relationship between income and retail financial infrastructure (branches and ATMs); and a negative relationship between poverty and the percentage banked.

11. *Are the underlying patterns similar across countries?* Various econometric tests, performed by integrating the seven survey data bases to form one data set, show that while explanatory factors such as the age, gender, poverty status, urban location and education level of the individual respondent are significant in explaining financial status, country-level indicators also remain highly significant. This suggests that other factors at country-level, whether unobserved demand side or supply side factors, are important in explaining the observed patterns. As expected, there are greater statistical similarities in profile between sub-groups of the countries (especially Namibia and South Africa, with Botswana in some cases; and Kenya, Tanzania and Uganda in other cases).
12. *Formal and informal products often complement one another:* typically one in five of banked people in the middle income countries, and often many more in countries such as Uganda and Kenya also report using informal financial services. However, as many as one half of all people do not trust informal services, including a third of informal service users. Banked people generally trust banks while only half of unbanked people do.
13. *Reasons for being unbanked are substantially similar across the countries:* reasons given by respondents for being unbanked are grouped into categories corresponding to demand-side factors (mainly an insufficiency of income in general), access-related reasons (supply side barriers like the high specific cost of the product, the large distance to a provider or not meeting eligibility rules for the product) and pure choice, in which the respondent professes in various ways not to need a bank. In general, only a small minority expresses a pure choice not to be banked, while income-related reasons are mentioned by a large majority in all countries. Access-related reasons appear to be more significant deterrents for people in East African countries than southern Africa.
14. *Attitudes towards risk and debt differ somewhat among the countries but less than might be expected between banked and unbanked.*

While people differ in their expressed attitudes towards risk in general, they show strong levels of debt aversion across all countries; and they indicate a willingness to pay more (or receive a lower return) in order for their money to be safer—and this is especially true for unbanked people.
15. *A substantial portion of unbanked people owns or has access to a cell phone; however attitudes to new technology in banking are not always positive.* While mobile banking is in its infancy in these countries (although interestingly, three of these seven countries—Zambia, South Africa and Kenya—contain some of the global pioneers in the sector), the potential appears large: almost one in three of banked people reports access to a cell phone, although far fewer actually own one at present. The FinScope™ numbers generally compare of penetration rates based on the number of individuals using a phone with the mobile industry definition based on number of subscribers.

ACKNOWLEDGEMENTS

A number of people have played an important part in making this first-of-a-kind exercise for FinScope™ possible, and we owe our thanks to them: Bob Currin and Christie Keulder, who have each played an important in the set up and analysis of the country level surveys; and then also Mark Napier, Darrell Beghin, Anne-Marie Chidzero and Andrea van der Westhuizen from FinMark Trust who oversee the FinScope Africa project, and have developed it from a small start to the place it is today, with seven national surveys completed and more planned; and growing usage of the data and results in policy and practice.

David Toniatti of Harvard University has done an excellent job of producing conformable datasets and analyzing them. Prof. Matthias Schuendeln of Harvard University Economics Department has provided helpful advice and input on the econometrics especially.

My grateful thanks are due to them all.

David Porteous
Somerville, MA
1 August 2007

TABLE OF CONTENTS

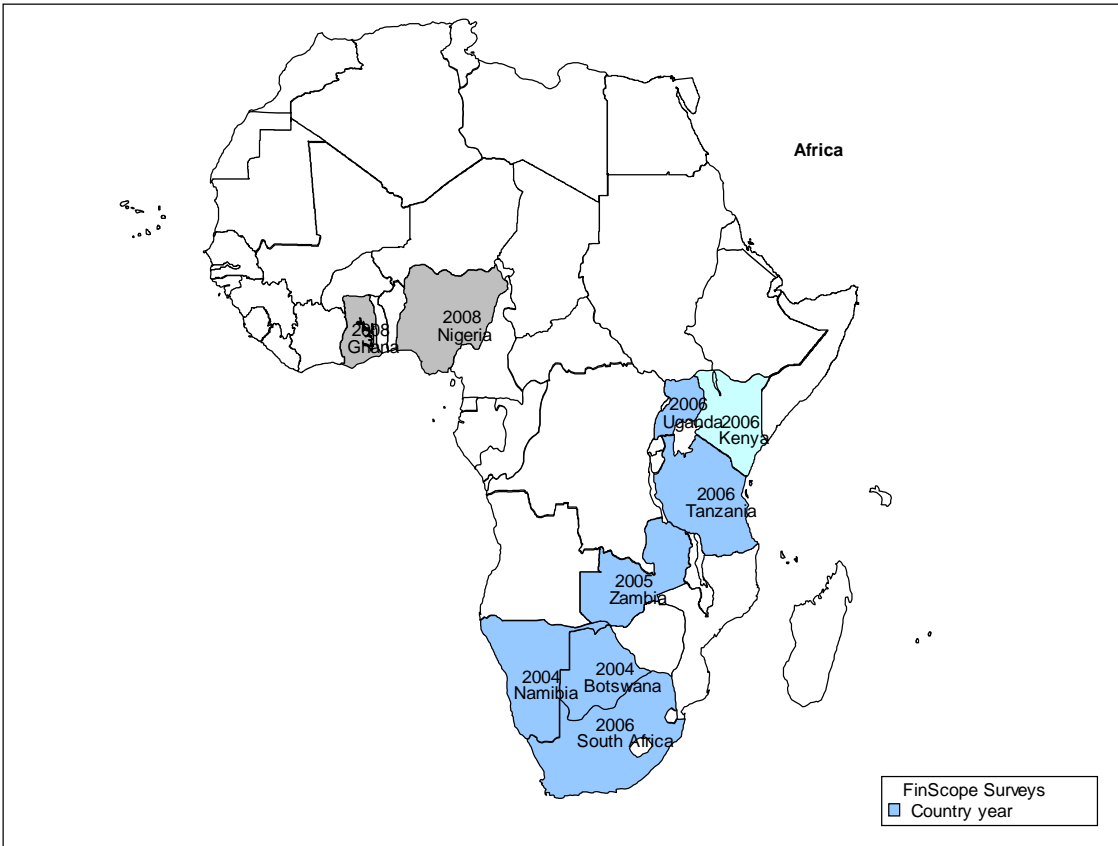
1. INTRODUCTION.....	8
2. COUNTRY CONTEXT & DATA BACKGROUND.....	14
3. OVERVIEW OF RESULTS.....	24
4. DETAILED TESTS ON THE DATA SETS	35
5. CONCLUSION.....	47
REFERENCES	50
ANNEX A: DATA META-TABLES.....	52
ANNEX B: SPECIFIC DATA ISSUES	91
ANNEX C: DETAILED RESULTS	94

1. INTRODUCTION

"FinScope™, a FinMark Trust initiative, is a nationally representative study of consumers' perceptions on financial services and issues, which creates insight to how consumers source their income and manage their financial lives. The sample covers the entire adult population, rich and poor, urban and rural, in order to create a segmentation, or continuum, of the entire market and to lend perspective to the various market segments." www.finscope.co.za

The first FinScope™ survey of people’s usage, needs and perceptions of financial services was undertaken by FinMark Trust in South Africa (SA) in 2003. Since then, FinScope™ has been repeated annually in that country and has become a premier source of credible information on the demand side of the retail financial services market there. FinScope™ surveys have also been completed to date in a further five African countries—Botswana (2004), Namibia (2004), Tanzania (2006), Uganda (2006) and Zambia (2005). FinAccess, a survey using similar methodology, was undertaken in Kenya in 2006. As Figure 1 below shows, further surveys are planned for 2007 in other African countries such as Ghana and Nigeria, as well as in Pakistan, which is not shown on the map.

Figure 1: Coverage of FinScope™ surveys



In the countries where surveys have been concluded, the results have been launched in the form of a launch presentation or brochure¹. In the earlier cases, further analysis and research has also been undertaken using the country-level data. However, to date, no systematic cross-country analysis has yet been undertaken using all seven data sets. This report was commissioned as a starting point for such analysis.

Any analysis of FinScope™ has to be seen against the context of its wider purpose: FinScope™ aims to create a credible nationally representative picture of financial service needs and usage patterns within a country. The resulting database is not an end in itself, however: as explained in various case studies², FinScope™ data is specifically designed to be used by:

- providers, to develop appropriate strategies to extend their product range and reach; and
- policy makers, to understand better the needs and demands as they consider new approaches to increasing financial inclusion.

In addition, FinScope™ data is likely to be of interest to academic researchers whose publications may in turn inform the two main targeted user groups.

The country datasets are constructed using sampling techniques specifically designed to give national representativity for all adults above a certain age³. As Table 1 shows, this involves a varying number of respondents in each case—from 1200 in small countries like Namibia and Botswana to over 4900 in Tanzania. However, each dataset is more than large enough to allow in-depth statistical analysis on its own. Indeed, some of this has already been undertaken: in addition to private proprietary research undertaken by members of the SA FinScope™ syndicate, publicly available research using country level FinScope™ data sets has been undertaken on particular issues such transaction banking (SA, Porteous 2005—case study section), insurance (SA, Melzer 2006), housing (SA, Melzer 2006), savings (SA, Melzer 2006), transaction banking (Zambia, Melzer 2006) and mobile banking (SA, Porteous 2007). Furthermore, a Financial Summary Measure (FSM) has been developed, which uses FinScope™ data to segment consumers into different groupings based on underlying attitudes and usage towards financial services, rather than existing income or asset-based segmentations.⁴

The main value of FinScope™ surveys to date has been in their usage at country level. The value will be enhanced as they are repeated over time, since this both creates greater certainty about the true values; and also enables trend analysis within each market.

¹ Usually downloadable for each country via the website www.finscope.co.za

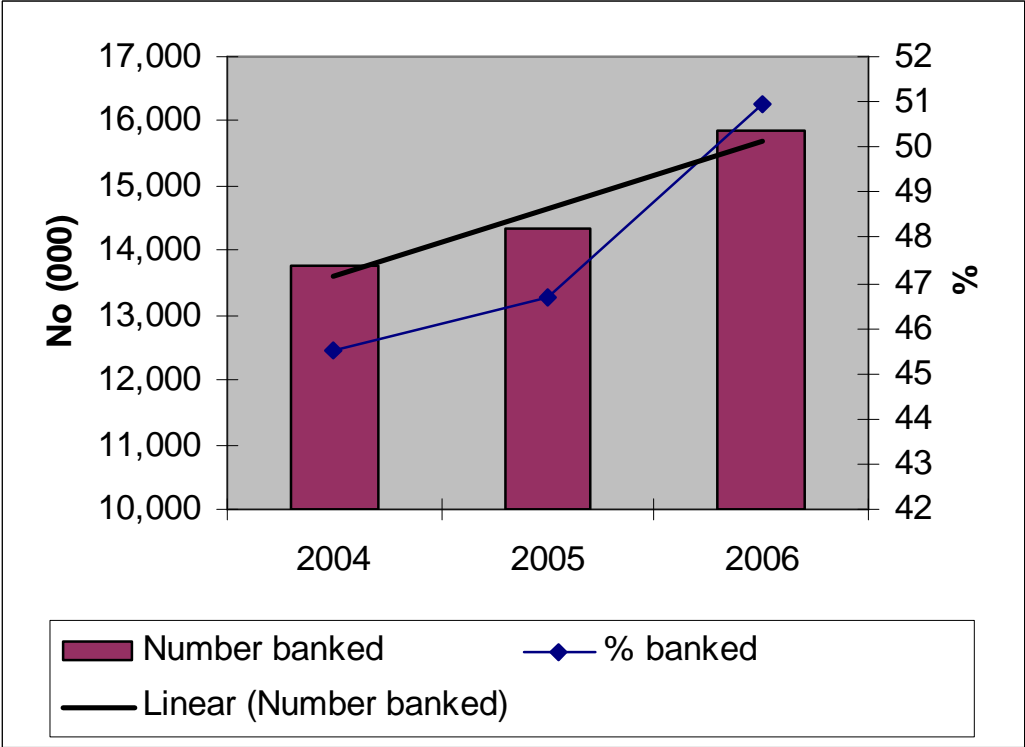
² Available for download via <http://www.finscope.co.za/index.asp>

³ See fuller description of methodology in the next chapter

⁴ For more information about the FSM, see <http://www.finscope.co.za/fsmcalc.html>.

To date, this is possible only for SA, where similar surveys have now been repeated four times since 2003, and three times on a directly comparable basis. Figure 2 below indicates one of the key data series extracted across these three years—the number and percentage of adults banked in that country. With at least three years of consistent FinScope™ data, it is possible both to state that the number of banked people in 2006 was indeed between 15 and 17 million, given the confidence intervals of +/-5%; and also, that there is a clear upward trend visible over this period.

Figure 2: The power of time series: FinScope SA



While there is therefore increasing analysis and usage of the individual data sets in some countries, this is the first study to look across what will be called here the seven 'FinScope™ countries': Botswana, Namibia, Kenya, South Africa, Tanzania, Uganda, Zambia.

For such comparisons to be meaningful and useful, several conditions must apply. First, there must be sufficient reason to believe that the comparison is *a priori* meaningful. While there are great differences among the seven countries, especially in terms of financial sector development, they are all countries in a contiguous region: southern or eastern Africa. Increasingly, regional financial institutions

provide retail financial services across the borders of these countries. Controlling appropriately for differences while observing similarities is at the heart of this exercise. The context of differences and similarities will be discussed further in the next section.

Second, since the surveys were not undertaken simultaneously in all countries, the timing of the surveys must be sufficiently close together in time to make comparison meaningful. The datasets used here derive from surveys undertaken over a two year interval: from 2004 (Botswana, Namibia) to 2006 (all the others excluding Zambia which was in 2005). This is sufficiently close not to distort most bases of comparison with the possible exception of absolute income levels; however, none of these countries have experienced high inflation and economic disruption during this period, like, say, their neighbour Zimbabwe, which would compromise any comparison.

Third, there must be sufficient similarity in methodology for comparison to be possible across surveys. The FinScope™ methodology will be discussed further in the next section. However, for the purposes now of setting up the comparison, FinScope™ has two key components:

- a sampling methodology designed to give a result which is nationally representative when weighted appropriately;
- a questionnaire, usually developed in conjunction with local financial providers and policy makers who are potential users of the data.

The sampling methodologies have been similar in intent, even though they may differ slightly in application: for example, the population of adults is defined in most as those older than 16 years (linked in SA at least to a law allowing a minor above this age to open a bank account in her own name); while in Botswana and Uganda, 18 years is the minimum age for sampling. Furthermore, the relevance and accuracy of the basis used for stratification and weighting in each case will vary based on how recent and how credible the national census is. But these issues are unavoidable and would be common to any household survey of this type.

The key challenge and issue for cross country comparison lies at the level of the questionnaire itself. In the FinScope™ process, the design of the questionnaire is owned and controlled at country level. As a result, although similar, the questionnaires are not the same: they differ in the modules covered and in the questions within these modules. Some of these differences reflect the way in which coverage has evolved over time: for example, the later questionnaires ask reasons for not using a range of financial services in addition to banking, as was asked from the start; but also, different countries emphasize different elements based on their special factors. For example, the questionnaire in SA, which has the most developed formal and informal insurance sector, contains extensive questions on insurance; whereas the Kenyan questionnaire has few questions on insurance but greater depth on semi- and informal financial institutions such as SACCOs and ASCAs which are popular there. At the level of individual questions, there may be differences due

to the nuances of local language (for example, a rotating savings and credit association is known by a range of terms across the countries); and to the way a question is framed (for example, “I am open to new technology—AGREE” or “I am not open to new technology—DISAGREE” may mean much the same, but may result in very different response rates).

A final difference among the surveys is in how they are funded: in South Africa, the first country and also the largest market, FinScope™ surveys are now fully funded by a consortium of mainly private sector financial institutions; in Namibia and Botswana, private financial institutions have participated in the funding syndicate alongside public donors, while in the other four countries, the FinScope™ survey has been funded wholly by donor agencies. The funding mix has an effect on the extent to which the underlying datasets are publicly available for further analysis as reflected in Table 1 below.

Table 1: Features of FinScope surveys undertaken to date

	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
Date undertaken	Sept 04	Sept 04	July-Sept 2006	Aug-Sept 2006	2006	2006	Nov-Dec 2005
Funding	Donor/ private	Donor/ private	Private syndicate	Donor	Donor	Donor	Donor
Dataset publicly available	No; datasets can be purchased	No; datasets can be purchased	No; datasets can be purchased; freely available for research purposes	On request to FSDK	Yes: on request	Yes: on request	Yes: on request

Against this background of the purpose of FinScope™ and the similarities and differences, this report analyses cross-cutting themes across the seven African countries in which FinScope™ or FinScope™-like surveys have been completed to date. Overall, the report aims:

- to inform the discussion on how to increase access to financial services in Africa;
- to demonstrate how the cross-cutting data sets may be used; and
- in the process, to recommend any changes to the FinScope™ methodology an approach which could enhance the ability to do cross cutting information going forward.

A note of caution is appropriate here: FinScope™ surveys capture demand-side responses only. The scope of this report did not include consideration of the supply side, since this is a much larger exercise which has not been completed yet in all of

these countries; however, we have sought to find and present relevant data from supply side studies where available.

The report is structured as follows. Section 2 provides more detail on country context and the methodology used—both by FinScope™ and in this report to address the issues of comparability across country. It also provides information from other relevant sources which both enrich and provide a cross check on the information arising from FinScope™ surveys. Section 3 then provides standardized cross-country overview, using some of the core tools developed by FinMark and its associates over time: the landscape of access, the access strand and the access frontier. Section 4 considers cross cutting themes about financial access, some coming from prior work in this and other regions, and reports the results of tests of these hypotheses using this data. Section 5 concludes with a summary of how these FinScope™ datasets have extended or challenged the conventional wisdom about access within and across these countries; as well as recommendations about FinScope's™ approach going forward.

2. COUNTRY CONTEXT & DATA BACKGROUND

2.1 Country contexts

Other than their location in a contiguous region, southern or east Africa, the seven FinScope™ countries which are the subject of this report are very different. As Table 2 below shows, the countries differ *inter alia*:

- in population (from very small Botswana to medium sized South Africa);
- in geographic size (hence the varying densities reported),
- in income levels (from GNI per capital of around \$300 per capita in Uganda to over \$5,000 in Botswana); and
- especially relevant to the purposes of this report, in financial depth (measured by domestic credit to the private sector) and retail financial infrastructure (measured by branches and ATMs per 100 000 people; or by availability of credit information), where the relatively developed financial sector of South Africa generally stands out.

Table 2: Cross country comparison of background data

	Source	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
Demographics								
Population	WDI	1,764,926	2,031,252	45,192,000	34,255,720	38,328,810	28,816,230	11,668,460
% Population older than 15 years	WDI	62.4	58.49	67.40	57.19	57.40	49.54	54.18
% rural	WDI	42.6	64.9	40.7	64.9	75.8	87.4	65
Literacy levels	WDI**	81.2	85.0	82.4	73.6	69.4	66.8	68.0
Population density	WDI	3.1	2.5	37.2	60.2	43.4	146.2	15.7
Income								
GNI per capital Atlas (US\$ current)	WDI	5,180	2,990	4,960	530	340	280	490
Financial sector								
Domestic credit to private sector/GDP	WDI 2005*	18.3	50.4	146.8	27.0	10.4	6.8	7.6
ATMs/100000	Beck et al 2005	9.00	12.11	17.50	0.99	0.17	0.70	0.65
Branches/ 100000	Beck et al 2005	3.77	4.47	5.99	1.38	0.57	0.53	1.52
Credit rights								

Legal rights index	Doing Business	7.00	8.00	5.00	5.00	5.00	3.00	7.00
Credit information index	Doing Business	5.00	2.00	5.00	5.00	0.00	0.00	0.00

Source: WDI- World Development Indicators, World Bank. WDI data is for 2005 except where otherwise indicated.

Doing Business (2007): available via www.doingbusiness.org

Notes: *: except Namibia 2003; **: 2004

Given these differences, how valid is a comparison across the countries? This question was raised in the introduction, but requires further answer here. The extent to which there are underlying similarities is in large part an empirical question i.e. when one controls for interpersonal differences (such as income, gender, rural location), how much of a difference is there in people's underlying attitudes towards and usage of financial services? The results of econometric testing of this will be reported in Section 4.1.

However, by way of making comparison more meaningful, there are at least two traditional ways of grouping the countries into peer groups:

- By *income level*: where Botswana, Namibia and South Africa are considered middle income countries (MICs) by World Bank classification; and the other four are all low income countries (LICs);
- By *region*: Kenya, Tanzania and Uganda are located in east Africa which has experienced close economic ties and flows of people and capital; whereas the others belong geographically in southern Africa with stronger economic ties to South Africa.

These two sub-groupings will be born in mind in the analysis which follows; and are the main reason why in subsequent tables reporting results, the alphabetical ordering of countries is broken by placing Kenya after South Africa, so that the three southern African middle income countries are seen alongside; as then are the four other low income countries.

2.2 FinScope™ methodology

As summarized in the introduction, there are two core elements to FinScope™ methodology:

- *Questionnaire design*: this is undertaken at country level, usually under the guidance or control of a committee consisting of important users of the data. For this reason, while there are substantial similarities in the survey instruments, they are not exactly the same since different issues were prioritized in different countries at different times; and since even common questions must be translated into local languages and terminology. The survey instrument is usually administered by a representative of the survey

firm appointed to do the field work in a face-to-face interview, lasting from one hour to almost two hours.

- *Sampling approach:* the sampling approach is intended to ensure national representation of adult individuals above a threshold age (16 or 18 years). Usually, a multi-level stratified sampling approach is followed to select households within chosen communities, linked to the most recent census, as summarized in Table 3 below. Sampling error may therefore stem from the accuracy of the national sampling frame, and from how recently it was developed. The choice of individual to interview within the selected chosen household is done by applying a randomization approach (Kish grid) at the time of the interview to choose the respondent from among all adult household members. As Table 3 below also shows, the sampling ratio differs by country according to the size and dispersion of the population, and the degree of precision desired, given the cost.

Table 3: FinScope™ sampling methodology

	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
Number of respondents	1200	1200	3894	4214	4962	2959	3998
Population represented (m)	1.1	1.1	31.4	19.1	21.1	8.1	5.4
Sampling ratio (no/1000)	1	1.05	0.25	0.12	0.24	0.37	0.74
Sampling basis	Adults 18+	Adults 16+	Adults 16+	Adults 16+	Adults 16+	Adults 18+	Adults 16+
Sampling methodology	Stratified multistage random sampling	Stratified multistage random sampling	Complex sample design	Stratified two stage cluster sampling	Stratified multistage random sampling	Stratified multistage random sampling	Stratified multistage random sampling
Sample frame based on	Census 2001	Census 2001	Census 2001/ Projected to 2005	NASSEP IV, from Census 1999	Census 2002	Census 2002	Census 2000
Confidence interval	\+/- 3%	+/- 3%	+/- 5%	+/- 5%	+/- 5%	+/- 5%	+/- 5%

2.3 Our approach to cross country analysis

For this exercise, we start by assuming that the sampling approach is adequate to provide a representative picture in each country. This assumption is validated during the FinScope™ process in each country, using data from external sources. The main methodological issue for this report is therefore to ensure sufficient comparability in the relevant categories, given differences in the questionnaires.

Our approach has been to construct categories of data for analysis, and assign question responses into these categories. This has required the construction of tables which allocate responses in each to the required category, which are shown

in Annex A. It turns out that this is not an easy exercise, and this leads to some of our recommendations contained in the Conclusion of this report to aid comparability in future surveys.

As one example of the difficulty of cross-survey comparability, consider the section asked in all surveys about the reasons for not being currently banked. Developing this section is one of the key innovations of FinScope™ surveys compared with previous household surveys. In this section, the respondent is given a list of possible reasons with the opportunity to make multiple selections. Although there are reasons which are exactly the same across countries, there are also some reasons which are offered in only one country (such as “They are rude” in Tanzania!); and more choices are given in some than others. These subtle differences may affect the relative importance of the categories of reasons across the countries.

Our approach here is to group the reasons at the country level into one of four categories based on their essential meaning in order to perform later analysis, as shown in Table 4 below. This grouping enables sufficient comparability, even though the exact content of category will vary by country.

Table 4: Reasons for not banking

Note: X indicates that this statement was asked; the four groupings are the ones used in later analysis

	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
A. Income related—demand side							
I don't have a regular income	X	X	X	X	X	X	X
I don't have a job	X	X	X	X	X		X
I earn too little to make it worthwhile	X	X	X	X	X	X	
I don't have money to save/ put into a bank	X		X	X	X	X	X
You are too young to open an account yourself				X	X		
B. Access related—supply side							
I don't have an identity document/ basic docs to open the account	X	X	X	X	X		X
I was declined			X				
I don't qualify to open an account	X	X	X		X	X	X
You have to keep a minimum balance/ Minimum balance is too high	X	X	X	X	X		X
I don't know how to open an account	X	X	X	X	X	X	X
I don't want to pay service fees	X	X	X		X	X	

	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
Bank charges are too high	X	X	X		X		X
It's (too) expensive to have a bank account	X	X	X	X			X
The bank is too far from where I live	X	X	X	X	X	X	X
They don't speak my language	X	X	X	X	X		X
I don't have a referee				X	X	X	X
It takes long to get money from the institution				X	X	X	
I couldn't speak their language						X	
The bank forced me to close my account							X
I am not comfortable walking into a bank							X
Banks are not for people like me					X		
They are rude					X		
I can't afford to open an account						X	
It's cheaper to use someone else's account				X			
You use someone else's account				X			
C. Personal choice							
I don't need a bank account	X	X	X	X	X	X	X
I prefer dealing in cash	X	X	X	X	X		X
I prefer to use other options				X		X	
I don't trust banks	X	X	X	X	X	X	X
Someone you know has lost money kept at a bank				X			
D. Other	X	X	X	X	X	X	X

In the analysis which follows, several categories are especially important as descriptive 'lenses', hence definitions are given in the boxes of definitions below.

Box A: Access strand definitions

For the purposes of creating the access strands in Section 3.1, the following category definitions were used:

Banked: refers to anyone using at least one of the services of a formally regulated deposit taking entity (i.e. bank and building society)

Formal other: refers to anyone who is not banked but uses at least one of the financial services provided by a formally registered entity, although the entity may not be regulated as a financial service provider; hence this category includes for example insurers, large retailers (but not informal shops) and employers.

Informal only: refers to anyone who is not banked or formally included but uses at least one financial service provided by an informal, unregistered entity as part of an intentional financial service relationship; hence, informal group-based savings and credit mechanisms such as ROSCAs belong in this category⁵, as do loans from unregistered money lenders, but loans from family and friends do not. This category corresponds to the informal mutual and informal one-on-one. categories used in Rutherford (2002) where the other party provides the service as part of a business-related, not personal, relationship.

Excluded: refers to anyone not in the categories above, even though they may be using or accessing informal one-on-one or individual financial instruments, but not as part of a business relationship: for example, savings by leaving money with a family member, or under the mattress; or indeed borrowing from that family member would fall into this category.

Note that within each country, different definitions of the access strand categories may have been used, especially with respect to the informally included category; but for the purposes of this study, the categories were standardized.

Box B: Definition of functional categories of financial services

For the purpose of creating the landscape of access in Section 3.2, each financial service or instrument is allocated to one or more of the following categories. The allocation is done based on the nature of the financial service, not on the provider; hence, for example, retirement annuities provided by life insurance companies are considered savings instruments, not insurance instruments. Some services (for example, ROSCA membership, would apply to two categories—savings and credit).

Transactions: a service by which the customer is able to, and usually does in fact, transact frequently to deposit, withdraw or transfer money. This includes transactional bank accounts (often called *inter alia* debit card accounts or current accounts), but also sending money via a remittance services.

⁵ Note that in East Africa, where SACCOs and MFIs are often well developed and often quite large, this sub-category is differentiated as 'semi-formal' but will be included as informal here for the sake of overall comparability

Savings: a store of value in which the intention of the user is to accumulate funds, however small, which he can access at a future time usually more than a month away at least.

Credit: the service through which the consumer comes to owe money to another party which must be repaid, with or without interest, at a future date. Hence, loans from friends and family are considered loans.

Insurance: a service through which a sum is payable in future based on a future event which is uncertain in nature occurring. Hence, membership in a burial society, an informal mechanism common in southern Africa, is properly considered insurance, even though the instruments used are group contributions which are often placed in a group savings account at a bank, since the payout is accessible to a member only on the death of a family member.

Box C: Definitions of poverty

There is no consistent definition of poverty applied within each of these countries. Several have their own definitions of poverty. To secure a consistent definition across the country of the poor, we used the following approach:

1. Household income: we calculate a national threshold for extreme poverty and poverty, using the general international cutoff lines of \$1 per person per day, and \$2 per person per day, using the average number of household members and PPP exchange rates for the most recent year available (2005 in most cases). However, not all surveys contain household income information; and even where they do, this is often a weaker indicator of poverty.

2. Household experience: most but not all FinScope surveys also ask so called 'crying questions' which provide proxies for poverty—for example, asking how often the respondent and household have gone without food. We combine those who responded 'often' and 'regularly' to this question to create a poverty proxy in each case.

We use both measures, and compare below to externally reported measures of poverty which in most cases are quite dated. Table 5 below shows wide divergences using the per capita income measure of the Millennium Development Goal (MDG) reports (most of which are based on data more than seven years old) against current FinScope numbers, despite the time difference between them. Interestingly, the divergences are in general less when the MDG proportion of population 'undernourished' is compared with the FinScope proportion 'hungry', even though these are clearly not exactly the same. The lack of good data here underlines the need to continue collecting reliable observable, proxy measures of poverty going forward.

Table 5: Comparison of poverty measures

	Source	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
Official measures: % population living on below \$1 pc/day	MDG	34.90		10.70	22.80			75.80
	Year	1993		2000	1997			2003
FinScope: % adults <\$1 pc/day	FinScope	54.00	45.50	13.50	na	na	na	16.50
% population undernourished (2002)	MDG	23.00	30.00		31.00		19.00	47.00
% often or sometimes hungry	FinScope	14.00	19.00	26.00	49.00	34.00	na	65.00

Note: 'Na': not available

2.4 Other information on financial usage in these countries

The FinScope™ data does not exist in a vacuum: a range of other studies and reports have compiled relevant data points of the subject of financial access in these seven countries. Unfortunately, very few of these other report cover all the seven FinScope™ countries, but they can nonetheless provide some insights around subsets of the countries. The coverage of these other relevant data sources are summarized in Table 6 below.

Table 6: other relevant data on FinScope countries

X indicates that data about the country is provided in the report listed (see references for full citation)

	Data covered	Botswana	Kenya	Namibia	South Africa	Tanzania	Uganda	Zambia
1. Beck et al (2005)	No of ATMs, Bank branches	X	X	X	X	X	X	X
	Loan accounts, deposit accounts		X	X			X	
2. Beck et al (2007)	Barriers to access		X		X		X	
3. Honohan (2005)	Penetration of microfinance							
4. Honohan (2007)	Estimation of % access	X	X	X	X	X	X	X
5. Hammond et al (2007)	Income (I)/ Expenditure (E) analysis of Base of Pyramid markets				X (I&E)	X (I)	X (I&E)	X (I)
6. PWC Banking in Africa Survey	Expert survey of banking		X		X			

	Data covered	Botswana	Kenya	Namibia	South Africa	Tanzania	Uganda	Zambia
(2007)	conditions							
7. Financial Diaries SA (2006)	Cashflows and usage of financial instruments over one year period				X			
8. Genesis (2005)	Cost of transaction bank accounts across 7 countries		X		X			
Sample of other recent country-specific studies	Relevant aspects of financial access in the country	Jefferis (2006)	Genesis (2007); Odera (2007); Ndii (2006)				Genesis (2006)	De la Luna Martinez (2006)

Most of the data in the studies listed above capture supply side information—either expert interviews to form an informed opinion (such as PWC 2007) or estimates of number of accounts or points of presence (Beck 2005, from Central Bank responses) or account features (Beck et al 2007, from a survey of major banks in the country). However, some of these supply-side data points have recently been used by Honohan (2007) to predict levels of formal access across a broad range of countries. In Section 3.4, we will compare his estimated results to FinScope™ results.

Demand side studies like FinScope™ are costly and time consuming to undertake properly, hence have seldom been done in the past in the smaller and poorer markets. However, these countries may have other national household surveys, although with varying coverage—for example, household expenditure surveys, which are the source of the analysis by Hammond and his colleagues at WRI (2007). In some countries, there are wider household surveys available too: for example, the bi-annual AMPS surveys in SA interview a large sample of households (more than 25 000) and cover media and product usage extensively, including a component on financial services.⁶ The financial service component is usually small however. Similarly, Stone (2005) has reviewed the questions asked in World Bank supported LSMS household surveys, and found some relevant financial instrument issues covered there, but in general, there has been little depth of analysis.

The Financial Diaries project is an important exception to this. Diary collection exercises have been completed in three countries, including only South Africa of the seven FinScope™ countries.⁷ Based on bi-weekly interviews with poor and near poor households over a year over their cashflows and financial instrument usage, the Diaries databases contain valuable, in-depth panel data on the subject household.

⁶ For further information on AMPS, see <http://www.saarf.co.za/>

⁷ See information and dataset available via www.financialdiaries.com

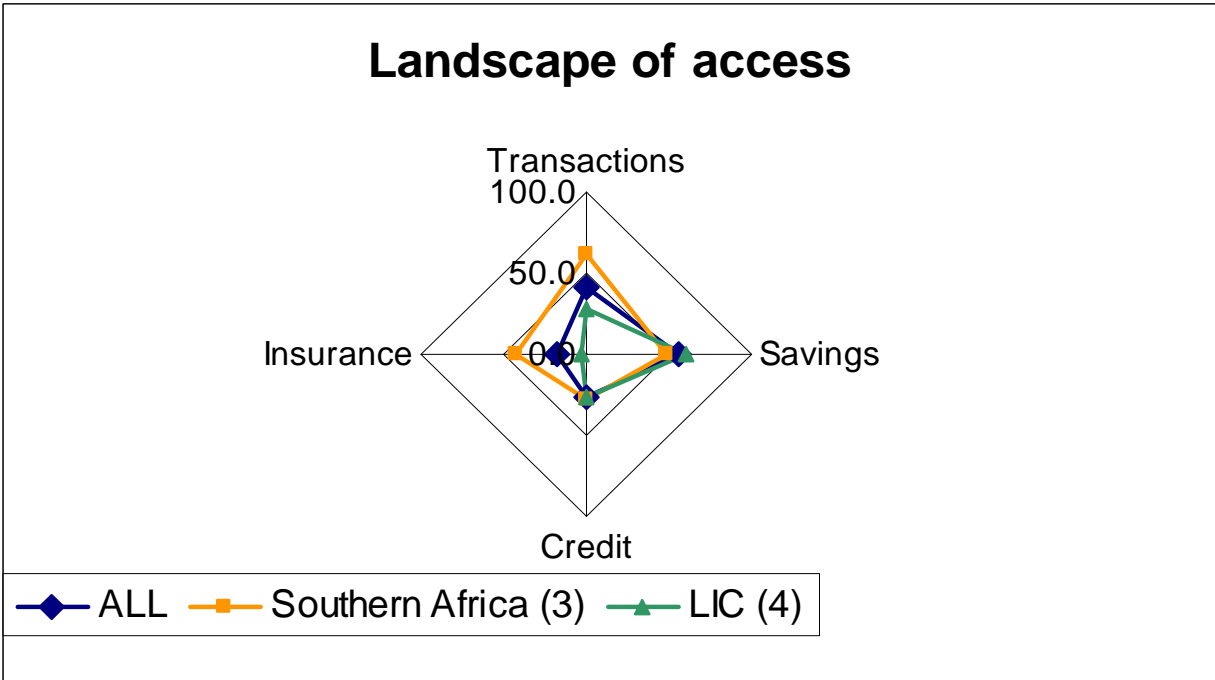
However, the small sample of households from Diaries-type exercises also needs to be set into a national context. FinScope™ surveys help to create this context, and as a result, enrich and are enriched by, the Diaries approaches.

3. OVERVIEW OF RESULTS

3.1 Landscapes of access—types of products

The landscape of access shows the percentage of people who use at least one product, formal or informal, in each of the four categories of financial services defined in Box B. The allocation of products to categories for each country can be found in Annex A1. Figure 3 shows the overall landscape, and the landscapes for the three southern African middle income countries and the four low income countries (three East African plus Zambia), where each is weighted by population. Country level results are available in Annex C.

Figure 3: Landscape of access



Note: Figure shows % of total adult population who report using at least one product in each category, as defined in Box B.

Figure 3 shows several noteworthy features. First, as expected, there is much higher reported usage of transaction⁸ and insurance products in the wealthier southern African countries, however, there is little difference in reported usage between the two groups of countries in the savings category, which has the highest overall reported usage. This reflects mainly informal product usage, since the levels of formal product usage are low, as will be seen in the next section. Second, the level of usage of credit instruments, at around a quarter of respondents, is lower than

⁸ The transactions category also includes sending remittances which may not involve using a bank.

would be expected, especially since this category takes all forms of credit into account. This highlights several issues with self-reported usage numbers: first, when there is a potential 'shame' factor, as with the usage of certain types of credit, people often lie and understate their usage; second, that consumers may not understand all the menu of products on offer in a questionnaire, even when properly translated. However, whatever the real level of credit usage, the overwhelming majority across all these countries claims to wish to avoid it, as will be analysed further in Section 4.

3.2 Access strands—types of provider

The access strand is a device for separating out the population of a country into the four main discrete categories defined in Box A—the banked, the formally served (but not banked), the informally served only, and the excluded who use no service defined as formally or informally served. The allocation of products to categories for each country can also be found in Annex A1. Note that since a consistent approach had to be taken to allocate products across countries in Figure 4, these percentages may differ from the local definition reported in each country. A table indicating the differences between these numbers and the reported numbers at country level may be found in Annex C. In most cases, the differences are small (within the typical confidence interval of +/- 5%) hence not meaningful, with the exception of a few cases, such as Tanzania, where a much wider definition of informally included was used.⁹

Figure 4: Access strands across countries

⁹ In Tanzania, the informally included category includes services received from family and friends; whereas the standard definition here considers a financial service only if provided as the result of a business relationship. Hence an informal loan from, say, a small shopkeeper would be considered informally included; whereas a loan (or remittance or money guarding) by a family member or friend would not be.

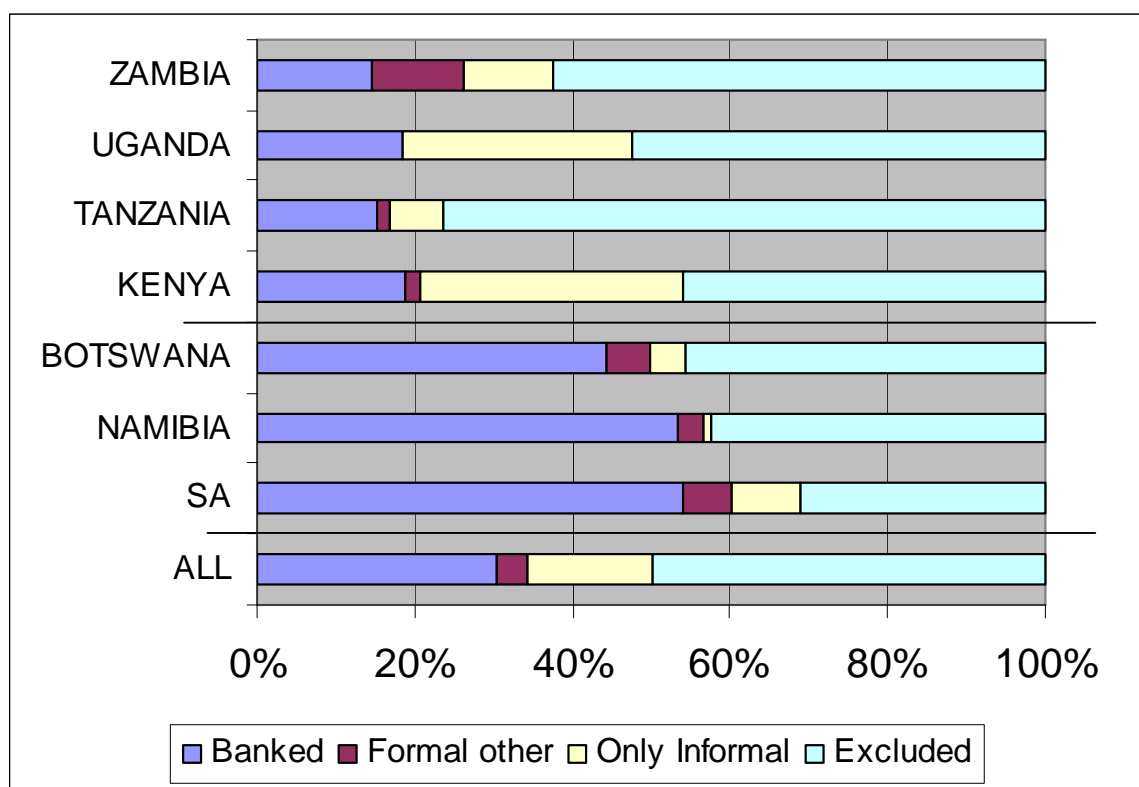


Figure 4 shows large differences in the degree of formal inclusion (the first two components of each country bar), although the biggest difference is between the middle income three, where in general over half of people are formally included in some way (mainly by being banked), and the other four, where the levels of formal inclusion are generally more like 20%. However, in the lower income countries, the proportion who are informally included only is generally much higher, ranging from under a third in Kenya and Uganda to around 10% in Tanzania and Zambia.

Across these countries, almost half (48% weighted average) is financially excluded. This is usually the group with the highest proportion of its members who are poor (i.e. who go without food on a regular basis), living in rural areas and with no formal income source. However, financially excluded does not mean that they use no financial instrument at all—this would be counter to the findings of Rutherford and the Financial Diaries, which show that even the very poor use some type of instrument regularly; rather, it means that they report such usage only in the context of a personal relationship, such as with a family or friend, or without another person involved (such as storing money at home).

If we are to consider the people in these countries as a possible market to be served, then it is also important to size each category. Table 7 below shows that, of 91 million adults in the seven countries, only some 30 million, around a third overall, uses a financial service from a formal, regulated provider. The remaining almost 60

million who do not, represent a potential market, although as the next section will show, not all are reachable the same way. However, at least the 14.3 million people who are active users of informal services only at present, and who live mainly in east Africa, represent an active user base for formal financial institutions to consider how best to serve.

Table 7: Demographic components for each segment of the strand:

	TOTAL	MIC (3)	LIC (4)
Banked	27,378,724	17,887,245	9,491,479
% of total	30.0	53.6	16.4
Formal Included only	3,348,514	2,034,934	1,313,579
Formal Included total	30,727,237	19,922,180	10,805,058
% of total	33.6	59.7	18.6
Informally included	14,390,734	2,813,672	11,577,062
Excluded	44,546,960	10,643,633	33,903,327
Total adult population	91,322,486	33,379,484	57,943,002

3.3 Access & usage: access frontiers

People cannot be compelled to use financial services; indeed, they may actively choose not to use a financial service such as credit. The attitudes underlying this choice will be analyzed further in Section 4.4. For this reason, policy makers are usually more concerned about increasing access than usage; or more precisely, their concern is about those who are *involuntarily* excluded from access. Providers are of course less interested in access per se but rather in potential clients who will use their products, thereby generating revenue. For providers, a group which has access to a service but which does not currently use it, represents a potential future market to target. But how does one best identify non-users amenable to the services of these providers?

The access frontier is an analytical tool designed to help make this distinction¹⁰. The access frontier applies standards of access relating to a particular market to a household data set, in order to segment the population into the following groups:

Group 1: Current users;

Group 2a: Those who currently have access but do not use the product and do not self-exclude on the basis of pure choice;

¹⁰ See Porteous (2005); Beck and de La Torre (2006) have provided rigorous microfoundations for what they call the access possibilities frontier, but is essentially the same concept.

- Group 2b: The residual from the population after demarcating the groups above, who are currently involuntarily excluded but who may be included if product features, cost or availability changes;
- Group 3: Those who have access but choose not to use it (i.e. self-exclude);
- Group 4: Those who are too poor to use the product within the foreseeable future, or for whom the product has no meaning (e.g. people who receive no cash income at all are not in the market for banking services); and who may therefore be considered as not within the reach of market-provided solutions hence are known as the supra-market group.

This segmentation results in an access mapping which can be used as the basis for dialogue between providers and government; and for policy making, since the magnitudes and composition of the different groups can be assessed. In particular, the required policy actions differ according to which segment is targeted: if the 'too poor to use group' is targeted ('the supra-market zone') then clients may need to be subsidized; whereas increasing the other categories will require different approaches. The reasons may be probed for lack of access by the group potentially within the reach of market solutions.

To map a population into access frontier categories or zones, it is necessary to define a current access standard for a particular product or category of product, using each of the key dimensions of access, namely:

- *Geographic access* i.e. how far one must go to reach a service point, measured in distance or time & cost of travel;
- *Product eligibility*: what features of the product restrict access;
- *Cost*: the cost of using the most basic product in this market.

In general, this requires good knowledge of the supply side of the market in question: both the product characteristics, and how the products are distributed, in order to define the basic standard based on the commonly available norm. Access standards may also be externally defined, for example by an industry grouping, regulators or government.¹¹

With the access standards defined, FinScope™ data enable the size (and profile) of each category to be analyzed, based on individual perception of reasons for using or not using banks.

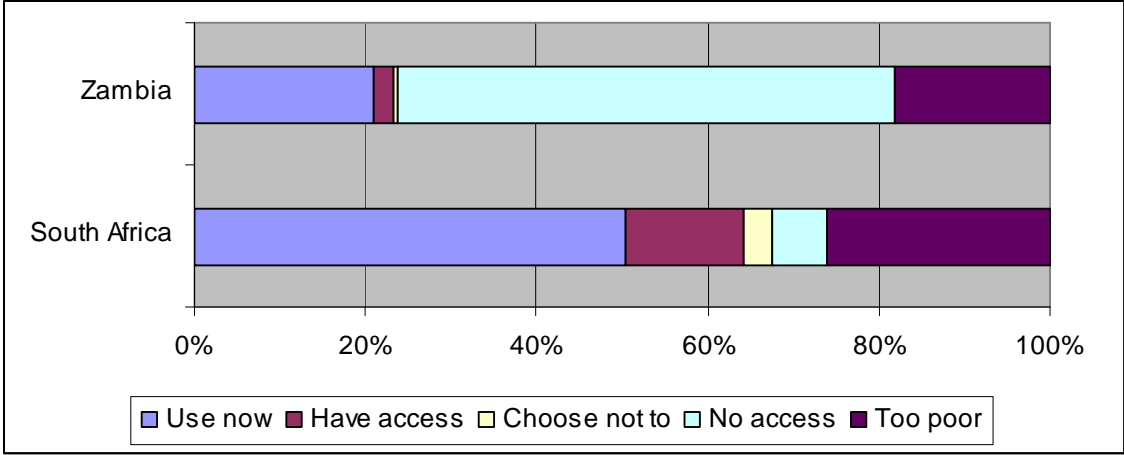
To date, access frontiers have been formally derived only in South Africa and Zambia using FinScope™ data, although FinMark Trust intends to undertake this exercise in more countries.¹² The results for the transactional banking market are

¹¹ For example, the South African Financial Sector Charter signed by financial providers and government in 2003 contains detailed definitions of access in relation to different product groups—bank products, insurance, etc.

¹² Tanzania and Uganda are apparently underway.

shown below, using the format developed by Melzer (2006). Some preliminary work has been done on the housing finance market in these two countries as well.¹³

Figure 5: Access frontier for transactional banking: SA and Zambia 2005/6



Source: Porteous (2007), Melzer (2007)

Note: Zambian numbers exclude those with non-cash income

Quite apart from the obvious differences in levels of usage (the first block from the left), Figure 5 above also highlights the differences in current access—most Zambians (the largest, light blue block) are involuntarily excluded by current banking products. To change this would require changes in the requirements, pricing and availability of these products in Zambia. The levels of involuntary exclusion in SA are lower, especially in the aftermath of the launch of Mzansi type basic bank accounts. A key issue there is how to increase account usage among those with access in order to generate sufficient revenue from usage to make basic accounts sustainable for banks to offer.

It is beyond the scope of this report to develop detailed access frontiers in the other five countries, since this requires the collection and analysis of supply side information in each. However, it is possible to develop simplified access frontiers for transaction banking by assuming the same notional access standard across the countries; and defining these groups:

- Currently banked (Group 1): this is known directly from FinScope™
- Supra-market group (Group 4): Unbanked and too poor to afford: as a proxy, we use the hunger variable, assuming that those who always or sometimes go without enough to eat, hence presumably will struggle to

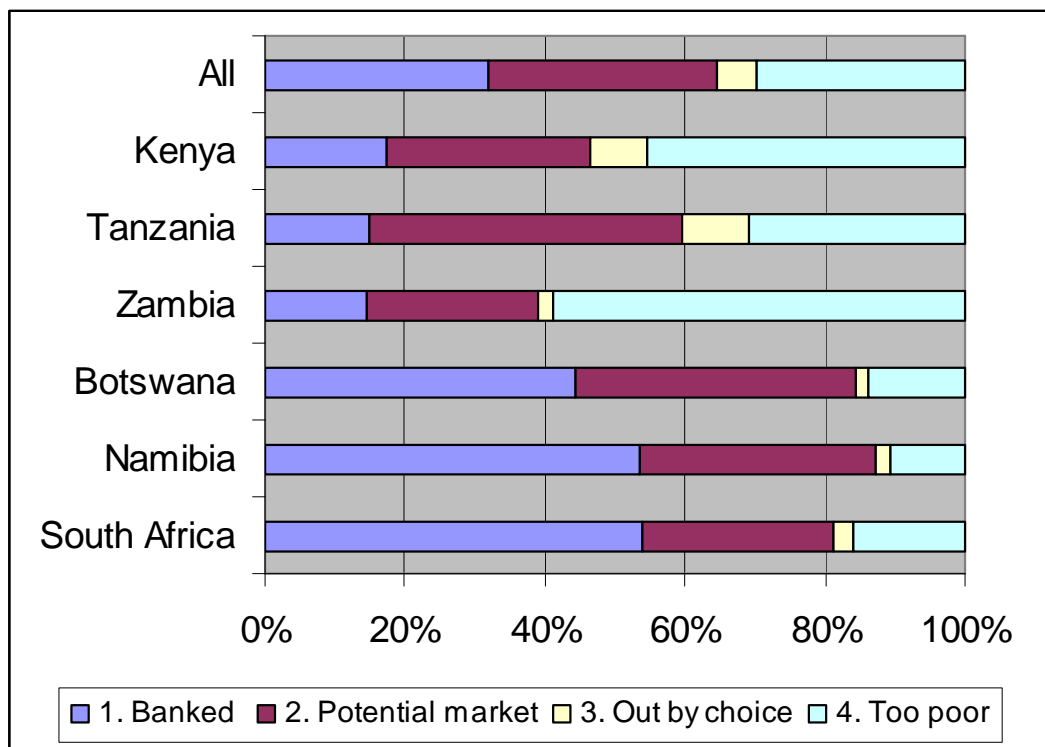
¹³ See Porteous (2006b)

afford the costs even of a bank account; and are not considered part of the group which can be provided with market-based solutions in the medium at least.¹⁴

- Out by choice (Group 3): of the group that is not currently banked or considered too poor, these people have given reasons for not-banking which reflect a relatively pure choice not to be banked (see Table 4).
- The potential market (Group 2): this is the balance of the population after defining the groups above, and can be divided further based on the access criteria used.

These four basic groups may be shown in the Figure below.

Figure 6: Basic Access Frontier Groups—consistent definition



The red band (second from left) is the group that has most potential to become formally banked: this varies from around a quarter in South Africa, where the majority is already served, to as high as 45% in Tanzania. Across these countries, this group is on average a third of all adults, or some 25 million people. It is also interesting to note in the Figure above that the self excluded category is generally

¹⁴ Though there may be other ways of providing them with basic bank accounts linked to government transfer programs—see description in Porteous (2006c)

higher in the less formally served countries (e.g. Kenya, Tanzania where 8% or 10% of people say essentially that they are not interested in banking, versus 2-3% in SA, Namibia or Botswana.) This illustrates in part the endogeneity of 'pure' choice in that it may be that, as a network product, bank accounts are more attractive and useful the more people who have them. However, it is relevant to note that the proportion not interested at 6% (4.5m people) overall, is a very small minority.

We can analyze further the large potential market group of 25 million. Ideally, we would wish to apply the current product standards in each country affecting the three main dimensions of access:

- *Distance*: for example, those not more than half an hour's travel from a point of financial access;
- *Eligibility*: anyone with some form of a cash income over the legal age at which an account can be opened
- *Affordability*: those able to afford to undertake a standardized bundle of transactions per month, at the cost of the bundle.

FinScope™ datasets do not collect all the data necessary to calculate this. For example, banked people are asked the distance (and cost to travel) to the nearest bank, whereas we need to consider the distance for the unbanked. Eligibility will vary based on what documentation and qualifications are required to open an account, and cost varies based on the transaction profile. These latter two categories are supply-side dimensions which need to be collected from individual providers and weighted to form a national average.

However, we may make a simplifying assumption and get closer at least to a measure of the affordability barriers to access: in South Africa, the typical profile of transactions on average costs the Mzansi-type¹⁵ account holder around \$3 per month. No other fees are charged on this type of account. Hence, we may hypothesize: if such an account were widely available across the region (it is not currently), who could afford it, if we accepted the norm that the total fees should cost no more than 2%¹⁶ of household income? In Table 8 below, to get an idea of sensitivity to cost, we use two levels of monthly fees: US\$2 and US\$4, translated at PPP exchange rates.¹⁷

Columns 1A and 2A in Table 8 below show that the proportion of the total potential market group who can afford even these modest levels of fees drops to 36% (at \$2) and 21% (at \$4). To get beyond this, either people must be willing to pay more than 2% of income for the service, or the cost of the service must be brought below \$2 per month, much lower than current Mzansi norms.

¹⁵ Mzansi is the name for the category of basic bank accounts introduced by major SA retail banks in 2004, and now used by over 2 million people.

¹⁶ 2% has been proposed by FinMark Trust as a rule of thumb for affordability based on norms used in the telco sector to assess affordability for a similar merit good type of service—universal telephony.

¹⁷ Which is subject to lumpy thresholds, since, following standard survey practice, FinScope income data is collected not as an absolute number but as an income interval; hence the use of a % cut off can trigger large changes if an interval boundary is crossed. Here we assign each respondent to the lower limit of his respective bundle.

Table 8: Further analysis of Potential market group

Group 2: Potential market (Unbanked, not too poor, not by choice)					
	1. If cost = \$2pm		2. If cost = \$4pm		
	1A. % affording at this level	1B. % affording & not giving access reason	2A. % affording at this level	2B. % affording & not giving access reason	2C. % affording but giving value prop/ (demand) reason
South Africa	30%	87%	8%	74%	81%
Namibia	18%	66%	12%	66%	77%
Botswana	24%	76%	19%	76%	86%
Zambia	62%	65%	49%	63%	85%
Tanzania	58%	51%	42%	46%	76%
All (5)	36%	54%	21%	47%	62%
All (5)	9,020,638		5,424,738		

Note: Kenya is necessarily excluded since FinAccess collects no income data.

Table 8 goes one step further than analyzing affordability alone. Using the reasons given for not being banked, it is possible also to ask what proportion of people who can afford it, are denied access as a result of other supply side reasons (combined into the access reasons defined in Table 4). Columns 1B and 2C give the answers to this question at each cost level: around half (54% and 62% of each group respectively) of those who can afford do not regard themselves as held back by what we have categorized as an access-related constraint. Using these measures, the narrowly defined potential market which would have effective access to a product such as the one hypothesized (at the \$2 fee level, which is already low) is closer to 5.4 million people, or 10% of the total of 60 million people in the five countries considered there.

3.4 Predicted results from other work and FinScope findings

Honohan (2007) has estimated the percentage of people with financial access in some of these countries using 2004 data on number of accounts and infrastructure; these are compared with the FinScope results in Table 9 below.

Table 9: Comparison of predicted with FinScope actual

	Data covered	Botswana	Namibia	Kenya	South Africa	Tanzania	Uganda	Zambia
1. Honohan (2007) synthetic estimator	% adults/households with access	47	NA (Survey data: 28)	NA (Survey data: 10)	46	5	20	15
2. FinScope	% adults banked	51	51	19	50	10	18	15
Difference (1-2)		-4	na	na	-4	-5	+2	0

Note: Honohan uses individual and household interchangeably; and refers to use of a bank as constituting formal access

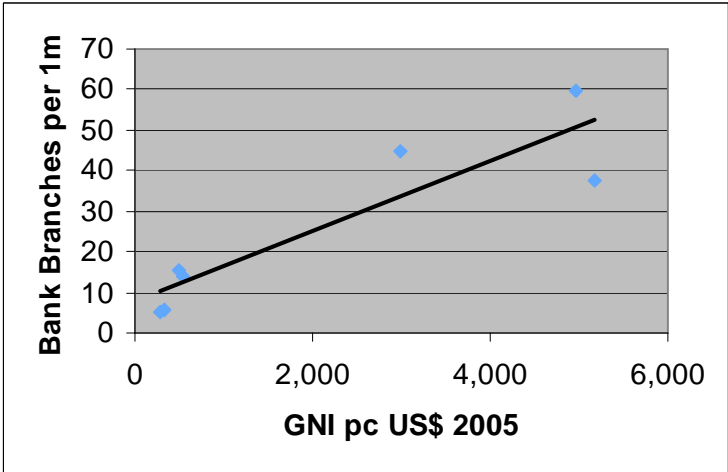
The synthetic estimators provide a reasonable fit (within +/-5%, which is the confidence interval in most of the surveys) in four of the five cases estimated. Ironically, in the two cases of the seven where existing survey data was used to fit the estimator (hence indicated by 'na' in row 3 of the table), the divergence from recent FinScope™ actual percentages is larger: Namibia: 28% vs 51%; Kenya: 10% vs 19%. This may be because the surveys used for these countries by Honohan are either old and/or reported results on a different basis. The newer FinScope™ numbers may be useful in calibrating the synthetic indicator more finely.

Other research has linked financial indicators such as these with broader macro indicators. *Measuring financial access* (World Bank 2005) states certain observed high level characteristics of financial access across a larger set of countries:

- (i) Financial depth (measured by M2/GDP) and reach (by accounts/1000 people) are not highly correlated;
- (ii) Financial access (defined as households with borrowing) varies by per capita income;
- (iii) Poverty rates are negatively correlated with access to finance;
- (iv) There are more bank branches per head in higher income countries.

These features also apply generally across these FinScope countries as well, as the Figures below show with simple linear fitted relationship for characteristics (iii) and (iv) above.

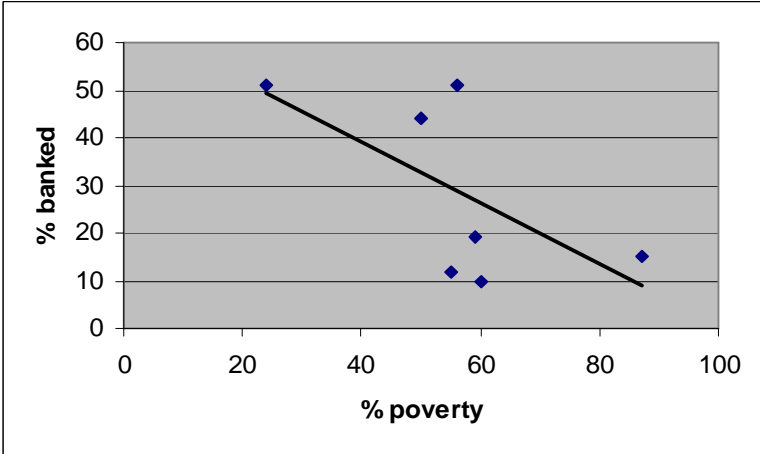
Figure 7: GNI pc to bank branches/million people



Dots represent each FinScope country

Sources: GNI pc: WDI 2005; Bank branches/ million inhabitants: Beck et al 2005

Figure 8: % banked to % in poverty



Sources: % banked: FinScope, years shown in Table 1;

Poverty: WDI 2004, most recent year available, broad measure (H/h <\$2 pc pd)

This section has therefore analyzed the FinScope™ data sets using the main tools developed by FinMark Trust, and against other available research. The next section goes further to analyze important patterns of financial behavior and access across and within these countries.

4. DETAILED TESTS ON THE DATA SETS

4.1 Even controlling for personal characteristics, there are significant differences in the patterns of retail financial services usage and non-usage across the FinScope countries of southern and eastern Africa

Each FinScope™ country data set is valuable in its own right; and is sufficiently large to enable econometric testing of various hypotheses. However, for this report, one of the most significant questions is whether, after controlling for factors specific to the individual, there are still differences in the observed patterns of financial service usage and non-usage across countries. To the extent that there are, they reflect the influence of unobserved country level factors. These country-level differences may have policy consequences.

They may also be important for financial providers: if there are significant country level differences, this would suggest that the underlying market demand is more integrated than might be suggested by the observable differences in the supply of retail financial services across them. It is clear however that the supply side picture is changing, as multinational and regional banks spread their influence across borders. Table 10 below captures the major banking groups which have retail presence across some or all of the FinScope™ countries: there is much more overlap of markets on the supply side now than a decade ago, in part due to the expansion of the retail activities of South African banking groups like ABSA (now Barclays) and Stanbic. To the extent that underlying demand patterns are similar, this cross border expansion is more likely to continue and even to be successful.

Table 10: Regional retail banks

Where small case x denotes country presence of each, large case X head office country location

	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
ABSA/ Barclays	x	x	X	x	x	x	x
African Banking Corp	X				X		
Citibank			X		X		X
Finabank	X			x			
First Rand/ FNB	x	x	X				
KCB				X	X		
Nedcor		x	X				
Stanbic	x	x	X		X		X
Standard Chartered			X		X		X

Source: Genesis 2004 and central bank websites of banks active

In order to do this, we must combine the datasets into one with over 18,000 observations in total representing some 78 million people; and test whether the fact that people are in different countries is a significant explanatory factor. Also, this analysis will tell us whether aggregate differences between countries are driven by observable differences between individuals (age, education, urban/rural) or whether the differences are unobservable – these would be captured by the country dummies, although it will not be clear whether the country level unobservable influences come from the demand side (such as other individual characteristics) or from the supply side (such as products offered by banks or regulations). We report on the two steps in our econometric analysis.

1. Probit regressions across the whole dataset which take into account the interaction among variables.

In these tests, we are interested in the determinants of the probability of being banked. We assume that the unobserved propensity of individual i in country j to be banked, call this banked^*_{ij} , can be expressed as a linear function of individual characteristics X_{ij} and country effects D_j i.e.

$$\text{banked}^*_{ij} = \beta X_{ij} + \gamma D_j + e_{ij}$$

Individual i in country j is then banked, if $\text{banked}^*_{ij} > 0$, and unbanked otherwise. If we further assume that the error term e_{ij} is normally distributed, the parameters β and γ can be estimated with the probit estimator.

Annex C3b reports on the coefficients and probabilities obtained.

Across all the specifications reported in the Annex (in which the reported coefficients on the country dummies are stated relative to South Africa) the age, urban location, a poverty indicator¹⁸ and the highest level of education achieved by the respondent all enter as highly significant ($p < 0.001$ level), and have the expected signs i.e. being older, urban, not poor and better educated is associated positively with the probability of being banked.

Most country dummies, with the exception of Namibia, are highly significant and negative. *This suggests that, even controlling for the individual characteristics, individuals are significantly less likely to be banked than in South Africa.*

A further specification in these countries tested whether broadening the dependent variable from a simple banked or not, to an index of financial inclusion based on the access strand definitions makes a difference. In the index, a respondent is assigned a value dependent on access strand status (i.e. 0=excluded; 1= informally included only; 2= semi-formally included; 3= formally included but not banked; 4= banked). In other words, we are no longer only seeing to explain whether someone is banked or not, but rather her status in this simple spectrum. We use an ordered probit regression on this index.

¹⁸ Whether the hungry proxy for poverty or the household income per household member as discussed in Box C in Section 2

This specification shows very similar results to the previous one: the same individual explanatory variables remain significant; as do the country dummies (even including Namibia in most cases), and with similar signs. This stability of results across the two specifications is encouraging.

We tested one final specification, reported fully in Annex C3c and summarized in Table 11 below, in which the dependent variable was an indicator based on the reasons which a respondent gave for being unbanked, namely income-, access- or choice-related, as explained earlier for Table 4. This specification enables one to test whether being in a particular country significantly influences the reasons given for being unbanked, when one controls for the same individual factors: gender, age, urban location, poverty and education. Of these factors, the most significant are¹⁹:

- Gender: women are more likely to cite income related reasons, and less likely to list access factors or choose not to use a bank;
- Age: older people are less likely to give access-related reasons;²⁰
- Education: high school educated adults are less likely to cite any of these factors;
- Urban Location: urban adults are less likely to report income related constraints.

Table 11: Cross-country analysis of reasons for being unbanked

Variable	(A1)	(A2)	(A3)
	Income	Access	Choice
Female	0.144***	-0.092**	-0.126**
age_100	-0.215	-1.396***	0.666
age2_100	-0.001	0.012**	-0.002
Urban	0.170***	-0.053	0.085
hs_edu	-0.310***	-0.235***	-0.104*
Namibia	-0.446***	0.328***	-0.097
Botswana	-0.010	0.149	-0.166
Zambia	-0.311***	0.443***	0.174*
Tanzania	-0.525***	1.168***	0.532***
Uganda	-1.246***	0.594***	0.061
Kenya	-0.122	0.605***	0.689***

¹⁹ Poverty: in a 6 country specification excluding Uganda for which the income proxies were not available, often going hungry is positively correlated with giving income reasons, and negatively correlated with choice factors. i.e. poor people are less likely to express a simple choice not to use a bank, maybe because the choice element is swamped by more pressing factors such as income and survival.

²⁰ This result, however, may not be economically significant, since age is divided by 100. An exact interpretation is not possible without probit analysis.

Variable	(A1)	(A2)	(A3)
	Income	Access	Choice
_cons	1.375***	-0.685***	-1.635***
N	15,593	15,593	15,593

Note: Shown are population weighted regression results for reasons for being unbanked grouped into the categories described.

The omitted country dummy variable is South Africa.

*: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$. p-values are calculated from standard errors that are corrected for clustering at the primary sampling unit level.

Importantly for this section, where income-related constraints are the dependent variable, most country dummies are highly significant, with the exception of Botswana and Kenya. The coefficients for the low income countries for people giving access-related reasons are significantly larger than those for the middle income countries, suggesting that there is a much stronger relationship between experiencing an access (supply side) constraint and coming from one of these countries than applies in South Africa, which is the omitted country in these regressions.

2. Testing for coefficient differences between multiple pairs of countries

From the above reported results, it is easy to infer directly statistical differences between South Africa and other country dummy variables, while it is more difficult to infer something about differences between other country pairs.

But using these same regression results, we can test the null hypothesis that the dummy variables are the same i.e. $H_0: D_j = D_k$ for any two countries j, k . The p-values reported in Annex C3a indicate the probability that we falsely reject the equality of the coefficients for the country dummies, i.e. that we reject equality if they are in fact not different from each other. Thus, if the p-value is small, we are confident that two countries are statistically significantly different from each other; and if the p-value is large it is likely that countries are not different from each other.

Not surprisingly, these results indicate recurring similarities between South Africa, Namibia and Botswana; and between Tanzania, Uganda and Kenya in the overall probability of being banked (Table 1 in Annex C3a), or the probability of being banked if living in a rural area (Table 2) or of being banked among men (Table 6), although quite different outside of these logical pairings. However, when one considers the probability of being banked if living in an urban area or with a high school or beyond high school education, or if a woman, the countries become much more similar.

Also, considering the categorized reasons for being unbanked, the southern African three countries tend to be more alike, at least with respect to people citing access or choice related reasons; the income-related reason, which is most common by far, as will be shown in Section 4.4 which follows, is quite similar across more countries.

Therefore, the econometric tests using the combined dataset reported in this section suggest that, even when one controls for expected individual influences on financial status, country-level factors remain significant: they affect the probability of being banked, or of where one is located on a financial inclusion spectrum, or the reasons given for being unbanked. In the narrow sense supported by the FinScope™ data, the seven countries are overall more different than similar; but particular country pairings such as SA-Namibia, Namibia-Botswana and Kenya-Tanzania-Uganda show considerable similarities in at least some of the dimensions. Drawing lessons and inferences about policy or strategy to extend financial access among these country pairings with substantial similarities is more likely to be effective than across all FinScope™ countries.

4.2 Formal and informal financial services are complements, not substitutes

In developed countries, most people are banked and use only or mainly formal financial institutions for their financial service needs; while in developing countries, most are unbanked and many use informal financial mechanisms. This simple empirical observation has led to the implication that formal and informal products are substitutes: those who cannot access formal products use informal ones instead; but when and if they can access the formal, their informal usage drops away.

In fact, from the earliest FinScope™ findings, this view has been challenged by evidence that even banked people may continue to use, or even start to use if they do not already, informal mechanisms to complement their usage of formal products: Porteous (2003:3) highlights that some 60% of members of informal rotating savings groups in South Africa were also (formally) banked. Presumably, this pattern of joint usage is driven either by the absence of desired product features in the formal product set, and/or by the fact that the desired return may also be in non-financial terms—for example, the member of an informal savings group may also derive social benefits from the contribution.

If this hypothesis is generally true in these countries, we would expect to see that a sizable proportion of formally included people also use informal instruments. Using the same definitions applied in the access strand (see Box A; or Section 3.2 above), Table 12 below shows that while the percentage of people using informal products varies considerably, the proportion of banked people who also use an informal product varies from a fifth to a half. In each country, banked persons are more likely to use informal products more than the unbanked do. In general, therefore, there is support for the view of formal and informal as complements.

Table 12: Formal/ informal overlaps

	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
1. % of total using informal	19	13	24	45	10	30	18
2. % banked also using informal	30	22	26	52	18	57	20
3. Trusting banks: Ratio: banked/ unbanked	2.1	8.38	1.78	Na	Na	1.0	2.3
4. % population trusting informal	41.0	53.0	45.0	61.0	*	84.2	60.0
5. % informal users trusting informal	51.0	58.0	60.0	68.0	*	86.2	57.0
6. Trusting informal: Ratio: banked/ unbanked	1.0	0.9	0.7	1.0	*	1.1	0.9

Note: Uganda to be completed

*: Note that for Tanzania, the question relating to trust was asked only of banked people hence is not comparable to the others

Given the complementarity of formal and informal usage, we might also expect to see little difference in attitudes expressed towards informal groups among banked and unbanked. Rows 3-6 of Table 12 above explore these attitudes. In fact, the levels of general trust in informal financial entities (row 4) hovers around the half way mark in most except Uganda: it is higher certainly in lower income countries such as Kenya and Uganda where these informal mechanisms are more prevalent and where people rely on them more. When one considers only the users of informal entities (i.e. taking out those who do not use them, whose opinion may be academic, or who may have "voted with their feet" after a bad experience), the trust level in informal rises somewhat, closer to two thirds (row 5). But it is striking that one third or more of users of informal financial entities do not trust them. And the proportion who trust in informal entities does not vary significantly (except perhaps in SA) between those who are banked (who may be assumed to be more financially literate) and the unbanked.

The flip side of this, trust in banks, also varies by country; but in general, banked people are much more likely to trust banks than unbanked people (row 3). It appears therefore, that while people may not trust informal financial institutions much, there is also a trust question among presently excluded people regarding banks which would need to be addressed, alongside the other access-related barriers, for these people to be willing to use banks; or at least, given the attitudes to be explored in Section 4.4 below, to deposit their savings with them.

4.3 The greatest perceived barrier to bank access is the absence of sufficient income, rather than access barriers per se

Previous analysis of FinScope SA data²¹ has shown that the biggest single reason for being unbanked relates to the 'value proposition' for having the account: most unbanked respondents indicated that they did not have a job, a regular income or earn enough money to make it worthwhile. These factors are access barriers resulting from actions of the provider i.e. the supply side. In fact, the reasons which may be categorized as directly access related—the need for certain documents to open an account, fees and minimum balance requirements and geographic access—applied to at most a fifth of respondents. A very small proportion (under 5%) were unbanked by simple choice not to have an account. These findings are different from the situation in developed countries such as the US, where access barriers and choice not to bank are much more significant reasons for being unbanked; but are more similar to those reported from a survey of urban households in Mexico (see Caskey et al 2004).

Here, the hypothesis is that this ordering of main reasons for being unbanked remains true across these seven countries also. Table 13 below shows the proportions falling into each category. These categories are defined by the underlying statements set out in full in Table 4 in Section 2.

Table 13: Expressed Reasons for being unbanked (grouped by category)

	All	MIC (3)	LIC (4)	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
Value proposition: demand side	82.4	90.7	77.6	91.0	82.0	91.0	89.0	80.0	55.0	85.0
Access: supply side	29.9	14.4	38.8	17.0	22.0	14.0	31.0	54.0	30.4	26.0
Pure choice	12.2	6.9	15.3	5.0	6.0	7.0	21.0	17.0	7.2	9.0

Note: does not sum to 100% since multiple mentions were possible.

At one level, Table 13 shows great uniformity: few people (fewer than one in seven overall) choose not to have a bank account; and a great majority (usually 80-90%) believe that they are constrained by demand side factors such as not having enough income to make it worthwhile. However, there are significant differences between the two country groupings, with unbanked respondents in the low income countries much more likely (39% versus 14%) than those in the middle income countries to report supply side factors as a constraint. This may be because a longer list of reasons was offered in these countries, as noted in the commentary around Table 4 in Section 2, making it more likely that people may find an access reason which fits; but it may also be that the distribution, cost and product features of bank accounts

²¹ Porteous 2004

in these countries mean that the market is much more likely to be supply constrained than demand constrained.

If so, policy measures may have greater leverage in increasing the proportion banked than in the richer countries where the constraints relate more to the linkage, in perception and reality, that a bank account is only required if one receives a regular (and historically, formal) income.

4.4 Underlying attitudes of banked and unbanked people are likely to differ in key respects such as risk aversion, debt aversion and the willingness to trade off safety for price.

FinScope™ asks several sets of questions which have a bearing on the key factors in the minds of current and potential bank customers affecting their choice of a provider. Among them, FinScope™ surveys include lists of attitudinal statements which have direct bearing on the hypothesis above: statements which indicate risk aversion with respect to financial services (e.g. “you avoid taking risks with your money and resources”) and willingness to make trade-offs (e.g. “you are prepared to pay more to have someone you trust handle your money”, “prefer to save where money is safe, even if interest rate is lower”). There are also indicators which indicate underlying preferences relating to particular categories and attributes of financial services, such as:

- Risk: (“to get ahead in life, one needs to take some risks”)
- Debt: (“you hate owing money to anyone”, “you go out of your way to pay debt”)
- Willingness to trade off cost for more reliable services (e.g. “you prefer to save where your money is safe, even if the interest rate or return is a little lower”).²²

Exact definitions of the statements included in each category for each country may be found in Annex A2.

²² Previous work, such as that of Rutherford (2002) has indicated that poorer households often place a premium on having safe, convenient financial services, shown by a willingness to pay more for a safer service: where they have access, they value it and consider it worth paying for, compared with the risky alternatives.

Table 14: Attitudes across groups

Distinguish % by currently banked/ unbanked for each country

	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
1. % Risk averse:	23.00	Na	30.00	77.00	Na	96.00	28.00
1a. Ratio (% banked/ % unbanked) in this category	0.78		0.80	1.03			0.57
2. % debt averse	86.00	65.00	80.00	78.00	76.00	69.00	84.00
2a. Ratio (% banked/ % unbanked) in this category	1.00	1.08	1.10	0.95	0.89		0.93
3. % willing to pay more for reliable services	78.00	36.00	76.00	Na	62.00	62.00	64.00
3a. Ratio (% banked/ % unbanked) in this category	1.2	1.3	1.3		1.2	1.2	1.2

As Table 14 above shows, this question was not asked in all countries in a comparable way. Nonetheless, a few observations are quite striking:

- While general risk aversity varies considerably across the countries (row 1) and differs among banked and unbanked (in row 1a, the banked generally say that they are willing to take more), there is a high and quite uniform level of debt aversity (row 2): on the lower end of the country spectrum, two thirds of Namibians, and on the higher end, more than eight out of ten Zambians would prefer to avoid debt; and the attitudes of banked and unbanked are not significantly different in this respect.
- Similarly, a majority (with the exception of Namibians) translate their risk aversity into a willingness to pay more for greater safety or reliability of service. In this case, however, there is a significant different between banked and unbanked: unbanked are more willing to pay this premium. While FinScope™ data do not in themselves tell us more, this may be because unbanked people have experienced loss of their cash in informal institutions or through other people. The relative premium which unbanked people are willing to pay for the formality of a regulated institution may be considerable, provided this does in fact bring security.

4.5 There is substantial potential for leapfrogging through mobile financial services in particular

Leapfrogging in this context is the ability to deploy new generation technology in such a way that the deployment of a previous generation of technology is made redundant.

Retail financial infrastructure has developed in five main waves over the past four decades: from IT-connected branches, to ATMs and then real time point-of-sale

(POS) deployment, to internet banking, and most recently, to mobile banking²³. In the lower income countries, ATM and POS deployment is still in an early stage although increasing fast; and very few people have access to or use the internet. One of the biggest impediments to deployment of these generations of infrastructure has been the lack of cost effective, reliable communications to connect remote points to the host. However, the growth of wireless coverage has significantly changed that. Not only can point of sale devices be deployed using wireless connections, but more significantly, mobile phones may even function as point of sale devices themselves. This significantly reduces the cost to financial providers of deploying and maintaining a network of dedicated point of sale devices or ATMs; and creates the prospect that lower income countries may leapfrog the need for extensive ATM or POS networks to a mobile-connected retail financial infrastructure. The potential for mobile phones to be transformational in enhancing access to formal financial services has been highlighted in several places²⁴ and indeed, a separate FinScope™-type survey has been piloted of mobile banking users in South Africa to understand better the profile of the new users.

To be sure, mobile banking is at an early stage across the FinScope™ countries: in 2006, in the country where it is most developed with a range of competing offerings, South Africa, there were not more than half a million active users, or less than 3% of the banked population. However, m-banking is available in most of these FinScope countries as an add-on channel to access existing bank accounts. In a few of these countries (such as Kenya or Zambia), transformational products have been launched by providers like M-Pesa and Celpay. Such m-banking products do not require the user to have a bank account first, or include the opening of a basic bank debit card account (Wizzit—SA) linked to the mobile offering; but all of these are at an early stage.

Since leapfrogging involves evidence that the previous generation of infrastructure is being by-passed, it is too early to assess whether this is already happening in the FinScope countries. However, FinScope data provides a view on the potential for leapfrogging through the use of mobile phone as a device for real time financial authentication and authorization. Most FinScope surveys ask whether the respondent owns, has access to and/or uses a mobile phone—not always distinguishing these in the same way, however. Some of the more recent surveys (such as Tanzania or Kenya) go on to explore related patterns of usage—for example, transferring airtime to other customers. This data may be used for two purposes here.

First, the leapfrogging potential derives mainly from the scale of deployment of mobile phones reaching critical mass. This requires knowing what proportion of people currently has and uses mobile phones. Mobile penetration numbers are calculated by aggregating the number of subscriptions reported by major operators by mobile industry information services such as Wireless Intelligence. This (supply

²³ For fuller description and diagram, see Porteous 2006.

²⁴ See for example, Porteous 2007

side) approach is clearly likely to overstate the number of individual users, since multiple subscriptions are increasingly common as networks develop. This is somewhat akin to inferring the percentage banked by the number of bank accounts per capita in a country. By tracking the individual usage, FinScope™ data gives the actual number of cell owners, as well as those with access. These numbers are compared with the reported number of subscribers in Table 15 below. With the exception of Uganda (where there appear to be more owners than subscribers), each cell owner in these countries has between 1.2 and 2 subscriptions. If the definition is broadened to include others who can access a cell, the number of subscriptions per capita falls to below one, as would be expected if cells were indeed shared. The one anomaly here appears to be South Africa, where the FinScope™ question (phrased in terms of access to a cell phone) seems, based on the low numbers, in fact to pick up mainly cell ownership; and if so, this would result in an average of 2.1 subscriptions per owner in that country.

Table 15: Usage of cell phones vs penetration

	Source	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
Communications technology								
Number of cell subscriptions (Q4:06) (000)	Wireless Intelligence	952	555	34,225	5,769	5,061	2,349	1,389
Number of cell subscriptions (000) in same year as FinScope, if different from above	Wireless Intelligence	550	329					879
	Date of line above	Q3:04	Q3:04					Q3:05
Cell owners in same period (000)	FinScope				4,734	2,595	3,371	709
Those with access to cell (000)	FinScope	522	516	16,464	5,061	na	5,996	2,083
Subscriptions per owner	Calculated				1.2	2.0	0.69	1.2
Subscriptions per total with access	Calculated	1.1	0.6	2.1	0.6	na	0.4	0.5
% internet users	WDI 2004	3.4	3.7	4.5	7.8	0.9	0.7	2.1

Second, the transformational potential of mobile phones derives primarily from the ability to provide at least transactional banking services to currently unbanked people who have a mobile phone. The size of this group, in line 3 of Table 16 below, will determine in part the transformational potential: in total, there are 20 million people in this category, or close to a third of the unbanked overall.

Table 16: Unbanked having cell phones

		Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
1. % of total adult population banked	%	44.4	53.4	53.9	17.4	14.8	18.3	14.5
2. % of total adult popln owning/ accessing cell phones	%	34.0	36.0	53.0	26.0	14.0	26.0	17.0
3. % of unbanked people owning/ accessing cell phones	%	17.0	7.0	31.0	17.0	9.0	41.0	9.0
4. Number of people in 3 above	No	187,117	80,080	9,651,786	3,099,478	1,901,863	5,400,686	486,590
5. %of total with a negative view of new technology	%	43.0	35.0	24.0	Na	9.0	Na	25.0
6. Ratio of banked/ unbanked with this negative view	%	0.8	1.0	0.9	Na	0.8	Na	1.2

In addition, this potential is indicated by the extent to which currently unbanked people are not prejudiced against using new technology. Among the various attitudinal questions, FinScope™ surveys ask about attitudes towards technology (such as whether one agrees or disagrees with a statement like: “you are prepared to learn new technology”). Although the statements vary across countries in ways which may affect the results, we can infer a general pattern of response: although always a minority of the total population, the percentage who indicate a negative view of technology (in general and in financial services) is surprisingly high in the richer three countries. And banked and unbanked people do not seem markedly different in their views on the topic.

5. CONCLUSION

5.1 Overall

FinScope™ surveys provide a major source of useful insights into the attitudes, preferences and usage patterns of consumers of financial services in a country at a time when holistic financial inclusion is a goal of rising significance to policy makers; and retail market expansion an objective of more financial institutions. FinScope™ data has already spurred policy debate in some of the countries studied here; and has provided useful insights for providers seeking to expand their offerings into underserved markets.

This report is the first to undertake cross-country analysis on the available FinScope™ data sets on a consistent basis. Notwithstanding the differences in questionnaires and some of the difficulties of achieving comparability, the whole set of country databases is still worth more than the sum of the seven country-level parts. Specifically, we have demonstrated here that country-level influences remain important to results even when controlled for individual level factors; and that there are regional influences among southern and east African countries.

By demonstrating in part what cross-country analysis can achieve, it is hoped that this report will help to fuel and inform demand for future changes to FinScope questionnaires which would enhance comparability without compromising the value of the country-level ownership of the questionnaire design process, which is an important part of ensuring that FinScope™ surveys result in action. There are a number of steps which would greatly facilitate the comparison of FinScope™ results among countries in future, without going to the extreme of having one standardized questionnaire. The next section lists some of the recommendations made in this respect.

Nevertheless, there remain many more useful and interesting forms of analysis which can be undertaken using these datasets—the analysis conducted in this report is only a sample of what can be done.

Further detailed country-level analysis, and most importantly, policy development and innovation are needed, to address the issues of involuntary exclusion and promote greater financial inclusion in each of these countries.

5.2 Recommendations for future FinScope™ surveys²⁵

Our recommendations for FinScope surveys going forward fall into three categories.

²⁵ Some country-specific data issues are listed in Annexure B.

(a) To increase comparability:

- Publish FinScopeTM definitions of the core definitional lenses (Boxes A, B and C) on all FinScopeTM datasets; if country sponsors have reason to deviate, at least they should be required to explain how their definitions differ, and allow FinMark to publish a standardized set to ensure integrity of cross-country comparison over time.
- Other key cross cutting metrics: there is also a case for greater standardization in respect of key cross cutting themes which enable comparability. These include:
 - Income thresholds: all surveys should contain some income-related measures; and the intervals used should be linked in part to meaningful consistent thresholds (e.g. the application of a national poverty line or \$1 per day measure);
 - Poverty: the inclusion of so-called 'crying questions' as standardized poverty proxies is valuable and should be given more attention to be relevant to poverty thresholds across the countries;
 - Cell ownership: given the importance of cell ownership, all questionnaires should follow the patterns of the more recent surveys in carefully distinguishing ownership of a cell phone from usage and access to someone else's phone.
- Where similar attitudinal questions are used, they should be standardized in their phrasing: i.e. positively or negatively, but not either. Similarly, precise wording should be standardized (for example, consistent use of 1st or 3rd person).

(b) To increase the use and usability of the datasets:

- Prepare and publish one consolidated data base of at least some common modules across the seven countries, using consistently coded definitions to encourage use of similar lenses by other researchers;
- Advertise to university Economics Departments the availability of the data bases and illustrate its potential for use in student theses, especially in the FinScopeTM countries: for example, senior undergraduate or Masters level econometrics classes may make good use of portions of the data;
- Choose one common data base format as the standard for publishing data: this requires empirical investigation of which packages are most widely used among market researchers, policy makers and financial institutions; and of the cost and reliability of each. Many products now read data from other packages; and researchers who wish to use a different package can transfer into their own format at their own risk.

(c) To increase depth of analysis:

A range of additional questions or data may be collected to give more insight and depth. Of course, given the length of most surveys already, including these may result in a need to exclude others. However, they are listed here:

- Collect household expenditure data on financial services (this would, for example, enable the widely used but little tested 2% affordability rule to be tested)
- Track the usage patterns of instruments more closely
- Track the marginal consumer each year i.e. ask special questions for those who became banked or unbanked in the past year about the reasons for their choice to change status
- Introduce a part panel element by returning to at least a subset of the sample respondents on the next survey
- Capture the GIS coordinates of the respondent since these may be used to relate to data on location of financial and other infrastructure (this is done in Kenya so far)
- Collect data on local infrastructure in a locality at the time of survey i.e. the field staff would be asked to collect certain basic data about the facilities in the chosen location, which should be captured, so that perceptions such as "the bank is too far" can also be tested against the reality of such distance.
- Consider introducing simple tests of risk aversion (such as choice between two described payoffs) into the questionnaire, rather than simply asking about attitude to risk; in this way, the stated attitude could be confirmed with the real status.

REFERENCES

- Beck, T, A Demircuc Kunt & M Martinez Peria (2005) "Reaching Out: Access to and use of banking services across countries", WPS 3754 available via http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/10/17/000016406_20051017171910/Rendered/PDF/wps3754.pdf
- Beck, T & A. de la Torre (2006) "The Basic Analytics of Access to Finance", World Bank Working Paper, available via <http://siteresources.worldbank.org/INTACCESSFINANCE/Resources/AF13BECKarticle.pdf>
- Beck, T, A. Demircuc-Kunt & M. Martinez Peria (2007) "Banking for Everyone: Barriers to Bank Access and Use around the World", Draft Working Paper presented at WBI Conference on Access to Finance, Washington DC 15-16 March 2007
- Caskey, J, Ruiz Duran and T. Solo (2006) "The Unbanked in Mexico and the United States", World Bank Policy Research Working Paper No 3835, Washington DC
- Claessens, S (2005) "Access to Financial services: A review of the issues and public policy objectives " WPS 3589, available via http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/05/15/000090341_20050515132903/Rendered/PDF/wps3589.pdf
- Doing Business (2007) Database available via www.doingbusiness.org
- Genesis Analytics (2004) "A survey of the SADC region: South African financial institutions, regional policies and issues of access" Interim Report, April 2004, available via www.finmarktrust.org.za
- Genesis Analytics (2005) "Inter country cost of bank accounts" available via www.finmarktrust.org.za
- Genesis Analytics (2006) "Low Cost Payment System (Uganda)", Final Report, Report prepared for Rural Speed, available via http://www.speeduganda.org/pdf/USAIDRuralSPEED_Payments_Systems_Presentation_2006.06.21.pdf
- Genesis Analytics (2007) "Identifying an enabling environment for Government to Person transfers through the banking sector: A supply side analysis of the constraints and potential solutions to making social welfare payments accessible and low cost to users and the Kenyan Government ", Draft paper commissioned by FSD Kenya
- Hammond et al (2007) *The Next Four Billion*, available via http://www.wri.org/business/pubs_description.cfm?pid=4142
- Honohan, P (2005) "Measuring Microfinance Access: Building on existing cross country data", WPS 3606 available via <http://siteresources.worldbank.org/EXTINCLUSIVEFINSYS/Resources/MeasuringMicrofinanceAccess.BldgonexistingData.pdf>
- Honohan, P (2007) "Cross Country Variation in Household Access to Financial Services", paper presented at Conference on Access to Finance, World Bank Washington DC March 2007
- Honohan, P & T. Beck (2007) *Making Finance work for Africa*, Washington: World Bank
- Ivatury, G & M. Pickens (2006) "Mobile Phone Banking and Low Income Consumers: evidence from South Africa: CGAP, UN Foundation, Vodafone Group Foundation, available via <http://www.cgap.org/publications/mobilephonebanking.pdf>
- Jefferis, K (2006) "Enhancing Access to Banking and Financial Services in Botswana", Paper prepared for FinMark Trust, available via www.finmarktrust.org.za
- Leach, J (2005) "The Access Frontier for Health Insurance", presentation to GIBS Healthcare Strategies conference, available via: http://www.finmarktrust.org.za/documents/2005/November/GIBS_healthInsure.pdf
- Melzer, I (2006a) "How Low can you Go: Charting the Housing Finance Access Frontier", April 2006, available via http://www.finmarktrust.org.za/accessfrontier/Documents/Access_HFin.pdf

- Melzer, I (2006b) "Exploring access to insurance in South Africa using the Access Frontier", available via http://www.finmarktrust.org.za/accessfrontier/Documents/AF_insurance.pdf
- Melzer, I (2007a) "Access to Savings in LSM1-5", FinMark Trust and SA Savings Institute, available via <http://www.finmarktrust.org.za/accessfrontier/accessfrontier.html>
- Melzer, I (2007b) Zambia FinScope presentation, mimeo FinMark Trust
- Martinez, Jose de Luna "Access to Financial Services in Zambia", World Bank WPS4061
- Ndii, D (2006) "Financial Access Survey: Economic and Policy Analysis report", Draft Report commissioned by FSD Kenya, November 24, 2006, available via <http://www.fsdkenya.org/finaccess/speeches.asp>
- Odera, R (2007) "Demand in Garissa", Paper commissioned by FSD Kenya, available via http://www.fsdkenya.org/pdf_documents/opportunities/07-02-27_G2P_Demand_side_analysis_report_Garissa.pdf
- Porteous (2003) "The Landscape of Access to Financial Services in South Africa," *Labour Markets and Social Frontiers No.3*, April 2003, Pretoria: SA Reserve Bank
- Porteous, D (2005) "The Access Frontier as an Approach and a Tool for Making Markets Work for the Poor", Paper commissioned by DFID, available via <http://www.finmarktrust.org.za/accessfrontier/accessfrontier.html>
- Porteous, D (2006a) "FINANCIAL INFRASTRUCTURE: HOW CAN IT SUPPORT OUTREACH TO UNBANKED PEOPLE?" Summary of the papers and discussion at Session III of the Brookings/ World Bank Conference on Access to Financial Services, Washington, DC 30-31 May 2006
- Porteous, D (2006b) "Connecting the poor to Financial Markets", Paper delivered at KfW Conference on Housing Finance, Berlin, November 2006
- Porteous, D (2006c) "Scoping Report on the Payment of Social Transfers through the Financial System", Commissioned by DFID, available via www.dfid.gov.uk
- Porteous, D (2007) "Just how transformational is m-banking?", Paper commissioned by FinMark Trust, available via <http://www.finmarktrust.org.za/accessfrontier/accessfrontier.html>
- Price Waterhouse Coopers (2007) *Banking in Africa*, available via <http://www.pwc.com/extweb/ncpressrelease.nsf/docid/ee5bc829c1f4c79a802572a30035b28e>
- Rutherford, S (2000) *The Poor and their Money*, Delhi: OUP
- Rutherford, S (2002) "Money Talks: Conversations with the Poor about their Money", IDPM Discussion Paper No. 45, May, available via http://www.sed.manchester.ac.uk/idpm/research/publications/archive/fd/fd_wp45.htm
- Stone, R (2005) "Financial Indicators stocktake", DFID, available via <http://siteresources.worldbank.org/INTFSECON/64199955-1123698090062/20612687/Robert%20Stone%20Paper.pdf>
- World Bank (2005) "Measuring Financial Access: Outlining the Scope of Current Data Collection Efforts", available via <http://siteresources.worldbank.org/EXTINCLUSIVEFINSYS/Resources/MeasuringFinAccessYOM.pdf>
- World Development Indicators (WDI) Database of indicators maintained by World Bank, accessed via <http://publications.worldbank.org/WDI/>

ANNEX A: DATA META-TABLES

ANNEX A1: PRODUCT CATEGORIZATION

South Africa				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal-organizational	Informal-personal	Transactions	Savings	Credit	Insurance
BANK PRODUCTS												
Mzansi account	Q67A	3		X					X			
ATM card	Q67B	3		X					X			
Debit card/Cheque card	Q67C	3		X					X			
Savings book at a bank	Q67D	3		X						X		
Post Bank account/Post Office savings account	Q67E	3		X					X	X		
Savings/Transaction account/	Q67F	3		X					X	X		
Current or Cheque account	Q67G	3		X					X			
Credit Card – Visa/Master/American Express/Diners Club	Q67H	3		X							X	
Fixed Deposit bank account	Q67I	3		X						X		
Personal garage card/Petrol card	Q67J	3		X					X			
Money market account	Q67K	3		X						X		
Cell phone banking e.g. MTN Banking, Wizzit, FNB/	Q67L	3		X					X			
Sent Money transfer—bank	Q182{A, B, C, I, J, M, N, O, U, V, Y, Z, AA, AG, AH, AK, AL, AM, AS, AT}	1		X						X		
Sent Money transfer—MTO	Q182{F, R, AD, AP}	1				X			X			
Sent Money transfer—courier, bus company, shop	Q182{G, H, S, T, AE, AF, AQ, AR}	1					X		X			
Money transfer—friend and family	Q182{D, P, AB, AN}	1						X	X			
CREDIT												
<i>Housing</i> Home loan from bank or bond/mortgage to pay for a house	Q67M	3		X							X	

South Africa				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY				
Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal-organizational	Informal-personal	Transactions	Savings	Credit	Insurance	
<i>Other Credit</i>	Home loan from bank or bond/mortgage to build, extend or improve a house	Q67N	3	X							X		
	Loan from microlender to buy a house	Q67O	3			X					X		
	Loan from microlender to improve a house	Q67P	3			X					X		
	Loan from government to buy a house	Q67Q	3			X					X		
	Loan/subsidy from government to build or extend a house	Q67R	3			X					X		
	Loan from employer/friend/family/ to buy a house	Q67S	3			X					X		
	Loan from employer/friend/family/ to build or extend a house	Q67T	3			X					X		
	Personal loan from a bank	Q67U	3	X							X		
	Loan from friend or family	Q67V	3						X		X		
	Loan from an employer	Q67W	3			X					X		
	Loan from a micro-lender e.g. African Bank, Credit Indemnity, Capitec Bank, Teba Bank	Q67X	3			X					X		
	Loan from an informal money lender, e.g. a mashonisa/cash loan shop	Q67Y	3				X				X		
	Borrowed money from a stokvel/umgalelo/savings club (not your contribution)	Q67Z	3			X					X		
	Loan from local spaza	Q67AA	3				X				X		
	<i>Retail Credit</i>	Vehicle or car finance through bank or dealer	Q67AB	3	X							X	
Vehicle or car finance from elsewhere e.g. personal loan, mashonisa, micro-finance		Q67AC	3			X	X				X		
Overdraft facility		Q67AD	3	X							X		
Store card where you buy on account and pay later e.g. Edgars, Sales House		Q67AE	3			X					X		
Loyalty card that gives you cash back, such as Clicks, Edgars Cash Card		Q67AF	3			X					X		
Other club or loyalty cards such as Voyager, Ster Kinekor, Kaizer Chiefs, Nu Metro		Q67AG	3			X					X		
Retail/Hire Purchase store account for the purchase of household goods, e.g. fridge or bed, which has a fixed credit limit, a fixed repayment period and fixed instalment amount		Q67AH	3			X					X		
INSURANCE													

South Africa				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY				
Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal-organizational	Informal-personal	Transactions	Savings	Credit	Insurance	
<i>Funeral</i>	Funeral policy from a shop or store e.g. Edgars, Sales House, Jet	Q67AI	3			X						X	
	Funeral cover through an undertaker/funeral parlour	Q67AJ	3			X						X	
	Funeral policy with an insurance company	Q67AK	3			X						X	
	Funeral policy with a broker	Q67AL	3			X						X	
	Funeral policy with a bank	Q67AM	3		X							X	
	Funeral policy with an administrator, e.g. The Best Funeral Practice	Q67AN	3			X						X	
	Funeral cover/insurance from your current employer	Q67AO	3			X						X	
<i>Asset</i>	Belong to a burial society	Q67AP	3				X					X	
	Vehicle or Car insurance/	Q67AQ	3			X						X	
	Insurance for a caravan or trailer	Q67AR	3			X						X	
	Insurance for jewellery/	Q67AS	3			X						X	
	Insurance for a boat/•	Q67AT	3			X						X	
	Insurance for hand tools or agricultural equipment/	Q67AU	3			X						X	
	Household content insurance (not jewellery/)	Q67AV	3			X						X	
	Shack Insurance/•	Q67AW	3			X						X	
	Cell phone insurance/•	Q67AX	3			X						X	
	Travel insurance/•	Q67AY	3			X						X	
	Home owners' insurance (e.g. insurance on building)/•	Q67AZ	3			X						X	
	Credit insurance that pays your credit repayments if you are unable to pay/•	Q67BA	3			X						X	
	Legal insurance, e.g. Legal Aid/	Q67BB	3			X						X	
	<i>Life</i>	Life insurance/assurance policy with an institution/	Q67BC	3			X						X
		Life cover/credit life to pay off any money that you owe when you die/•	Q67BD	3			X						X
<i>Loss of Earnings</i>	Disability insurance with an institution/•	Q67BE	3			X						X	

South Africa				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal-organizational	Informal-personal	Transactions	Savings	Credit	Insurance
Disability cover from your employer/*	Q67BF	3				X						X
Dreaded disease/critical illness insurance/*	Q67BG	3				X						X
Professional insurance (in the event of loss of earnings) (NOTE: Not UIF)/*	Q67BH	3				X						X
Debtors insurance/*	Q67BI	3				X						X
SAVINGS												
<i>Retirement</i>												
Retirement annuity/*	Q67BJ	3				X				X		
Provident fund/	Q67BK	3				X				X		
Pension fund/*	Q67BL	3				X				X		
INSURANCE												
<i>Medical</i>												
Medical aid/scheme/*	Q67BM	3				X						X
Hospital plan/*	Q67BN	3				X						X
Medical insurance/*	Q67BO	3				X						X
<i>investments</i>												
Unit trust/*	Q67BP	3				X				X		
Education policy/plan/*	Q67BQ	3				X				X		
Investment/savings policy/*	Q67BR	3				X				X		
Endowment policy with death and/or disability cover/*	Q67BS	3				X				X		
<i>Savings Clubs</i>												
Stokvel/umgalelo/savings club/*	Q67BT	3					X			X		
Other savings club (e.g. church club)/*	Q67BU	3						X		X		

	Botswana				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY				
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance	
BANK PRODUCTS	ATM card	Q3D1	3,4	1	X					X				
	Debit card/Cheque card	Q3D2	3,4	2	X					X				
	Savings book at a bank	Q3D4	3,4	4	X						X			
	Savings/Transaction account/	Q3D5	3,4	5	X					X	X			
	Current or Cheque account	Q3D6	3,4	6	X					X				
	Credit Card – Visa/Master/American Express/Diners Club	Q3D3	3,4	3	X							X		
	Fixed Deposit bank account	Q3D7	3,4	7	X						X			
	Personal garage card/Petrol card	Q3D10	3,4	10	X					X				
	Money market account	Q3D11	3,4	11	X						X			
	Sent Money transfer--bank	Q35B1-Q35B7	1,2,3,4	35B1,2,3,4	X					X				
	Sent Money transfer--MTO	Q35B1-Q35B7	8	35B.8			X			X				
	Sent Money transfer--courier, bus company, shop	Q35B1-Q35B7	9	35B.9				X		X				
	Money transfer--friend and family	Q35B1-Q35B7	10	35B.10					X	X				
CREDIT <i>Housing</i>	Home loan from bank or bond/mortgage to build, extend or improve a house	Q3D13	3,4	13	X							X		
	Loan from government to buy a house	Q3D16	3,4	16			X					X		
	Loan from employer/friend/family/ to buy a house	Q3D18	3,4	18			X					X		
	<i>Other Credit</i>	Personal loan from a bank	Q3D15	3,4	15	X							X	
		Loan from friend or family	Q3D19	3,4	19					X			X	
		Loan from an employer	Q3D20	3,4	20			X					X	
		Loan from a micro-lender e.g. African Bank, Credit Indemnity, Capitec Bank, Teba Bank	Q3D21	3,4	21		X						X	
		Loan from an informal money lender, e.g. a mashonisa/cash loan shop	Q3D22	3,4	22				X				X	
	molshelo	Q3D23	3,4	23		X						X		
	Vehicle or car finance through bank or dealer	Q3D14	3,4	14	X							X		
Overdraft facility	Q3D12	3,4	12	X							X			

	Botswana				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
<i>Retail Credit</i>	Loan from government scheme for business	Q3D17	3,4	17				X				X	
	Store card where you buy on account and pay later e.g. Edgars, Sales House	Q3D24	3,4	24			X					X	
	Loyalty card that gives you cash back, such as Clicks, Edgars Cash Card	Q3D25	3,4	25			X					X	
	Other club or loyalty cards such as Voyager, Ster Kinekor, Kaizer Chiefs, Nu Metro	Q3D26	3,4	26			X					X	
INSURANCE													
<i>Funeral</i>													
	Funeral cover through an undertaker/funeral parlour	Q15A1-Q15A3	2	Q15A.2			X						X
	Funeral policy with an insurance company	Q15A1-Q15A3	1	Q15A.1			X						X
	Funeral cover/insurance from your current employer	Q15A1-Q15A3	5	Q15A.5			X						X
	Belong to a burial society	Q15A1-Q15A3	4	Q15A.4				X					X
<i>Asset</i>													
	Vehicle or Car insurance/	Q30.16	3,4	Q30.16			X						X
	Household content insurance (not jewellery/)	Q30.15	3,4	Q30.15			X						X
	Cell phone insurance/*	Q30.17	3,4	Q30.17			X						X
	Travel insurance/*	Q30.18	3,4	Q30.18			X						X
	Home owners' insurance (e.g. insurance on building)*	Q30.7	3,4	Q30.7			X						X
	Credit insurance that pays your credit repayments if you are unable to pay/*	Q30.11	3,4	Q30.11			X						X
	Legal insurance, e.g. Legal Aid/	Q30.20	3,4	Q30.20			X						X
	Personal injury/ accident	Q30.27	3,4	Q30.27			X						X
<i>Life</i>													
	Life insurance/assurance policy with an institution/	Q30.2	3,4	Q30.2			X						X
	Life cover/credit life to pay off any money that you owe when you die/*	Q30.12	3,4	Q30.12			X						X
<i>Loss of Earnings</i>													
	Disability insurance with an institution/*	Q30.13	3,4	Q30.13			X						X
	Disability cover from your employer/*	Q30.22	3,4	Q30.22			X						X
	Dreaded disease/critical illness insurance/*	Q30.19	3,4	Q30.19			X						X
	Debtors insurance/*	Q30.11	3,4	Q30.11			X						X

	Botswana				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
SAVINGS													
<i>Retirement</i>													
	Retirement annuity/*	Q30.3	3,4	Q30.3			X				X		
	Provident fund/	Q30.4	3,4	Q30.4			X				X		
	Pension fund/*	Q30.5	3,4	Q30.5			X				X		
INSURANCE													
<i>Medical</i>													
	Medical aid/scheme/*	Q30.8	3,4	Q30.8			X						X
	Hospital plan/*	Q30.9	3,4	Q30.9			X						X
	Medical insurance/*	Q30.10	3,4	Q30.10			X						X
<i>investments</i>													
	Education policy/plan/*	Q30.14	3,4	Q30.14			X				X		
	Endowment policy with death and/or disability cover/*	Q30.6	3,4	Q30.6			X				X		
	Treasury bills	Q3D8	3,4	3.8	X						X		
	Offshore investment	Q3D9	3,4	3.9			X				X		
<i>Savings Clubs</i>													
	Stokvel/umgalelo/savings club/*	Q18A	1	Q18A.1				X			X		
	Other savings club (e.g. church club)/*	Q20.13	3,4	Q20.13					X		X		

	Kenya				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
BANK PRODUCTS				a1,2,3									
	ATM card	A1.25	1	25	X					X			
	Debit card/Cheque card	A1.26	1	26	X					X			
	Post Bank account/Post Office savings account	A1.20	1	20	X					X	X		
	Savings/Transaction account/	A1.21	1	21	X					X	X		
	Current or Cheque account	A2.22	1	22	X					X			
	Credit Card – Visa/Master/American Express/Diners Club	A1.27	1	27	X							X	
	Fixed Deposit bank account	A1.23	1	23	X						X		
	Sent Money transfer--bank	C2a.4, C2a.5	1	C2a.4,5	X					X			
	Sent Money transfer--MTO	C2a.3	1	C2a.3			X			X			
	Sent Money transfer--courier, bus company, shop	C2a.2	1	C2a.2				X		X			
	Money transfer--friend and family	C2a.1	1	C2a.1					X	X			
CREDIT													
<i>Housing</i>	Loan to buy/build house from bank	A1.17	1	17	X							X	
	Loan to buy/build house from building society	A1.18	1	18	X							X	
	Loan from government to buy a house	A1.19	1	19			X					X	
<i>Other Credit</i>	Personal loan from a bank	A1.8	1	8	X							X	
	Loan from friend or family	A1.14	1	14					X			X	
	Loan from an employer	A1.12	1	12			X					X	
	Loan from a micro-lender e.g. African Bank, Credit Indemnity, Capitec Bank, Teba Bank	A1.10	1	10		X						X	
	Loan from an informal money lender, e.g. a mashonisa/cash loan shop	A1.15	1	15				X				X	
	Loan from a SACCO	A1.9	1	9		X						X	
	Loan from an ASCA	A1.13	1	13				X				X	
	Local shop/supplier that allows you to take goods/services on credit	A1.30	1	30				X				X	
	Overdraft facility	A1.24	1	24	X							X	
	Loan from a government institution	A1.11	1	11				X				X	

	Kenya				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
<i>Retail Credit</i>	Other club or loyalty cards such as Voyager, Ster Kinekor, Kaizer Chiefs, Nu Metro	A1.28	1	28			X					X	
	Retail/Hire Purchase store account for the purchase of household goods, e.g. fridge or bed, which has a fixed credit limit, a fixed repayment period and fixed instalment amount	A1.29	1	29			X					X	
INSURANCE													
<i>Funeral Asset</i>													
	Vehicle or Car insurance/	A1.31	1	31			X						X
	Household content insurance (not jewellery/)	A1.32	1	32			X						X
	Home owners' insurance (e.g. insurance on building)/*	A1.33	1	33			X						X
<i>Life</i>													
	Life insurance/assurance policy with an institution/	A1.35	1	35			X						X
<i>Loss of Earnings</i>													
	Disability insurance with an institution/*	A1.36	1	36			X						X
SAVINGS													
<i>Retirement</i>													
	Retirement annuity/*	A1.39	1	39			X				X		
INSURANCE													
<i>Medical</i>													
	government social security NSSF	A1.40	1	40			X				X		
	Medical insurance/*	A1.34	1	34			X						X
<i>investments</i>													
	Education policy/plan/*	A1.37	1	37			X				X		
<i>Savings Clubs</i>													
	Savings at ROSCA	A1.4	1	4				X			X		

	Kenya				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
	Savings with a group of friends	A1.5	1	5					X		X		
	Savings at MFI	A1.2	1	2		X					X		
	Savings at SACCO	A1.1	1	1		X					X		
	Savings at ASCA	A1.3	1	3					X		X		
	Savings given to family or friends to keep	A1.6	1	6					X		X		
	Savings you keep in a secret hiding place	A1.7	1	7							X		

	Namibia				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
BANK PRODUCTS													
	ATM card	q3d_1	3,4	1	X					X			
	Debit card/Cheque card	q3d_2	3,4	2	X					X			
	Savings book at a bank	q3d_4	3,4	4	X						X		
	Nampost savings bank account	q3d_8	3,4	8	X					X	X		
	Savings/Transaction account/	q3d_5	3,4	5	X					X	X		
	Current or Cheque account	q3d_6	3,4	6	X					X			
	Credit Card – Visa/Master/American Express/Diners Club	q3d_3	3,4	3	X							X	
	Fixed Deposit bank account	q3d_7	3,4	7	X						X		
	Personal garage card/Petrol card	q3d_9	3,4	9	X					X			
	Money market account	q3d_10	3,4	10	X						X		
	Sent Money transfer--bank	q35b_1- q35b_4	1,2,3,4	35B1,2,3,4	X					X			
	Sent Money transfer--MTO	q35b_1- q35b_4	8	35B.8			X			X			
	Sent Money transfer--courier, bus company, shop	q35b_1- q35b_4	9	35B.9				X		X			
	Money transfer--friend and family	q35b_1- q35b_4	10	35B.10					X	X			
CREDIT													
<i>Housing</i>	Home loan from bank or bond/mortgage to pay for a house	q3d_11	3,4	11	X							X	
	Grant from government to buy house 13b	q3d_13a	3,4	13a			X					X	
<i>Other Credit</i>	Personal loan from a bank	q3d_12	3,4	12	X							X	
	Loan from F&F to start business 14c; gift from F&F to start business 14d	q3d_15	3,4	15							X	X	
	Loan from an employer	q3d_16	3,4	16			X					X	
	Loan from a micro-lender e.g. African Bank, Credit Indemnity, Capitec Bank, Teba Bank	q3d_17	3,4	17		X						X	
	Loan from an informal money lender, e.g. a mashonisa/cash loan shop	q3d_18	3,4	18				X				X	
	Borrowed money from a stokvel/umgalelo/savings club (not your contribution)	q3d_19	3,4	19		X						X	

	Namibia				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
<i>Retail Credit</i>	Vehicle or car finance through bank or dealer	q3d_20	3,4	20	X							X	
	Overdraft facility	q3d_21	3,4	21	X							X	
	Loan from government scheme for business	q3d_14a	3,4	14a				X				X	
	Loan from bank to start business	q3d_14e	3,4	14e	X							X	
	Store card where you buy on account and pay later e.g. Edgars, Sales House	q3d_22	3,4	22			X					X	
	Loyalty card that gives you cash back, such as Clicks, Edgars Cash Card	q3d_23	3,4	23			X					X	
	Other club or loyalty cards such as Voyager, Ster Kinekor, Kaizer Chiefs, Nu Metro	q3d_24	3,4	24			X					X	
INSURANCE													
<i>Funeral</i>	Funeral cover through an undertaker/funeral parlour	q15a_2	2	Q15b			X						X
	Funeral policy with an insurance company	q15a_1	1	Q15a			X						X
	Funeral cover/insurance from your current employer	q15a_5	5	Q15e			X						X
	Belong to a burial society	q15a_4	4	Q15d				X					X
<i>Asset</i>	Vehicle or Car insurance/ Household content insurance (not jewellery)	q30_16	3,4	Q30.16			X						X
		q30_15	3,4	Q30.15			X						X
	Cell phone insurance/•	q30_17	3,4	Q30.17			X						X
	Travel insurance/•	q30_18	3,4	Q30.18			X						X
	Home owners' insurance (e.g. insurance on building)•	q30_7	3,4	Q30.7			X						X

	Namibia				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
<i>Life</i>	Credit insurance that pays your credit repayments if you are unable to pay/*	q30_11	3,4	Q30.11			X						X
	Legal insurance, e.g. Legal Aid/	q30_20	3,4	Q30.20			X						X
	Personal injury/ accident	q30_28	3,4	Q30.28			X						X
	Life insurance/assurance policy with an institution/	30_2	3,4	Q30.2			X						X
	Life cover/credit life to pay off any money that you owe when you die/*	q30_12	3,4	Q30.12			X						X
<i>Loss of Earnings</i>	Disability insurance with an institution/*	q30_13	3,4	Q30.13			X						X
	Disability cover from your employer/*	q30_22	3,4	Q30.22			X						X
	Dreaded disease/critical illness insurance/*	q30_19	3,4	Q30.19			X						X
<i>SAVINGS Retirement</i>	Debtors insurance/*	q30_11	3,4	Q30.11			X						X
	Retirement annuity/*	q30_3	3,4	Q30.3			X				X		
	Provident fund/	q30_4	3,4	Q30.4			X				X		
	Pension fund/*	q30_5	3,4	Q30.5			X				X		
<i>INSURANCE Medical investments</i>	Medical aid/scheme/*	q30_8	3,4	Q30.8			X						X
	Hospital plan/*	q30_9	3,4	Q30.9			X						X
	Medical insurance/*	q30_10	3,4	Q30.10			X						X
	Education policy/plan/*	q30_14	3,4	Q30.14			X				X		
	Endowment policy with death and/or disability cover/*	q30_6	3,4	Q30.6			X				X		

	Namibia				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
<i>Savings Clubs</i>		q18	1	Q18A.1				X			X		

	Tanzania				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
BANK PRODUCTS													
	PTC												
	ATM card	PTC.1	1	32	X					X			
	Debit card/Cheque card	PTC.2	1	33	X					X			
	Post Bank account/Post Office savings account	PTC.3	1	34	X					X	X		
	Savings/Transaction account/	PTC.4	1	36	X					X	X		
	Current or Cheque account	PTC.5	1	35	X					X			
	Fixed Deposit bank account	PTC.6	1	37	X						X		
	PTE, J												
	FI where you hold account	PTE.1	1	48	X					X			
	FI where you don't hold account	PTE.2	1	47			X			X			
	Sent Money transfer--courier, bus company, shop	PTE.3	1	49				X		X			
	Money transfer--friend and family	PTE.4	1	50					X	X			
CREDIT													
	P TB												
	<i>Housing</i>												
		PTB26.1	1	26	X								X
	Loan from FI to buy a house	PTB28.1	1	28	X								X
		PTB27.1	1	27	X								X
	<i>Other Credit</i>												
	Personal loan from a bank	PTB14.1	1	14	X								X
	Loan from friend or family	PTB20.1	1	20					X				X
	Loan from an employer	PTB18.1	1	18			X						X
	Loan from a micro-lender e.g. African Bank, Credit Indemnity, Capitec Bank, Teba Bank	PTB16.1	1	16		X							X
	Loan from an informal money lender, e.g. a mashonisa/cash loan shop	PTB21.1	1	21				X					X
	SACCO	PTB15.1	1	15		X							X
	Loan from local spaza	PTB30.1	1	30				X					X
	Vehicle or car finance through bank or dealer	PTB24.1	1	24	X								X

Tanzania					ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance	
	Govt inst e.g. student loan	PTB17.1	1	17			X				X		
	Business loan	PTB25.1	1	25	X						X		
<i>Retail Credit</i>													
	Retail/Hire Purchase store account for the purchase of household goods, e.g. fridge or bed, which has a fixed credit limit, a fixed repayment period and fixed instalment amount	PTB29.1	1	29				X			X		
INSURANCE													
<i>Funeral</i>													
<i>Asset</i>													
	Vehicle or Car insurance/	PTD.1.1	1	38				X				X	
	Household content insurance (not jewellery/)	PTD.1.2	1	39				X				X	
	Building insurance	PTD.1.3	1	40				X				X	
<i>Life</i>													
	Life insurance/assurance policy with an institution/	PTD.1.5	1	42				X				X	
<i>Loss of Earnings</i>													
SAVINGS													
<i>Retirement</i>													
	Retirement annuity/*	PTD.1.7	1	44				X		X			
	Provident fund/	PTD.1.8	1	45				X		X			
	Pension fund/*	PTD.1.8	1	45				X		X			
INSURANCE													
<i>Medical</i>													
	Medical insurance/*	PTD.1.4	1	41				X				X	
<i>investments</i>													
	Education policy/plan/*	PTD.1.6	1	43				X		X			
	Insurance schemes	PTA9	1	9				X		X			
<i>Savings Clubs</i>													
	Merry go round	PTA4	1	4				X		X			
	Savings with a group of friends	PTA5	1	5						X			

Tanzania				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
Savings at MFI	PTA2	1	2		X					X		
Savings at SACCO	PTA1	1	1		X					X		
Savings at ASCA	PTA3	1	3					X		X		
Savings given to family or friends to keep	PTA6	1	6					X		X		
Savings you keep in a secret hiding place	PTA7	1	7							X		
Employer savings schemes	PTA8	1	8			X				X		
Savings in kind	PTA12	1	12					X		X		

	Uganda				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
				A8-A10									
BANK PRODUCTS													
	ATM card	A8.9	1	9	X					X			
	Debit card/Cheque card	A8.9	1	9	X					X			
	Voluntary/ compulsory at any FI	A8.1, A8.2	1	1,2	X					X	X		
	Current or Cheque account	A8.8	1	8	X					X			
	Credit Card – Visa/Master/American Express/Diners Club	A8.11	1	11	X							X	
	Fixed Deposit bank account	A8.3	1	4	X						X		
	Money transfer (includes all types)	A8.35	1	35			X	X	X	X			
CREDIT													
<i>Housing</i>	Home loan from bank or bond/mortgage to pay for a house	A8.15	1	17	X							X	
<i>Other Credit</i>	Personal loan from a bank	A8.12	1	14	X							X	
	Overdraft facility	A8.14	1	16	X							X	
	Services obtained on credit	A8.17	1	19				X				X	
<i>Retail Credit</i>													
	Retail/Hire Purchase store account for the purchase of household goods, e.g. fridge or bed, which has a fixed credit limit, a fixed repayment period and fixed instalment amount	A8.18	1	18			X					X	
	Goods obtained on credit			20				X				X	
INSURANCE													
<i>Funeral Asset</i>													
	Vehicle or Car insurance/	A8.28	1	32			X						X
	Household content insurance (not jewellery)/	A8.27	1	30			X						X
	Home owners' insurance (e.g. insurance on building)*	A8.21	1	24			X						X
<i>Life</i>													
	Life insurance/assurance policy with an institution/	A8.19	1	21			X						X
<i>Loss of Earnings</i>													

	Uganda				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
SAVINGS	Disability insurance with an institution/*	A8.25	1	28			X						X
	Disability cover from your employer/*	A8.25	1	28			X						X
	Personal injury	A8.29	1	34			X						X
<i>Retirement</i>	Retirement annuity/*	A8.23	1	26			X				X		
INSURANCE	NSSF insurance	A8.22	1	25			X				X		
<i>Medical</i>		A8.24	1	27			X						X
<i>investments</i>	Investment account (shares, etc)	A8.10	1	12			X				X		
<i>Savings Clubs</i>		A8.26	1	29			X				X		
	Stokvel/umgalelo/savings club/*	A8.11	1	13				X			X		
	Savings given to family or friends to keep	A8.5	1	5					X		X		
	Savings you keep in a secret hiding place	A8.6	1	6							X		

	Zambia				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY				
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance	
BANK PRODUCTS				Q5										
	ATM card	Q5.1	3,4	1	X					X				
	Visa electron account	Q5.2, Q5.6	3,4	2,6	X					X				
	Savings/Transaction account/	Q5.4	3,4	4	X					X	X			
	Current or Cheque account	Q5.3	3,4	3	X					X				
	Credit Card – Visa/Master/American Express/Diners Club	Q5.12	3,4	12	X							X		
	Fixed Deposit bank account	Q5.5	3,4	5	X						X			
	24 hour call account	Q5.7	3,4	7	X						X			
Bank account outside Zambia	Q5.11	3,4	11											
CREDIT	Money transfer						X	X	X	X				
	E: Q41													
	Housing		Q41.3	3,4	3	X							X	
				Q41.4	3,4	4		X					X	
				Q41.9	3,4	9		X					X	
	Other Credit			Q41.6	3,4	6		X					X	
				Q41.1	3,4	1	X						X	
				Q41.10, Q41.11	3,4	10,11				X			X	
				Q41.8	3,4	8		X					X	
				Q41.12	3,4	12				X			X	
				Q41.13	3,4	13		X					X	
	Retail Credit			Q41.2	3,4	2	X						X	
			Q41.10	3,4	10		X	X				X		
			Q41.13	3,4	13	X						X		
			Overdraft facility	Q41.13	3,4	13	X						X	
INSURANCE	G: Q59-INSURANCE													
	Funeral	Funeral insurance	Q59.4	3,4	4		X						X	
Asset														

	Zambia				ACCESS STRAND Categorization					FUNCTIONAL CATEGORY			
	Definition	Variable	Value	Reference	Formal Banked	Semi-Formal	Formal Not banked	Informal--organizational	Informal--personal	Transactions	Savings	Credit	Insurance
<i>Life Loss of Earnings</i>		Q59.1	3,4	1			X						X
		Q59.3	3,4	3			X						X
		Q59.2	3,4	2			X						X
	Property insurance	Q59.11	3,4	11			X						X
	Money insurance	Q59.12	3,4	12			X						X
	All risks	Q59.5	3,4	5			X						X
<i>SAVINGS Retirement</i>	Personal injury	Q59.10	3,4	10			X						X
	Q59	Q59.13	3,4	13			X				X		
<i>INSURANCE Medical</i>	Health cover (doctor)	Q59.7	3,4	7			X						X
		Q59.6	3,4	6			X						X
<i>investments</i>	Unit trust*	Q54.10	3,4	Q54.10			X				X		
	Savings with insurance co	Q54.20	3,4	Q54.20			X				X		
	Treasury bills	Q54.9	3,4	Q54.9	X						X		
	Invest in other countries	Q54.11	3,4	Q54.11			X				X		
<i>Savings Clubs</i>	Savings at MFI	Q54.20	3,4	Q54.20		X					X		
	Invest in a business (non agric)	Q54.7, Q54.8, Q54.13	3,4	Q54.7,8,13			X				X		
	Invest in land/ housing	Q54.1, Q54.2, Q54.3, Q54.16	3,4	Q54.1,2,3,16			X				X		
	Invest in agric uses	Q54.3, Q54.4, Q54.5	3,4	Q54.3,4,5			X				X		

ANNEX A2: THEME CATEGORIES

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
Demographics	Gender	male	Q228	Q228	Gender	1
	Urban/rural	metro	Q302	Q302	Metro	1
	Age	age	Q2001	Q2001	Age (16+)	
	Income	inc	Q203	Q203	Personal monthly income	range
	Head of Household	HeadHH		Q202	Head of household status	1
	Type of housing	house_formal		Q188	Dwelling type	1,2,3,4
	Household Income	hh_inc	Q204	Q204	Household monthly income	range
	Household Size	hh_size	Q197, Q201	Q197, Q201	Number of (adults, children) in household	sum (Q201 = 12 is 0)
	Food Scarcity	food	Q187A	Q187A	Gone without enough food to eat	1,2
	High School Education	hs_edu		Q189	Education Level	5,6,7,8,9,10,11
	Marital Status	partner		Q185	Marital Status	4
Formal Money Source	inc_source_formal		Q174.01	Q174A	Child grant	1
			Q174.02	Q174B	Any other type of state grant	1
			Q174.04	Q174D	Government old age pension	1
			Q174.05	Q174E	Disability Grant	1
			Q174.11	Q174K	Self-employed formal	1
			Q174.13	Q174M	Unemployed Insurance	1
			Q174.14	Q174N	Work for a salary/wage from a company	1
			Q174.16	Q174P	Company pension	1
	Q174.17	Q174Q	Living off returns of your investment	1		
Bank Travel Time	Under 30 minutes	time_u30	Q163	Q163	Time to get to bank	1,2,3,4,5
	Under 60 minutes	time_u60		Q163	Time to get to bank	1,2,3,4,5,6
National Document		Document	Q72D	Q72D	I don't have an identity document	1
Alternate Source	Do you use somebody else's account?	alt_bank	Q96	Q96	Use someone else's account	1
Reasons for not banking	Income	r_income	Q72B	Q72B	I don't have a regular income	1
			Q72C	Q72C	I don't have a job	1
			Q72K	Q72K	I earn too little to make it worthwhile	1

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
	Access	r_access	Q72L	Q72L	I don't have money to save	1
			Q72A	Q72A	I was declined	1
			Q72D	Q72D	I don't have an identity document	1
			Q72E	Q72E	I don't qualify to open an account	1
			Q72G	Q72G	I don't know how to open an account	1
			Q72I	Q72I	The bank is too far from where I live	1
			Q72J	Q72J	It's expensive to have a bank account	1
	Choice	r_choice	Q72F	Q72F	I don't need a bank account	1
			Q72H	Q72H	I prefer dealing in cash	1
Personal disposition	Aversion to loans	averse_loans	Q82D	Q82D	You hate owing money to anyone	1
	Aversion to technology	averse_tech	Q82N	Q82N	You avoid banking machines such as ATMs as much as possible	1
	Willing to trade earnings for safety	tradeoff		Q82I	You prefer to save where your money is safe, even if the interest or return is a little lower	1
	Avoid taking risks	averse_risk	Q82G	Q82G	To get ahead in life, one needs to take some risks	2

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
Attitude to Banks	Trust banks	trust_banks	Q83.14-4	Q84DD	You trust them - banks	1
	Trust Informal Products	trust_infs		Q86J	You don't trust informal organizations	2
	Enjoy Bank Status	bank_status	Q83.13-4	Q84CV	Having an account there gives you status in the community	1
Cellphone	Access	cell_access		Q172A-Q172C	Cell phone	1
	Ownership	cell_own				
	Access via someone else's phone	cell_other				
	Usage of airtime transfer	cell_airtime				
Primary Sampling Unit (cluster)		ea		Q18 (destring)	EA Code	
Weight		weight	Q600	Q600	Weight	N/A
Theme	Issue	Variable defined	Zambia			
			Location	Variable	Label	Value
Demographics	Gender	male	Gender	Gender	Gender of Respondent	2
	Urban/rural	metro		Region	Region	2
	Age	age	Age	Age	Age if respondent	N/A
	Income	inc	Q124	Q124	Total monthly personal income	range
	Head of Household	HeadHH		Q104	Head of Household	1
	Type of housing	house_formal		Q109	Type of dwelling	4 through 12
	Household Income	hh_inc	Q125	Q125	Total monthly household income	range
	Household Size	hh_size	Total_hhsize	Total_hhsize	Total Household Size	N/A
	Food Scarcity	food	Q23_1	Q23_1	Gone without enough food to eat	1,2,3
	High School Education	hs_edu	Q108	Q108	Highest Level of Education	5,6,7,8,9,10,11
Marital Status	partner	Q107	Q107	Marital Status	4,5	
Formal Money Source		inc_source_formal	Q27.1	Q27.1-4	Salaries/wages from a company/business	1
			Q27.7	Q27.1-4	Private pension	7
			Q27.8	Q27.1-4	State pension	8

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
			Q27.9	Q27.1-4	Maintenance grants	9
			Q27.10	Q27.1-4	Interest on financial instruments	10
Bank Travel Time	Under 30 minutes	time_u30	Q16	Q16	Time to get to bank	1,2,3,4,5
	Under 60 minutes	time_u60		Q16	Time to get to bank	1,2,3,4,5,6
National Document		Document	Q7.12	Q7.1-10	I do not have an identity document	12
Alternate Source	Do you use somebody else's account?	alt_bank	Q8	Q8	Use somebody else's bank account	1
Reasons for not banking	Income	r_income	Q7.1	Q7.1-10	I do not have a regular income	1
			Q7.2	Q7.1-10	I do not have money to put into a bank	2
			Q7.3	Q7.1-10	I do not have a job	3
	Access	r_access	Q7.4	Q7.1-10	I do not qualify to open an account	4
			Q7.6	Q7.1-10	Bank forced me to close account	6
			Q7.7	Q7.1-10	They couldn't speak my language	7
			Q7.8	Q7.1-10	I am not comfortable walking into a bank	8
			Q7.9	Q7.1-10	I do not know how to open an account	9
			Q7.10	Q7.1-10	The bank is too far	10
			Q7.11	Q7.1-10	Minimum balance is too high	11
			Q7.12	Q7.1-10	I do not have an identity document	12
			Q7.13	Q7.1-10	I do not have a reference	13
			Q7.14	Q7.1-10	It is expensive to have a bank account	14
	Q7.15	Q7.1-10	Bank Charges / Service Fees are too high	15		
	Choice	r_choice	Q7.5	Q7.1-10	I do not need a bank	5
			Q7.16	Q7.1-10	I prefer dealing in cash	16
			Q7.17	Q7.1-10	I do not trust banks	17
			Q7.18	Q7.1-10	For tax purposes	18

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
			Q7.19	Q7.1-10	User Friendly	19
Personal disposition	Aversion to loans	averse_loans	Q92.4	Q92.4	You hate owing money to anyone	1
	Aversion to technology	averse_tech	Q92.21	Q92.21	You avoid banking machines such as ATMs/Cashpoints as much as possible	1
	Willing to trade earnings for safety	tradeoff	Q92_9	Q92_9	You prefer to save where your money is safe, even if the interest rate or return is lower	1
	Avoid taking risks	averse_risk	Q92.7	Q92_7	To get ahead in life, one needs to take some risks	2
Attitude to Banks	Trust banks	trust_banks	Q19.24-1	Q19.24.1-6	You trust them	1
	Trust Informal Products	trust_infs		Q20.14	You do not trust informal associations like savings clubs	2
	Enjoy Bank Status	bank_status	Q20.22	Q20.22	The bank you use gives you status in your friend's eyes	1
Cellphone	Access	cell_access	Q93_1-Q93_12	Q93_1-Q93_12	Access to cellphone	1
	Ownership	cell_own		Q95	Own cell phone	1,2
	Access via someone else's phone	cell_other	Q95	Q95	Cellphone access through someone else	3
	Usage of airtime transfer	cell_airtime				
Primary Sampling Unit (cluster)		ea		SEA_ID	SEA ID	
Weight		weight		Final_weights_2	Weights	
Theme	Issue	Variable defined	Botswana			
			Location	Variable	Label	Value
Demographics	Gender	male	Q1C	c1sex	Q1C	1

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
	Urban/rural	metro	Q34	c5zone	c5zone	1
	Age	age		c2age	Age	range
	Income	inc	Q59A	Q59A	Personal monthly income	range
	Head of Household	HeadHH				
	Type of housing	house_formal		Q50	Type of dwelling	4 through 12
	Household Income	hh_inc	Q59B	Q59B	Household monthly income	range
	Household Size	hh_size				
	Food Scarcity	food	Q14A1	Q14A1	Gone without enough food to eat	3,4,5
	High School Education	hs_edu		c7edu	Highest level of education	5,6,7,8
	Marital Status	partner	c4marital	c4marital	Marital Status	4,5
Formal Money Source		inc_source_formal	Q32.1	Q31A1-Q31A4	Salaries/wages	1
			Q32.6	Q31A1-Q31A4	Private pension	6
			Q32.7	Q31A1-Q31A4	State pension	7
			Q32.8	Q31A1-Q31A5	Maintenance grants	8
			Q32.9	Q31A1-Q31A6	Drought relief assistance	9
			Q32.10	Q31A1-Q31A4	Welfare grants	10
			Q32.11	Q31A1-Q31A4	Interests on savings	11
			Q32.12	Q31A1-Q31A4	Return on investments	12
Bank Travel Time	Under 30 minutes	time_u30		Q9C2	distance to bank	1,2,3,4,5
	Under 60 minutes	time_u60		Q9C2	distance to bank	6,7
National Document		Document	Q4A.11	Q4A1-Q4A8	I don't have an identity document	11
Alternate Source	Do you use somebody else's account?	alt_bank				
			Q4A.15	Q4A1-Q4A8	I use somebody else's bank account (for unbanked)	15
Reasons for not banking	Income	r_income	Q4A.1	Q4A1-Q4A8	I do not have a regular income	1
			Q4A.2	Q4A1-Q4A8	I do not have a job	2
			Q4A.3	Q4A1-Q4A8	I earn too little to make it worthwhile	3
			Q4A.14	Q4A1-Q4A8	Don't have money to save	14
	Access	r_access	Q4A.4	Q4A1-Q4A8	Have to keep minimum balance in the bank	3
			Q4A.5	Q4A1-Q4A8	It's expensive to have a bank account	5
			Q4A.6	Q4A1-Q4A8	I don't want to pay service fees	6

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
			Q4A.7	Q4A1-Q4A8	Bank charges are too high	7
			Q4A.8	Q4A1-Q4A8	The bank is too far from where I live	8
			Q4A.9	Q4A1-Q4A8	I don't qualify to open an account	9
			Q4A.10	Q4A1-Q4A8	I don't know how to open an account	10
			Q4A.11	Q4A1-Q4A8	I don't have an identity document	11
			Q4A.12	Q4A1-Q4A8	They couldn't speak my language	12
	Choice	r_choice	Q4A.13	Q4A1-Q4A8	I don't need a bank account	13
			Q4A.16	Q4A1-Q4A8	I prefer dealing in cash	16
			Q4A.17	Q4A1-Q4A8	I don't trust banks	17
Personal disposition	Aversion to loans	averse_loans	Q34.4	Q34.4	You hate owing money to anyone	1
	Aversion to technology	averse_tech	Q34.21	Q34.21	You avoid banking machines such as ATMs as much as possible	1
	Willing to trade earnings for safety	tradeoff	Q34_9	Q34_9	You prefer to save your money is safe, even if the interest rate or return is a little lower	1
	Avoid taking risks	averse_risk	Q34.7	Q34.7	To get ahead in life, one needs to take some risks	2
Attitude to Banks	Trust banks	trust_banks	Q11.24-1	Q11.24.1-6	I trust them	1
	Trust Informal Products	trust_infs		Q12.14	You don't trust informal organizations	2

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
	Enjoy Bank Status	bank_status	Q12.22-1	Q12.22	The bank you use gives you status in your friend's eyes	1
Cellphone	Access	cell_access	Q36A1-Q36A10	Q36A1-Q36A10	Access to cellphone	1
	Ownership	cell_own	Q36C_1	Q36C_1	Cell phone: personally own	1,2
	Access via someone else's phone	cell_other	Q36C_1	Q36C_1	Cell phone: do not personally own	3
	Usage of airtime transfer	cell_airtime				
	Primary Sampling Unit (cluster)	ea		Locality_no	Locality_no	
Weight	weight		Within_weights	Weights		
Theme	Issue	Variable defined	Namibia			
			Location	Variable	Label	Value
Demographics	Gender	male	q1C	q1C	Gender	1
	Urban/rural	metro	q43	q43	Urban/rural	1
	Age	age	q42	q42	Age	not 99
	Income	inc	Q59A	Q59A	Income	range
	Head of Household	HeadHH	q47	q47	Head of household	1
	Type of housing	house_formal		q50	Type of dwelling	4 through 12
	Household Income	hh_inc	Q59B	Q59B	Household income	range
	Household Size	hh_size	q44tot	q44tot	Household size	number
	Food Scarcity	food		q14a_1	Gone without enough food to eat	4,5
	High School Education	hs_edu	Q49	Q49	Highest level of education	5,6,7,8
Marital Status	partner	q48	q48	Life Stage	4,5	
Formal Money Source		inc_source_formal		q31b_1-q31b_15	Salaries/wages	1
				q31b_1-q31b_15	Private pension	6
				q31b_1-q31b_15	State pension	7
				q31b_1-q31b_15	Maintenance grants	8
				q31b_1-q31b_15	Drought relief assistance	9
				q31b_1-q31b_15	Welfare grants	10
				q31b_1-q31b_15	Interests on savings	11
				q31b_1-q31b_15	Return on investments	12

Theme	Issue	Variable defined	South Africa			Value
			Location	Variable	Label	
Bank Travel Time	Under 30 minutes	time_u30		q9c	Time to get bank	5
	Under 60 minutes	time_u60		q9c	Time to get bank	6,7
National Document		Document	Q4A.11	q4a_1-q4a_9	I don't have an identity document	11
Alternate Source	Do you use somebody else's account?	alt_bank				
			Q4A.15	q4a_1-q4a_9	I use somebody else's bank account (for unbanked)	15
Reasons for not banking	Income	r_income	Q4A.1	q4a_1-q4a_9	I do not have a regular income	1
			Q4A.2	q4a_1-q4a_9	I do not have a job	2
			Q4A.3	q4a_1-q4a_9	I earn too little to make it worthwhile	3
	Access	r_access	Q4A.4	q4a_1-q4a_9	Have to keep minimum balance in the bank	4
			Q4A.5	q4a_1-q4a_9	It's expensive to have a bank account	5
			Q4A.6	q4a_1-q4a_9	I don't want to pay service fees	6
			Q4A.7	q4a_1-q4a_9	Bank charges are too high	7
			Q4A.8	q4a_1-q4a_9	The bank is too far from where I live	8
			Q4A.9	q4a_1-q4a_9	I don't qualify to open an account	9
			Q4A.10	q4a_1-q4a_9	I don't know how to open an account	10
			Q4A.11	q4a_1-q4a_9	I don't have an identity document	11
	Q4A.12	q4a_1-q4a_9	They couldn't speak my language	12		
	Choice	r_choice	Q4A.13	q4a_1-q4a_9	I don't need a bank account	13
Q4A.16			q4a_1-q4a_9	I prefer dealing in cash	16	
Q4A.17			q4a_1-q4a_9	I don't trust banks	17	
Personal disposition	Aversion to loans	averse_loans	Q34.4	q34_4	You hate owing money to anyone	1

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
	Aversion to technology	averse_tech	Q34.21	q34_21	You avoid banking machines such as ATMs as much as possible	1
	Willing to trade earnings for safety	tradeoff		q12_11	You are prepared to pay more money to have someone you trust handle your money	1
	Avoid taking risks	averse_risk				
Attitude to Banks	Trust banks	trust_banks	Q11.24-1	q_11_24_1-q_11_24_8	I trust them	1
	Trust Informal Products	trust_infs		Q12.14	You don't trust informal associations like savings clubs	2
	Enjoy Bank Status	bank_status				
Cellphone	Access	cell_access		q36a_1-q36a_4	Cellphone access	1
	Ownership	cell_own		q36c_1-q36c_2	Cellphone ownership	1,2
	Access via someone else's phone	cell_other		q36c_3	Do not personally own cellphone	3
	Usage of airtime transfer	cell_airtime				
Primary Sampling Unit (cluster)		ea		ea	ea Enumerator Area	
Weight		weight	withinweight	withinweight	weight	
Theme	Issue	Variable defined	Uganda			
			Location	Variable	Label	Value
Demographics	Gender	male		Sex	Gender	1
	Urban/rural	metro		Area	Area	1
	Age	age		Actual	Actual age of respondent	number
	Income	inc				
	Head of Household	HeadHH		Head_HHh	Relationship to head of household	1
	Type of housing	house_formal		Roof, Floor, Wall	Housing conditions	Roof <= 4 & Wall <= 5 & Floor <= 2

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
	Household Income	hh_inc		Hhld_income_crop, Hhld_income_non_agric	Household Income	sum of 2 variables
	Household Size	hh_size				
	Food Scarcity	food			NO CRYING QUESTION - SEE end of survey for related	
	High School Education	hs_edu		Education	Educational Level	14,15,16,17 (not 99)
	Marital Status	partner		Marital	Marital Status	1,2,3 (not *)
Formal Money Source		inc_source_formal		A 1 1	Pension	1
				A 1 14	Employed in the formal scetor	1
				A 1 19	Investing in like shares, stocks	1
Bank Travel Time	Under 30 minutes	time_u30				
	Under 60 minutes	time_u60		E3	Time to get to bank	1
National Document		Document				
Alternate Source	Do you use somebody else's account?	alt_bank		F9	I use someone else's account	1
Reasons for not banking	Income	r_income	QA13.2	A13_2	I earn too little to open and maintain an account	1
			QA13.3	A13_3	Don't have money to save	1
			QA13.4	A13_4	Don't have a regular income	1
	Access	r_access	QA13.1	A13_1	Don't want to pay service fees	1
			QA13.5	A13_5	I can't afford to open an account	1
			QA13.6	A13_6	The financial institution is too far from where I live or stay	1
			QA13.10	A13_10	It takes long to get money from the institution	1
			QA13.11	A13_11	I can't read or write	1
			QA13.12	A13_12	I don't have a referee	1
			QA13.13	A13_13	I don't qualify to open an account	1

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
			QA13.14	A13_14	I don't know how to open an account	1
			QA13.15	A14_15	I couldn't speak their language	1
	Choice	r_choice	QA13.7	A13_7	I prefer to use other options than a bank	1
			QA13.16	A13_16	I don't need an account	1
			QA13.17	A13_17	I don't trust BOU regulated financial institutions	1
			QA13.18	A13_18	I don't trust semi-formal institutions	1
Personal disposition	Aversion to loans	averse_loans	K6.4	k6_4	I hate owing money to anyone	1
	Aversion to technology	averse_tech				
	Willing to trade earnings for safety	tradeoff		k6_9	I prefer to save where my money is safe, even if the interest rate or return is a little lower	1
	Avoid taking risks	averse_risk	K6.7	k6_7	To get ahead in life, one needs to take some risks	1
			K6.31	k6_31	I avoid taking risks with my money and resources	1
Attitude to Banks	Trust banks	trust_banks	K1.2	k1_2	I trust formal commercial banks	1
	Trust Informal Products	trust_infs				
	Enjoy Bank Status	bank_status	K1.12	k1_112	My financial institution gives me status in the eyes of my friends and family members	1
Cellphone	Access	cell_access	K2.1	k2_1	Access to cell phone	1
	Ownership	cell_own				
	Access via someone else's phone	cell_other				

Theme		Issue	Variable defined	South Africa			
				Location	Variable	Label	Value
		Usage of airtime transfer	cell_airtime				
Primary Sampling Unit (cluster)			ea		EA	EA/LC1	
Weight			weight		WEIGHTS2	weight	
Theme		Issue	Variable defined	Tanzania			
				Location	Variable	Label	Value
Demographics	Gender	male			SEX4a	Gender	1 (not 4)
	Urban/rural	metro			Setting	SETTING	1
	Age	age			AGE5	Actual Age	(not 999)
	Income	inc	D13		D13b_1	Personal Income	
	Head of Household	HeadHH			REL3a	Relationship	3
	Type of housing	house_formal			Roof3, Roof4, Roof5, Roof6, Floor2, Floor3, Walls	Type of dwelling	
	Household Income	hh_inc	D13b		D13b_2	Household Income	
	Household Size	hh_size					
	Food Scarcity	food			D9_1	Gone without food to eat	1,2
	High School Education	hs_edu			D3	Level of education	5,6,7
Marital Status	partner						
Formal Money Source			inc_source_formal	M1.1	M1_1	Pension that you receive	1
				M1.13	M1_13	Employed in the formal sector	1
				M1.17	M1_17	Earning money from investments, eg shares, stocks	1
Bank Travel Time	Under 30 minutes		time_u30				

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
	Under 60 minutes	time_u60		A5	Time to get to bank (x2)	1
National Document		Document	B2.23	B2_23	I don't have documents to open an account	1
Alternate Source	Do you use somebody else's account?	alt_bank	B2.8	B2_8	I use someone else's bank account	1
Reasons for not banking	Income	r_income	B2.1	B2_1	I don't have a regular income	1
			B2.2	B2_2	I do not have a job	1
			B2.14	B2_14	I have too little to make it worthwhile	1
			B2.17	B2_17	I don't have money to save	1
	Access	r_access	B2.3	B2_3	You are too young to open an account yourself	1
			B2.4	B2_4	I don't qualify to open an account	1
			B2.5	B2_5	I have to keep a minimum balance in the bank	1
			B2.7	B2_7	I don't know how to open a bank account	1
			B2.11	B2_11	I don't want to pay service fees	1
			B2.12	B2_12	The bank is too far from where I live	1
			B2.13	B2_13	It's expensive to have a bank account/I can't afford to	1
			B2.15	B2_15	Bank charges are too high	1
			B2.16	B2_16	They do not speak my language	1
			B2.18	B2_18	I don't have a referee	1
	Choice	r_choice	B2.19	B2_19	It takes too long to get my money	1
			B2.22	B2_22	Banks are not for people like me	1
			B2.23	B2_23	I don't have documents to open an account	1
			B2.6	B2_6	I don't need a bank account	1
			B2.9	B2_9	I prefer dealing in cash	1
			B2.10	B2_10	I don't trust banks	1
			B2.20	B2_20	I prefer to use alternative financial service providers	1
B2.21	B2_21	They are rude	1			

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
Personal disposition	Aversion to loans	averse_loans	FP1.3	FP1_3	You hate owing money to anyone	1
	Aversion to technology	averse_tech		B3_12	You are prepared to learn how to use new technologies	2
	Willing to trade earnings for safety	tradeoff		FP1_7	You prefer to save where your money is safe, even if your returns are low	1
	Avoid taking risks	averse_risk				
	Trust banks	trust_banks				
Attitude to Banks	Trust Informal Products	trust_infs		B3_11	You don't trust informal institutions like Upatu or savings clubs	2
	Enjoy Bank Status	bank_status		B3_18	The bank you use gives you status in your friend's eyes	1
	Access	cell_access	M2	M2a_1-Ma2_5	Access to cell phone	1
Cellphone	Ownership	cell_own		M2a_3, M2a_4, M2a_5	Own cell phone	1
	Access via someone else's phone	cell_other		M2a_2	You do not have your own cell phone but you use someone else who lives in your house	1
	Usage of airtime transfer	cell_airtime		M2a_9	You use your phone to send airtime to friends	1
	Primary Sampling Unit (cluster)	ea		EA	EA	
Weight	weight		WEIGHTS	weight		
Theme	Issue	Variable defined	Kenya			
			Location	Variable	Label	Value
Demographics	Gender	male	Gender	Gender	Gender	1
	Urban/rural	metro		Cluster_type	Cluster Type	2
	Age	age	ActualAge	ActualAge	Respondent Actual Age	Range
	Income	inc				
	Head of Household	HeadHH				

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
	Type of housing	house_formal		J1	Housing Conditions	1
	Household Income	hh_inc				
	Household Size	hh_size		TNoHHM	Total number of household members	N/A
	Food Scarcity	food		I1_1	Gone without enough food to eat	1,2
	High School Education	hs_edu	Education	Education	Highest Level of Education	5,6,7
	Marital Status	partner	Life_stage	Life_stage	Respondent Life Stage	4
Formal Money Source		inc_source_formal	B1.1	B1_1	Pension that you receive	1
			B1.11	B1_11	Employed by the gov't	1
			B1.12	B1_12	Employed in the private sector - 50+ people	1
			B1.13	B1_13	Employed in the private sector - 10-49 ppl	1
			B1.14	B1_14	Employed in the private sector - less than 10 ppl	1
			B1.20	B1_20	Earning money from investments	1
Bank Travel Time	Under 30 minutes	time_u30				
	Under 60 minutes	time_u60		A15b	Time to get to bank	1
National Document		Document	A16a.14	A16a_14	You don't have a national ID	1
Alternate Source	Do you use somebody else's account?	alt_bank				
			A16a.11	A16a__11	You use someone else's account	1
Reasons for not banking	Income	r_income	A16a.4	A16a_4	You don't have a regular income	1
			A16a.6	A16a_6	You can't afford to	1
			A16a.17	A16a_17	You earn too little to make it worthwhile	1
			A16a.3	A16a_3	You don't have money to save	1
	Access	r_access	A16a.2	A16a_2	You have to keep a minimum balance in the bank	1
			A16a.5	A16a_5	It's expensive to have a bank account	1
			A16a.7	A16a_7	The bank is too far from where you live	1
			A16a.12	A16a_12	It takes too long to get your money	1
			A16a.13	A16a_13	You do not have a job	1

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
			A16a.14	A16a_14	You don't have a national ID	1
			A16a.15	A16a_15	You can't read or write	1
			A16a.16	A16a_16	You don't have a referee	1
			A16a.18	A16a_18	You don't qualify to open an account	1
			A16a.19	A16a_19	You are too young to have a bank account	1
			A16a.20	A16a_20	You don't know how to open an account	1
			A16a.21	A16a_21	They can't speak your language	1
			A16a.25	A16a_25	You are not allowed to open account by your partner/spouse	1
	Choice	r_choice	A16a.1	A16a_1	You don't want to pay service fees	1
			A16a.8	A16a_8	You prefer dealing in cash	1
			A16a.9	A16a_9	You prefer to use other options rather than a bank	1
			A16a.10	A16a_10	It's cheaper to use someone's else's account	1
			A16a.11	A16a_11	You use someone else's bank account	1
			A16a.22	A16a_22	You don't need a bank account	1
			A16a.23	A16a_23	You don't trust banks	1
Personal disposition	Aversion to loans	averse_loans		I2_2	You hate owing money to anyone	1
	Aversion to technology	averse_tech				
	Willing to trade earnings for safety	tradeoff		I2_12	You are prepared to pay more money to have someone you trust handle your money	1
	Avoid taking risks	averse_risk		I2_20	You avoid taking risks with your money or resources	1
	Trust banks	trust_banks				
Attitude to Banks	Trust Informal Products	trust_infs		I2_14	You don't trust informal associations like shamas	2

Theme	Issue	Variable defined	South Africa			
			Location	Variable	Label	Value
	Enjoy Bank Status	bank_status		I2_19	Having a bank account gives you status in your friends' eyes	1
Cellphone	Access	cell_access		J12	Cell phone	2,3
	Ownership	cell_own		J12	You have your own mobile/cell phone which you use	3
	Access via someone else's phone	cell_other		J12	You do not have your own mobile/cell phone but you use someone else's	2
	Usage of airtime transfer	cell_airtime				
Primary Sampling Unit (cluster)		ea		Cluster_No	Cluster Number	
Weight		weight		weights	Weights	

ANNEX B: SPECIFIC DATA ISSUES

Variable	Issue	Our approach
Employment	There is little consistency in employment questions. SA (Q205) delineates part-time/full-time as well as formal/informal employment. Tanzania (D11-D13) delineates self-employed versus paid agriculture and business. Uganda has no specific employment questions. Botswana and Namibia delineate full-time/part-time but not formal/informal. Zambia (Q27) offers both formal/informal employment but not full-time/part-time. Kenya (B1) offers formal/informal employment.	Employment was not included in our analysis.
Aversion to technology	There are two questions: "I avoid using ATMs at all costs" and "I am prepared to learn how to use technology", but neither question is asked in all surveys. "I avoid using ATMs..." is not asked in Uganda, Tanzania, or Kenya, and "I am prepared...technology" is not asked in SA, Namibia, Uganda, or Kenya.	SA, Namibia, Botswana, Zambia and Kenya used "I avoid using ATMs at all costs", and Tanzania coded a negative response to "I am prepared to learn how to use technology". The variable is null in Uganda and Kenya.
Income	Uganda and Kenya do not have questions that record personal income. Kenya and Tanzania do not record household income either. Since many respondents list lack of income as a reason for not banking, the surveys could better capture the behavior of the poor, unbanked by recording more narrow income groupings among the very poor.	Personal income is null in Uganda and Kenya, and household income is null in Kenya and Tanzania.
Food	Uganda asks specific dietary questions but does not have "crying questions".	The food variable is null in Uganda.
Distance to Bank	SA, Zambia, Namibia delineate time within 5 minutes. Uganda (E3), Kenya (A15), and Tanzania (A5) only distinguish increments greater than 1 hour. Tanzania asks for total time (to and from). The surveys only list a respondent's time to bank if, in fact, he or she is already banked. In order to better understand the prohibitive effects of banking, it would be useful to have travel time to the bank for those that are unbanked. (This may be accessible through supply side data.)	Distance to bank is not used in the access frontier, but the country-level data records time under 30 minutes and time under 60 minutes where available.
Document	Uganda survey (A13) does not ask whether a respondent is not opening an account due to lack of documentation. This issue is relevant to the potential banked calculations (access frontier).	Documentation is not used in the access frontier.
Aversion to Risk	There is no one question that captures risk aversion across all questions. The statement, "To get ahead in life, one needs to take some risks" is asked in SA, Zambia, Botswana, and Uganda. Alternatively, Uganda and Kenya ask, "I avoid taking risks with my money and resources". The questions alternate between first and second person.	South Africa, Zambia, Botswana, and Uganda code a negative response to the question, "To get ahead in life, one needs to take some risks". Kenya is coded positively for "I avoid taking risks with my money and resources". Namibia and

Tradeoff (willingness to sacrifice earnings for safety)	SA, Botswana, Zambia, Tanzania and Uganda ask, “You prefer to save where your money is safe, even if your returns are low,” while Namibia and Kenya ask, “You are prepared to pay more money to have someone you trust handle your money.” The latter question receives a much lower positive response rate than the first statement. Uganda uses first person where all other surveys use second person.	Tanzania are omitted. All survey questions are coded																																								
Cell phone	Cell phone information is limited. ‘X’ indicates that the survey asks a question concerning cell phone access, cell phone ownership, use other person’s cell phone, and send airtime minutes to another person:	The data is coded as available.																																								
	<table border="0"> <thead> <tr> <th></th> <th>SA</th> <th>NA</th> <th>BO</th> <th>ZA</th> <th>TA</th> <th>UG</th> <th>KE</th> </tr> </thead> <tbody> <tr> <td>Access</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>Ownership</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>Use other</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>X</td> </tr> <tr> <td>Send mins</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>X</td> </tr> </tbody> </table>		SA	NA	BO	ZA	TA	UG	KE	Access	X	X	X	X	X	X	X	Ownership		X	X	X	X	X	X	Use other		X	X	X	X		X	Send mins					X		X	
	SA	NA	BO	ZA	TA	UG	KE																																			
Access	X	X	X	X	X	X	X																																			
Ownership		X	X	X	X	X	X																																			
Use other		X	X	X	X		X																																			
Send mins					X		X																																			
Weights	South Africa, Uganda, Tanzania, and Kenya use frequency weights while Namibia, Botswana, and Zambia use analytic weights.	All countries are reweighted to frequency weights based on estimates of adult population.																																								
Reasons for not banking	South Africa, Tanzania, Uganda, and Kenya have indicator variables for each reason for not banking, whereas Namibia, Botswana, and Zambia are coded for response #1, response #2, etc. Indicator variables may be more accurate since they allow for “Don’t know” responses—otherwise, we must assume a negative response for each null value.	All questions are assumed negative if not included identified within one of the numbered response																																								
Trust Banking	There are no questions concerning trust of banks in Tanzania or Kenya.	The variable is null in Tanzania and Kenya.																																								
Trust Informal Products	All countries except Uganda ask “You don’t trust informal organizations...”. In Tanzania, the question is only asked to those currently or previously banked. (This yields a lower trust rate than other countries). Alternatively, South Africa, Namibia, Botswana, Zambia, and Uganda list “I trust X” for specific informal products.	The negative response “You don’t trust informal organizations...” is negatively coded in all countries (including Tanzania) and Uganda is omitted.																																								
Household Size	Household size is not listed in Uganda or Tanzania.	This variable is omitted in Uganda and Tanzania.																																								
Type of Housing	Specified informal and formal housing are listed for all countries except Tanzania and Uganda. Tanzania list specific roof, floor, and wall characteristics	Formal was based on non-earthen, permanent characteristics of floors, walls, and roof. (See coding for specific characteristics.)																																								
Marital	Tanzania does not list marital status	This variable is omitted in Tanzania.																																								

Status

Overview of Uganda:

The dataset is missing information key information, most notably personal income and household size. While there is specific information on the diet of the respondent (Section L), there are no "crying questions" that would facilitate cross-country analysis. The survey also does not contain questions that elicit the respondent's disposition toward technology (i.e. "You avoid banking machines such as ATMs as much as possible"), and there is limited information on cell phone usage save the respondent's access (k2_1). Questions that denote ownership or type of usage (transferring minutes) would enable a greater understanding of technological potential.

Creating an access strand is difficult given the language of the questions in A8. Questions A8_1 and A8_2 allow for savings in any financial institution or group, rendering a difficult distinction between formal and informal savings. Similarly, money transfers.

Minor issue: The numbering of A8 questions in the data set is not consistent with the survey order. There is no #10 in the survey, and the data set omits question 7 – "others specify"), so that each question is numbered incorrectly by 1 or 2 places.

Other data issues:

- Zambia – Q54D_20 "Savings at MFI" is missing in dataset
- Namibia Q59A/B are not user-friendly – use number values rather than letters
- Botswana – variables are not labelled in the database

ANNEX C: DETAILED RESULTS**Table C1: Landscape of access—country level (cf Section 3.1)**

	All	Southern Africa (3)	LIC (4)	South Africa	Botswana	Namibia	Kenya	Tanzania	Uganda	Zambia
Transactions	40.5	61.5	28.4	62.00	54.00	54.00	31.00	17.00	49.00	14.00
Savings	56	48	60.7	48.00	48.00	50.00	63.00	59.00	71.00	34.00
Credit	26.6	27.5	26.1	28.00	20.00	22.00	34.00	18.00	37.00	5.00
Insurance	17.7	42.8	3.2	44.00	24.00	28.00	4.00	3.00	2.00	4.00

Table C2: Reconciling access strand to locally reported measures (cf Section 3.2)

	Botswana	Namibia	South Africa	Kenya	Tanzania	Uganda	Zambia
A. Access strand--consistent basis							
Banked	44	53	54	17	15	18	14
Formal Other	5	3	6	2	2	0	12
Informally included	5	1	9	31	7	29	11
Excluded	46	42	31	43	75	52	62
B. Access strand—self-reported							
Banked	43	51.1	50	19	9	na	14.6
Formal Other	6	2.8	7				7.8
Semi formal*				8	2	na	
Informally included	5	0.9	9	35	35	na	11.3
Excluded	46	45.2	33	38	54	na	66.3
C. Differences							
Banked	1	2	4	-2	6	Na	0
Formal Other	-1	0	-1	2	2	Na	4
Informally included	0	0	0	-4	-28	Na	0
Excluded	0	-3	-2	5	21	Na	-4

*: semi-formal: used only in Kenya & Tz; allocated here to informal

Notes on differences:

1. SA banked/ Tanzanian banked: in this report, banked includes sending a remittance with a bank as well as several other categories such as personal loan from a bank which is not in the narrow definition of banked, hence the slightly higher proportion
2. Tanzania informally included: the self-reported definition included categories of personal informal financial service such as a loan from friends or family, which are not considered a financial service per se in the other countries. Hence the self reported informal included is much higher than the consistent definition; and conversely for the excluded.
3. Uganda: self reported access strand not available at time of finalization of report; due for release in August 2007.

Table C3: Econometric results (cf Section 4.1)**(a) Test of Differences between Countries (p-value)**(fail to reject at 95% significance level in **bold** i.e. significant similarity)

	South Africa	Namibia	Botswana	Zambia	Tanzania	Uganda	% banked	% of total population (weighted)
<i>Probability Banked (Regression 3)</i>								
South Africa							54%	100%
Namibia	0.00						53%	100%
Botswana	0.38	0.05					44%	100%
Zambia	0.00	0.00	0.00				14%	100%
Tanzania	0.00	0.00	0.00	0.00			15%	100%
Uganda	0.00	0.00	0.00	0.00	0.34		18%	100%
Kenya	0.00	0.00	0.00	0.00	0.45	0.07	17%	100%
<i>Probability Banked in Rural (4)</i>								
South Africa							44%	62%
Namibia	0.07						39%	56%
Botswana	0.04	1.00					38%	67%
Zambia	0.00	0.00	0.00				9%	65%
Tanzania	0.00	0.00	0.00	0.01			11%	72%
Uganda	0.00	0.00	0.00	0.00	0.12		17%	75%

	South Africa	Namibia	Botswana	Zambia	Tanzania	Uganda	% banked	% of total population (weighted)
Kenya	0.00	0.00	0.00	0.04	0.20	0.00	14%	76%

Probability Banked in Urban (4)

	South Africa	Namibia	Botswana	Zambia	Tanzania	Uganda	Kenya	% banked	% of total population (weighted)
South Africa								70%	38%
Namibia	0.11							72%	44%
Botswana	0.24	0.02						58%	33%
Zambia	0.08	0.00	0.76					25%	35%
Tanzania	0.00	0.00	0.39	0.54				23%	28%
Uganda	0.01	0.00	0.25	0.34	0.66			19%	25%
Kenya	0.22	0.01	0.82	0.52	0.16	0.09		30%	24%

Probability Banked within Non-High School Educated (5)

	South Africa	Namibia	Botswana	Zambia	Tanzania	Uganda	Kenya	% banked	% of total population (weighted)
South Africa								39%	63%
Namibia	0.80							38%	59%
Botswana	0.03	0.12						32%	65%
Zambia	0.00	0.00	0.00					4%	72%
Tanzania	0.00	0.00	0.00	0.00				10%	86%
Uganda	0.00	0.00	0.00	0.00	0.02			16%	87%
Kenya	0.00	0.00	0.00	0.00	0.26	0.00		9%	75%

Probability Banked within High School Educated (5)

	South Africa	Namibia	Botswana	Zambia	Tanzania	Uganda	Kenya	% banked	% of total population (weighted)
South Africa								80%	37%
Namibia	0.24							76%	41%
Botswana	0.21	0.78						68%	35%
Zambia	0.00	0.00	0.00					42%	28%
Tanzania	0.27	1.00	0.80	0.00				43%	14%
Uganda	0.00	0.00	0.00	0.00	0.00			27%	13%
Kenya	0.80	0.34	0.28	0.00	0.37	0.00		43%	25%

Probability Banked Among Males (6)

	South Africa	Namibia	Botswana	Zambia	Tanzania	Uganda	% banked	% of total population (weighted)
1 South Africa							54%	50%
Namibia	0.00						58%	48%
Botswana	0.00	0.02					47%	47%
Zambia	0.00	0.00	0.00				17%	51%
Tanzania	0.00	0.00	0.00	0.00			18%	48%
Uganda	0.00	0.00	0.00	0.01	0.45		19%	48%
Kenya	0.00	0.00	0.00	0.00	0.85	0.54	22%	48%

Probability Banked Among Females (6)

South Africa							53%	50%
Namibia	0.10						49%	52%
Botswana	0.84	0.20					42%	53%
Zambia	0.12	0.73	0.27				11%	49%
Tanzania	0.20	0.77	0.34	1.00			12%	52%
Uganda	0.14	0.01	0.15	0.01	0.02		18%	52%
Kenya	0.02	0.69	0.07	0.39	0.47	0.00	13%	52%

Reasons for Not Banked - Income (A1)

	Namibia	Botswana	Zambia	Tanzania	Uganda			
South Africa						91%	46%	
Namibia	0.00					82%	47%	
Botswana	0.92	0.00				91%	56%	
Zambia	0.00	0.17	0.00			85%	86%	
Tanzania	0.00	0.42	0.00	0.01		80%	85%	
Uganda	0.00	0.00	0.00	0.00	0.00	60%	82%	
Kenya	0.10	0.01	0.21	0.01	0.00	0.00	87%	83%

Reasons for Not Banked - Access (A2)

South Africa						14%	46%
--------------	--	--	--	--	--	-----	-----

Reasons for Not Banked - Income (A1)

	Namibia	Botswana	Zambia	Tanzania	Uganda		
Namibia	0.00					22%	47%
Botswana	0.16	0.11				17%	56%
Zambia	0.00	0.16	0.00			26%	86%
Tanzania	0.00	0.00	0.00	0.00		54%	85%
Uganda	0.00	0.00	0.00	0.02	0.00	33%	82%
Kenya	0.00	0.00	0.00	0.00	0.00	0.84	43% 83%

Reasons for Not Banked - Choice (A3)

South Africa						7%	46%
Namibia	0.41					6%	47%
Botswana	0.18	0.63				5%	56%
Zambia	0.00	0.01	0.00			9%	86%
Tanzania	0.00	0.00	0.00	0.00		17%	85%
Uganda	0.54	0.19	0.07	0.19	0.00	8%	82%
Kenya	0.00	0.00	0.00	0.00	0.01	0.00	21% 83%

Table C3: Econometric results (cf Section 4.1)
(b) CROSS COUNTRY PROBIT TESTING

	Banked Probit Regression					Financial Services Index Ordered Probit Regression				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
female	-0.067* (0.030)	-0.088** (0.033)	-0.093** (0.033)	-0.093** (0.033)	-0.039 (0.057)	-0.026 (0.026)	-0.033 (0.027)	-0.040 (0.027)	-0.042 (0.027)	-0.008 (0.055)
age_100	1.016*** (0.108)	0.835*** (0.118)	0.838*** (0.119)	0.854*** (0.117)	0.834*** (0.119)	1.239*** (0.093)	1.020*** (0.098)	1.006*** (0.098)	1.045*** (0.097)	1.019*** (0.098)
age2_100	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
urban	0.351*** (0.044)	0.396*** (0.044)	0.531*** (0.079)	0.374*** (0.044)	0.397*** (0.044)	0.228*** (0.040)	0.279*** (0.041)	0.524*** (0.081)	0.269*** (0.041)	0.279*** (0.040)
hs_edu	1.125*** (0.036)	1.039*** (0.037)	1.036*** (0.038)	1.121*** (0.067)	1.036*** (0.037)	1.019*** (0.035)	0.882*** (0.036)	0.882*** (0.036)	1.053*** (0.072)	0.882*** (0.036)
namibia		-0.065 (0.073)	-0.171 (0.093)	-0.023 (0.086)	0.017 (0.090)		-0.206* (0.082)	-0.352*** (0.095)	-0.239** (0.090)	-0.108 (0.100)
botswana		-0.233*** (0.069)	-0.171* (0.082)	-0.181* (0.084)	-0.224** (0.087)		-0.326*** (0.075)	-0.307*** (0.091)	-0.320*** (0.087)	-0.338*** (0.093)
zambia		-1.244*** (0.067)	-1.152*** (0.092)	-1.451*** (0.094)	-1.184*** (0.073)		-0.892*** (0.051)	-0.741*** (0.062)	-0.837*** (0.056)	-0.843*** (0.062)
tanzania		-0.969*** (0.064)	-0.860*** (0.087)	-0.934*** (0.070)	-0.907*** (0.080)		-1.062*** (0.060)	-0.972*** (0.079)	-1.041*** (0.063)	-1.009*** (0.074)
uganda		-0.903*** (0.062)	-0.681*** (0.102)	-0.759*** (0.066)	-0.971*** (0.074)		-0.825*** (0.060)	-0.523*** (0.083)	-0.704*** (0.064)	-0.828*** (0.070)

	Banked Probit Regression					Financial Services Index Ordered Probit Regression				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
kenya		-1.017*** (0.052)	-0.967*** (0.062)	-1.015*** (0.062)	-0.923*** (0.068)		-0.567*** (0.048)	-0.426*** (0.053)	-0.462*** (0.051)	-0.573*** (0.062)
namibia_urban			0.239 (0.148)				0.318* (0.162)			
botswana_urban			-0.177 (0.151)				-0.045 (0.160)			
zambia_urban			-0.228 (0.131)				-0.436*** (0.103)			
tanzania_urban			-0.310** (0.116)				-0.270* (0.111)			
uganda_urban			-0.369** (0.131)				-0.547*** (0.121)			
kenya_urban			-0.142 (0.116)				-0.491*** (0.112)			
namibia_edu				-0.122 (0.103)					0.061 (0.110)	
botswana_edu				-0.158 (0.125)					-0.036 (0.127)	
zambia_edu				0.348** (0.108)					-0.182 (0.097)	
tanzania_edu				-0.122 (0.111)					-0.016 (0.107)	

	Banked Probit Regression					Financial Services Index Ordered Probit Regression				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
uganda_edu			-0.808*** (0.110)						-0.665*** (0.110)	
kenya_edu			-0.024 (0.096)						-0.396*** (0.088)	
namibia_female					-0.159 (0.095)					-0.188* (0.095)
botswana_female					-0.019 (0.096)					0.022 (0.098)
zambia_female					-0.126 (0.081)					-0.101 (0.070)
tanzania_female					-0.126 (0.098)					-0.106 (0.083)
uganda_female					0.138 (0.094)					0.006 (0.086)
kenya_female					-0.199* (0.084)					0.010 (0.068)
_cons	-1.304*** (0.055)	-0.658*** (0.062)	-0.704*** (0.066)	-0.680*** (0.064)	-0.682*** (0.067)					

Note: Banked is dummy variable for whether or not the respondent is banked, and the Financial Services Index is as follows: (0 = excluded, 1 = informally included only, 2 = semiformally included, 3 = formally included not banked, 4 = banked). South Africa dummy variable is omitted. Kenya and Tanzania are not included in regression (2) since the surveys are missing data on income and household size, respectively. Standard errors that are corrected for clustering at the enumeration area level are in parentheses (*p<0.05, **p<0.01, ***p<0.001).

Table C3: Econometric results (cf Section 4.1)
(c) CROSS COUNTRY ANALYSIS OF REASONS FOR NOT BEING BANKED

	Probit Regression		
	(A1) Income	(A2) Access	(A3) Choice
female	0.144*** (0.038)	-0.092** (0.033)	-0.126** (0.039)
age_100	-0.215 (0.470)	-1.396*** (0.415)	0.666 (0.485)
age2_100	-0.001 (0.005)	0.012** (0.004)	-0.002 (0.005)
urban	0.170*** (0.048)	-0.053 (0.043)	0.085 (0.049)
hs_edu	-0.310*** (0.054)	-0.235*** (0.046)	-0.104* (0.050)
namibia	-0.446*** (0.101)	0.328*** (0.090)	-0.097 (0.119)
botswana	-0.010 (0.102)	0.149 (0.105)	-0.166 (0.125)
zambia	-0.311*** (0.085)	0.443*** (0.073)	0.174* (0.082)
tanzania	-0.525*** (0.086)	1.168*** (0.074)	0.532*** (0.080)
uganda	-1.246*** (0.078)	0.594*** (0.073)	0.061 (0.099)
kenya	-0.122 (0.074)	0.605*** (0.067)	0.689*** (0.076)
_cons	1.375*** (0.122)	-0.685*** (0.106)	-1.635*** (0.123)
N	15593	15593	15593