The World Bank
Financial Sector Vice-Presidency

MEASURING FINANCIAL ACCESS

Outlining the Scope of Current Data Collection Efforts

As part of the International Year of Microcredit, spearheaded by UNCDF, many organizations have been reviewing the policy and research agenda surrounding access to financial services of low income households and enterprises. The World Bank has accelerated its collection and publication of relevant data, and its research based on such data and, together with the International Monetary Fund, the UK Department for International Development (DFID) and other development partners, has been developing a clearer framework for data collection in this area. This note provides a brief overview of the issues and opportunities that have been identified in this new wave of data work on financial access.

Why data on financial access?

It stands to reason that being excluded from direct access to finance must represent a barrier to prosperity for the poor, and to growth and productivity improvements for micro and small-scale enterprises. But the evidence that could guide public policy initiatives remains thin and tentative largely due to inadequate data sources.

Numerous case studies illustrate the poverty-reducing potential of direct access to financial services. But in order to verify, quantify and understand more fully the policy implications as well as the business opportunities in this complex area, much more comprehensive data is needed. Already, using internationally comparable data on financial depth, recent research findings have discovered that financial depth is not only associated with higher growth rates, but also has an additional pro-poor effect.[1] These findings strongly suggest that policy for strengthening financial systems generally can have an important effect on reducing poverty – and that is before taking any explicit account of whether the poor themselves enjoy direct access to modern financial services. Because access to financial services is skewed to varying degrees, there is no assurance that a deeper financial system is one that has more access for the poor. It is along this dimension that data is most lacking, especially when one realizes that financial services are provided to poor people not only through the formal financial system, but also – in varying degrees – by semi-formal and informal financial institutions.

Greater availability of data can help unlock the answers to a variety of key policy-relevant questions. How well does the financial system in different countries directly serve the poor and the enterprises which employ poor people? Who are the excluded or underserved? Which types of direct access to financial services have the greatest impact on reducing poverty and lifting growth rates in deprived districts and regions? How does financial sector access affect the efficiency of micro- and small-scale enterprises? What are the chief obstacles to access (including direct and indirect costs, regulations, product quality and design, social exclusion aspects)? What policy interventions and institutional arrangements can improve access for underserved groups? Are existing policy interventions geared at improving access actually working?

Data on access is relevant for market participants also. It can help determine what kinds of organizational and product strategies are effective in allowing specialized MFIs to provide extensive outreach while achieving financial viability. Potential formal financial service providers are often discouraged by the lack of market intelligence. Greater availability of the appropriate data can help identify underserved segments enabling banks and other intermediaries to adapt their operations to serve this potential market profitably, opening up lucrative business opportunities and resulting in greater outreach.[2]

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[1] Beck, Demirgüç-Kunt and Levine (2004); Honohan (2004). Furthermore, financial sector development has been shown to relax the constraints on small firms the most (Beck, Demirgüç-Kunt and Maksimovic, 2005; Beck, Demirgüç-Kunt, Laeven and Levine, 2005).

[2] This last question is becoming more relevant as policy design shifts from supporting specific lending arrangements to the broader macro and meso-level.

Limitations of existing data

Despite the existence of numerous extensive financial databases,[3] our knowledge in most countries of the degree to which effective and low-cost financial services reach small enterprises, low and middle-income households and other less privileged segments of society is very limited. Recognizing this deficiency, development partners have begun a new push to fill the gaps in national financial access data.

– Over the past few years several extensive household surveys specialized on financial sector access issues have already been carried out in Brazil, India, Colombia, Mexico, Romania, and in Southern Africa among others. In addition, other broader household surveys, including general household surveys conducted by national statistical offices, have included significant financial sector access modules[4]

– The latest rounds of the World Bank's Investment Climate enterprise surveys (http://rru.worldbank.org/InvestmentClimate/) conducted in almost 60 countries, have also sought to explore questions of financial sector access by the surveyed companies; indeed, analysis of these surveys has shown that finance is seen as generating the most binding constraint of the overall business environment (Ayyagari et al. 2005). The World Bank's "Doing Business" surveys have also covered expert assessments of certain elements of the relevant institutional environment for as many as 145 countries (http://rru.worldbank.org/DoingBusiness/).

– More recently, the World Bank has been collecting quantitative information relevant to the question of access from two distinct institutional sources, namely (i) major financial service providers and (ii) regulators, in almost one hundred countries (cf Beck, Demirgüç-Kunt and Martinez Peria, 2005). These include the kind of information that is often already collected by national financial authorities (or sometimes multi-country authorities such as the BCEAO) such as price data, as well as data on branch and ATM density and on the number and average size of loan and deposit accounts.

It is much easier to measure usage than access. Evidently, access is wider than usage: some do not wish to use certain financial services, despite having full knowledge and access at keen prices. But the lack of usage by others is often not just because they are too poor to pay the normal price for the product, but that they face a higher all-in price (including indirect transactions costs) or additional barriers.[5]

At the same time, attempts by researchers to evaluate the impact of specific policy interventions, or of the establishment or expansion of specific banking initiatives directed at the poor, have also been hampered by lack of the right kind of data. To be sure, there have been numerous studies of the financial and operational viability of specialized microfinance institutions. A large cross-country panel database of financial and operational information for over 200 microfinance firms has been established and is maintained by the Microfinance Information Exchange (http://www.mixmarket.org/) allowing comparative analysis. While the data only covers a subsample of the industry drawn mainly from the better-performing firms, and though not all firms have reported every year, the wide range of information collected helps understand some of the institutional influences on

[3] Existing data sources typically focus on national aggregate stocks and flows, rather than on the degree to which customers are reached. Likewise, while existing sources measure wholesale asset market prices, they rarely look at retail prices, or the quality of services or of the institutions that support these services.

[4] To be sure, financial access issues have always been on the agenda of household survey design. Twenty-five of the countries covered by the internationally harmonized standard LSMS surveys conducted over the past twenty years included a modest component on financial access. Gasparini et al. (2005) have assembled a database containing data for many of these and for a further 19 countries with general household surveys containing information on credit and savings. Stone's (2005) stocktake includes a non-overlapping list of 25 non-LSMS countries which have had relevant surveys. Advanced economies (notably the UK and the US) have also conducted sophisticated financial surveys, though at fairly wide intervals of 5 years or so. Claessens (2005) and Honohan (2005) provide more discursive accounts of the variety of types of data source in this area and their relative strengths and provide further references.

[5] Conceptually, usage is where actual demand and supply curves intersect, whereas access may be thought of as referring to an optimal level.

the performance of these firms (cf. Cull et al., 2005).

There are also numerous *microeconomic* studies of the impact effect of the establishment of microfinance firms on poverty and living standards (for reviews see Littlefield et al. 2004, Honohan, 2004, Morduch and Aghion de Armendariz, 2004). But in such micro studies the problem is often the difficulty of distinguishing in the data between the role of the policy intervention and the self-selection of the most energetic clients into the program. Researchers are constantly developing innovative techniques for isolating impacts and overcoming the selection bias problem. Sometimes this can be done because the particular circumstances provide the needed additional information dimensions (often this is called a 'natural experiment'). Recently, the design and roll-out of some microfinance initiatives have been planned to meet statistical requirements for control groups and for elimination of selection bias (cf. Karlan and Zinman, 2005).[6] A new wave of microeconomic data efforts of this type is ongoing in India, Kenya, Pakistan, Peru and the Philippines (to mention only projects in which World Bank researchers are involved) among others.

Finally, mention may be made of the detailed anthropological financial diary studies, pioneered by Rutherford (2000), which provide invaluable data for understanding the actual solutions found by poor people excluded from the formal financial sector.

This note is mainly concerned with national level data however, and even here there are many needs along different dimensions.[7]

The types of national data needed

A separate companion note defines in detail an agreed minimum set of core concepts which it is felt that any household survey on financial service usage should attempt to measure. Taking a wider view, the following categories of data are most useful:

– the extent of *usage* of various financial products and services by different *segments* of the economy. This may cover both individuals/households and small enterprises; and be broken down by urban-rural divide; by different regions and socio-ethnic groups (relevant to questions of ethnic exclusion); by gender; and ideally, where possible, by income level (especially important for capturing the poverty dimension), education and other socio-economic indicators),

– the *retail prices, spreads and fees* that are charged;
– the perceived *barriers*[8] to usage reported by non-users (likewise in different segments of the economy);
– the density and distribution of the network of access points (bank branches, ATMs, POS etc.)
– the appropriateness of the institutional and policy framework as it affects access to financial services on this scale[9] (e.g. usury laws, prudential regulations adapted to microcredit, proportionality regarding the regulatory burden associated with AML/CFT requirements etc).

The products and services worth covering include:

– savings and transactions-type deposit accounts, including simple microsaving accounts
– stored value cards and other types of payments media
– loans of all types, distinguishing certain key types, such as residential mortgages
– insurance, distinguishing between life insurance, health, motor, weather, crop, etc.

[6] As distinct from laboratory experiments; ingenious examples of the latter are also being done in this area (e.g. Gine et al., 2005)
[7] The many different types of source: national household and enterprise surveys: provider, regulator and expert surveys; microlevel databases and others can be used jointly with some potential for cross-checking between sources to verify accuracy.
[8] Including the costs of waiting, of multiple lengthy trips to the provider's office, of bribes, etc, as well as barriers in such forms as paperwork requirements, high minimum balances and bounced check charges or other inappropriateness of product design to needs, lack of respect from provider staff.
[9] Evidently it is also important that data exists on the wider infrastructural issues supporting the provision of financial services in general (credit registries, legal and judicial framework, supporting secured and unsecured lending etc.), but for the most part these would be covered by other data collection initiatives and need not be duplicated in the present context.

Data on a wide range of service providers is relevant.

– On the other hand, it is important to find ways of distinguishing between financial services that are provided using modern financial technology and availing of formal institutional underpinnings, on the one hand, and the traditional or informal on the other. While a local informal moneylender undoubtedly provides important financial services to clients, there can be a big difference between the range, quality and price of these services and those which are provided, for example, by a commercial bank. In between these two extremes is a wide variety of provider types, differing in the degree of formality, and in the range and quality of services provided.

– No single dividing line is universally idea for defining formal finance. One useful criterion is whether the provider institution has a legal status (whether because incorporated as a firm, or as a recognized cooperative or charity) and those which remain in informal sector. An alternative more restrictive criterion is between providers that are subject to licensing and/or supervision by a financial regulator.

– Within the formal sector it can also be useful to distinguish between broad-spectrum intermediaries – such as banks – providing a range of depository, lending and payments services, and the rest.

– Provision of informal finance, including by such entities as ROSCAs, is also worth measuring separately in order to understand the alternatives to the formal sector as sources of financial services.

Achieving international consistency

The findings of different surveys have proved to be difficult to compare across countries and over time. With the ramping-up of data collection exercises, it is therefore timely to ensure a degree of coordination and agreement on basic concepts in order to ensure that information collected in different countries are comparable, thereby allowing research and analysis of them to be conducted on a secure basis. It is also highly desirable that consistent definitions be maintained over time within each country when, as is desirable, the surveys can be repeated, generating a time series that can help detect progress.

For surveys that are more centrally-organized, such as the Investment Climate Surveys and the surveys of providers and regulators and experts mentioned above, such coordination is automatically achieved. In the case of surveys of household financial access, these are often embedded in wider surveys whose design is in part predetermined by other considerations not related to financial sector concerns. This constrains the degree to which an internationally identical design template can be imposed. However, it is realistic to define a core set of concepts or indicators of financial access to which every household survey should aspire.

In the context of a major initiative by DFID to expand the availability of household survey data on financial access in African countries, based on the successful Finscope studies in five Southern African countries (http:// www.finscope.co.za/), DFID and the World Bank have jointly reviewed methodological issues, including questionnaire design with a view to ensuring that World Bank and Finscope surveys generate comparable data. This effort includes the selection and definition of a core set of indicators which represent the concepts which it is hoped that that as many future household surveys as possible would measure as an input into an internationally comparable data set. The definition of these concepts is set out in a companion note intended to guide the design of household surveys. It is proposed that these would be seen as a required minimum.

In addition, it has been proposed that a single summary indicator of access should be selected as a focal point for benchmarking a country's progress towards improving access. Given the complexity and multidimensionality of financial access, no one indicator can fully capture it; focusing on just one indicator could risk neglect of other dimensions and a distorted approach to policy. However, just as the HDI and the various component indicators of the Millennium Development Indicators are imperfect but suggestive indicators in their different fields, highlighting a single summary indicator of financial access may help raise the profile of financial access and as such do more good than harm.

The detailed description of the proposed single summary indicator is set out in the companion note on household indicators. In essence it measures the proportion of adult individuals who use a financial service from a bank or other formal financial intermediary. Where the relevant data has been collected from a household survey, this will be the ideal source for this summary indicator. Alternatively, and provisionally, for countries where household survey data is not available, it can be approximated (using for example data on the number of accounts at intermediaries and their average value).

Next steps and organizational issues

Progress is thus being made along many different fronts, using different types of data sources, collected with varying frequency and often linked with non-financial data collection exercises. Under the leadership of UNCDF, the International Year of Microcredit has helped build contacts between different initiatives in this area and the question arises as to whether a more formalized over-arching structure should be created to ensure lasting coordination.

Clearly, there are already several important collaborative structures governing aspects of the work. The International Household Survey Network has recently been created to coordinate improvements worldwide in such surveys generally. The Microfinance Information Exchange acts as a central archive of MFI information. CGAP maintains a webportal of information on financial access issues. It is probably not necessary to establish any new formal body to ensure that progress is made in a coordinated manner and that there is a sufficient flow of information on best practice and current developments in access data issues.

The World Bank is in the process of creating and publishing a comprehensive database of national *Financial Development Indicators*, which will include key access indicators, allowing direct cross-country comparisons. The first of these reports will be published during 2006. This effort could also become the home for the maintenance of the international standard definitions for the key indicators. The single summary indicator and other access indicators deserve to be given a higher international profile in measuring development progress – the area being clearly relevant to MDG8.

Building on the recent one-off *regulatory and provider surveys* mentioned above, it would be desirable to establish an ongoing process of updating and deepening information from this source.

Micro and household level data collection will never be fully centralized. However, agreement on a core set of concepts to be measured in countries' general household surveys as well as specialized financial sector surveys will help to create an internationally comparable dataset.

- An expansion of LSMS finance modules to include these standard indicators could guide the design of wider household surveys.
- The expansion into additional African countries of the Finscope surveys already carried out in Southern Africa (with financial support from DFID) has the potential to represent a model on which further specialized financial access household surveys could be built.[10] There are also plans to proceed with specialized surveys, on a standardized basis, in other regions, notably South Asia.

Expanding the data collection effort requires *building partnerships* involving national research institutions and the private sector to ensure cost effectiveness and cost-sharing, to take account of local conditions, and to ensure engagement and buy-in for the results.

Building on what has been done in the case of previous studies (see Basu et al., 2004; Kumar et al., 2004, as well as the cited Finscope website for examples), survey findings deserve to be *widely disseminated* at national level, forming the basis for building a consensus around needed policy changes to improve access. This can be particularly effective if the surveys are carried out in time to feed into a country's FSAP discussions.

[10] These surveys are documented at http://www.finscope.co.za/. It is envisaged that a compendium of comparable cross-country indicators collected over the next two years through Finscope surveys will be published.

The accompanying charts provide some flavor of the emerging information and how it can be used

Figure 1 shows that financial depth and financial reach or access indicators are not all highly correlated. This helps underline the added value of collecting access data.

Figure 2 shows that financial access is not just a reflection of national income levels. Household access to credit varies widely among developing countries in a way that is uncorrelated with per capita income.

Figure 3 shows how institutional data on the number of bank accounts and the average size of deposits could be used to approximate household access where direct household survey data is not yet available. A regression of survey access data on these variables gives a close fit, suggesting that the fitted values for countries without survey data could well serve as a proxy indicator.

Figure 4 shows how quickly the number of bank branches grows as an economy becomes richer. Most of this is a market response and more refined measures of the degree to which branches are accessible would be desirable, but even this measure of branch density is negatively correlated with the degree to which firms report financial barriers (Beck, Demirgüç-Kunt and Martinez Peria, 2005).

Finally a note of modesty is appropriate as shown in Figure 5. Poverty rates are negatively correlated with access to finance, but other factors matter also

Drawing on the newly available data, *an extensive research program* is already being spearheaded by the World Bank's Development Research Group and the findings will be reported in working papers and, it is envisaged, synthesized in a wide-ranging reflective review being planned for 2007.

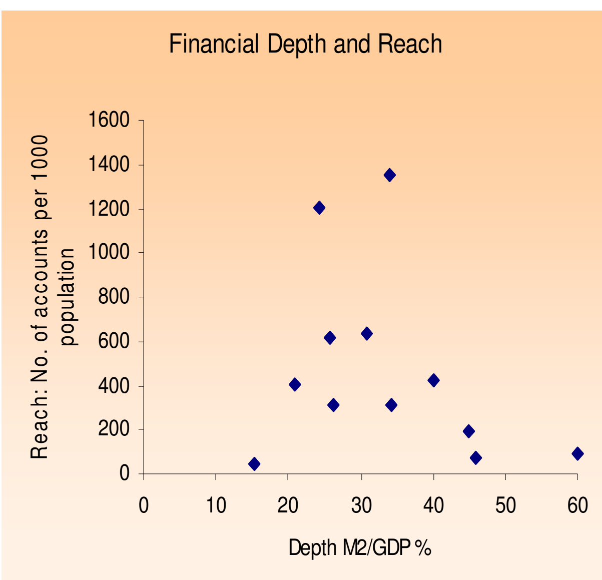

Figure 1: Financial depth and reach indicators are not all highly correlated
Source for reach variable: Beck, Demirgüç-Kunt and Martinez Peria, 2005

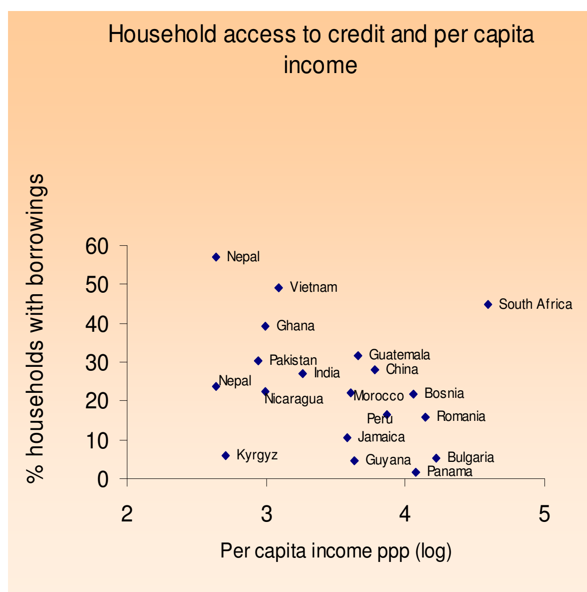

Figure 2: Financial access varies widely, even at the same level of mean income
Note: Shows percentage of households who reported borrowed money in past 12 months (LSMS surveys concept, cf. Claessens, 2005) plotted against average living standards.

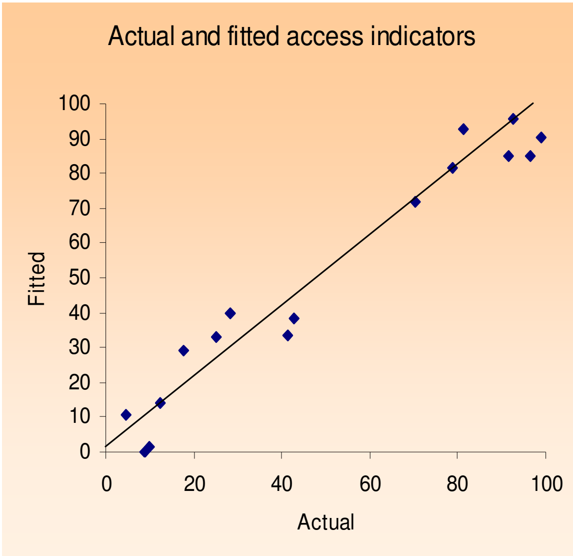

Figure 3: Percentage of households who save in a formal financial institution: survey results and estimated values from accounts data

Note: Fitted is the value from the estimated regression line

$$Survey = -170 + 21\ log(\#Accounts) + 10\ log(Depsize),$$

where *Survey* is the percentage of households who save in a formal financial institution (based on survey data summarized by Claessens, 2005); *#Accounts* is the number of deposit accounts per 1000 population and *Depsize* is the average size of deposit (from Beck, Demirgüç-Kunt and Martinez Peria, 2005).

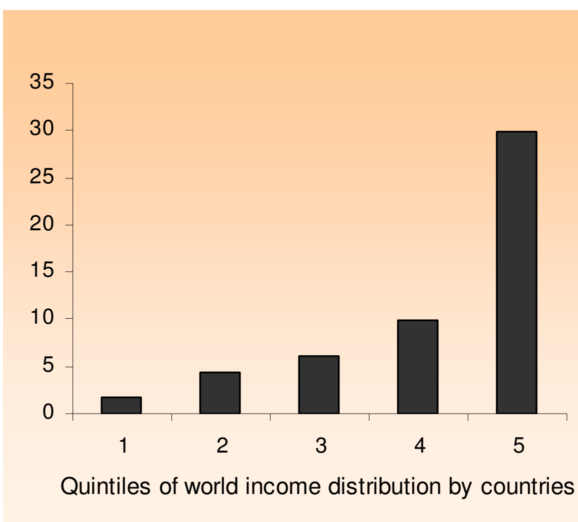

Figure 4: More bank branches in higher income countries

Note: Ranking the countries of the world by mean income, the figure shows for the countries each quintile the mean no. of branches per 100,000 population. Source: Beck, Demirgüç-Kunt & Martinez Peria (2005).

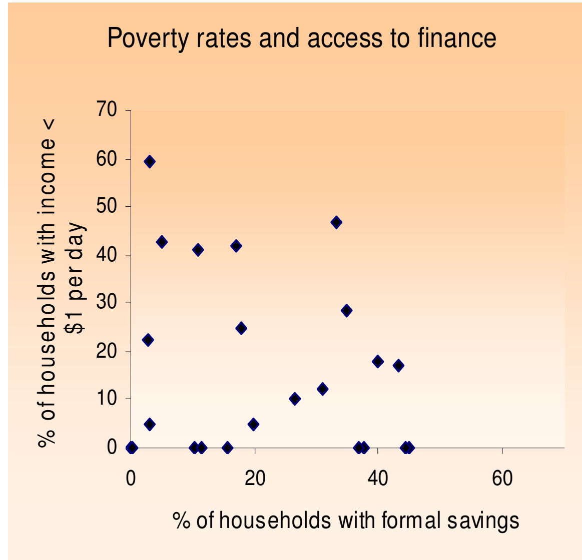

Figure 5: Poverty rates are negatively correlated with access to finance, but other factors matter also

Sources: For Poverty: the Povcal database, for access, Claessens, 2005.

References

Armendariz de Aghion, Beatriz and Jonathan Morduch. 2005. *Economics of Microfinance*. (Cambridge, MA: MIT Press).

Ayyagari, Meghana, Aslı Demirgűç-Kunt and Vojislav Maksimovic. 2005. "How Important are Financing Constraints? The Role of Finance in the Business Environment." World Bank mimeo.

Basu, Priya et. al. 2004. "Scaling up Access to Finance for India's Rural Poor." World Bank Report No. 30740-IN, December.

Beck, Thorsten, Aslı Demirgűç-Kunt and Ross Levine. 2004. "Finance, Inequality and Poverty: Cross-Country Evidence." World Bank Policy Research Working Paper 3338.

Beck, Thorsten, Aslı Demirgűç-Kunt and Vojislav Maksimovic. 2005. "Financial and Legal Constraints to Firm Growth: Does Firm Size Matter?" *Journal of Finance* 60(1), 137-177.

Beck, Thorsten, Aslı Demirgűç-Kunt, Luc Laeven & Ross Levine. 2005. "Finance, Firm Size, and Growth." World Bank mimeo.

Beck,Thorsten, Aslı Demirgűç-Kunt and Maria Soledad Martinez Peria. 2005. "Reaching Out: Access to and Use of Banking Services across Countries." World Bank mimeo.

Claessens, Stijn. 2005. "Access to Financial Services: A Review of the Issues and Public Policy Objectives." World Bank Policy Research Working Paper 3589.

Cull, Robert J., Aslı Demirgűç-Kunt and Jonathan Morduch. 2005. "Contract Design and Microfinance Performance: A Global Analysis." World Bank mimeo.

DFID. 2004. "The Importance of Financial Sector Development for Growth and Poverty Reduction." London: Department for International Development. http://www.dfid.gov.uk/pubs/files/finsecworkingpaper.pdf.

DFID. 2005. "Banking the Underserved: New Opportunities for Commercial Banks, Exploring the Business Case." London: Department for International Development. http://www.dfid.gov.uk/pubs/files/banking-undeserved.pdf

Gasparini, Leonardo, Federico Gutiérrez, Guido Porto, Alejandro Támola and Leopoldo Tornarolli. 2005. "Finance and Credit Variables in Household Surveys of Developing Countries" mimeo.

Genesis Analytics. 2004. *A Survey of the SADC Region: South African Financial Institutions, Regional Policies and Issues of Access*. Mimeo. http://www.finmarktrust.org.za/documents/2004/JUNE/SADCSurvey.pdf

Giné, Xavier, Pamela Jakiela, Dean Karlan and Jonathan Morduch. 2005. "Microfinance Games." Mimeo. http://aida.econ.yale.edu/karlan/papers/microfinancegames.pdf

Honohan, Patrick. 2004. *Financial Sector Policy and the Poor: Selected Issues and Evidence*, World Bank Working Paper No. 43 (Washington DC: The World Bank)..

Honohan, Patrick. 2005. "Measuring Microfinance Access: Building on Existing Cross-Country Data." World Bank Policy Research Working Paper 2606.

Karlan, Dean S. and Jonathan Zinman. 2005. "Observing Unobservables: Identifying Information Asymmetries with a Consumer Credit Field Experiment." Princeton University, mimeo.

Kumar, Anjali, Thorsten Beck, Cristine Campos and Soumya Chattopadhyay. 2004. *Assessing Financial Access in Brazil*. Washington, DC: World Bank.

Littlefield, Elizabeth, Jonathan Morduch and Syed Hashemi. 2003. "Is Microfinance an Effective Strategy to Reach the Millennium Development Goals?" CGAP Focus Note 24.

Rutherford, Stuart. 2000. *The Poor and Their Money*. (Delhi: Oxford University Press).

Stone, Robert. 2005. "Financial Access Indicators Stocktake." Draft Working Paper. London: DFID. Mimeo.

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The World Bank Financial Sector is working to strengthen and develop financial systems in client countries in order to create access to financial services for all levels of society. For more information, visit: www.worldbank.org/finance, email: financial_sector@worldbank.org, or contact Neesham C. Kranz, Communications & Knowledge Coordinator, The World Bank Financial Sector Vice Presidency, tel +1 202 458 9774; fax +1 202 614 1271.

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