

Access to Finance

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# Financial Access 2012

## Getting to a More Comprehensive Picture

Oya Pinar Ardic, Kathryn Imboden, and Alexia Latortue



**IFC**

**International  
Finance Corporation**  
World Bank Group

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CGAP  
1818 H Street, N.W.  
Washington, DC 20433 USA

Internet: [www.cgap.org](http://www.cgap.org)  
Email: [cgap@worldbank.org](mailto:cgap@worldbank.org)  
Telephone: +1 202 473 9594

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## What Is FAS?

The IMF's Financial Access Survey (FAS) is the most comprehensive source of global supply-side data comparable across countries and over time. The latest round of FAS was conducted by the IMF Statistics Department in 2012 in collaboration with CGAP and IFC Access to Finance Advisory.

FAS facilitates the analysis of trends in access to deposits, loans, and insurance by households and enterprises over time and across countries, and by type of financial service provider. The FAS database includes geographic and demographic indicators on access to and usage of basic financial services at an annual frequency for 187 jurisdictions, including all G-20 economies, covering an eight-year period (2004–2011).

- FAS collects data from country financial regulators, primarily central banks. FAS's methodology is based on IMF's

Monetary and Financial Statistics and its accompanying Compilation Guide.

- In 2012 the FAS questionnaire was expanded to include times series data on credit unions and financial cooperatives and MFIs, with separate identification of small and medium enterprises (SMEs), households, and life and nonlife insurance providers.
- FAS is one of the three global data sources for the G-20 Basic Set of Financial Inclusion Indicators endorsed by the G-20 Leaders at the Los Cabos Summit in June 2012.

FAS data are publicly available at <http://fas.imf.org>. IMF's standard data query (eLibrary) and visualization (DataMapper) tools also include FAS data.



## Foreword

**W**e have seen remarkable progress toward increasingly robust global financial inclusion data architecture in a few short years.

The IMF's Financial Access Survey (FAS) and the World Bank's Global Financial Inclusion Database (Global Findex) represent major global and comprehensive supply- and demand-side datasets. At the national level, countries such as Brazil, Mexico, and Malaysia are investing heavily in defining financial inclusion indicators that need to be collected, monitored, and analyzed to help advance financial inclusion. Last year, the Irving Fischer Committee on Central Bank Statistics of the Bank of International Settlements convened central bankers and other experts for its first meeting ever on financial inclusion data.

National and global policy makers, funders, and private-sector providers all stand to benefit from this progress. And while stakeholders may prioritize different kinds of data, there is general agreement that supply- and demand-side data are complementary, and both are important to create a meaningful picture of access and usage of financial services globally. (See Annex 1 for the principal financial inclusion data sources.)

At the Los Cabos Summit in June 2012, the G-20 Leaders endorsed the G-20 Basic Set of Financial Inclusion Indicators (G-20 Basic Set). The G-20 Basic Set was developed by the Global Partnership for Financial Inclusion's (GPFI) Data and Measurement Sub-Group and its Implementing Partners the Alliance for Financial Inclusion (AFI), CGAP, the Inter-

national Finance Corporation (IFC), and the World Bank. The Basic Set integrates existing global data sets to track financial inclusion around the world. (See Annex 2 for the latest available figures for the G-20 Basic Set of Financial Inclusion Indicators.)

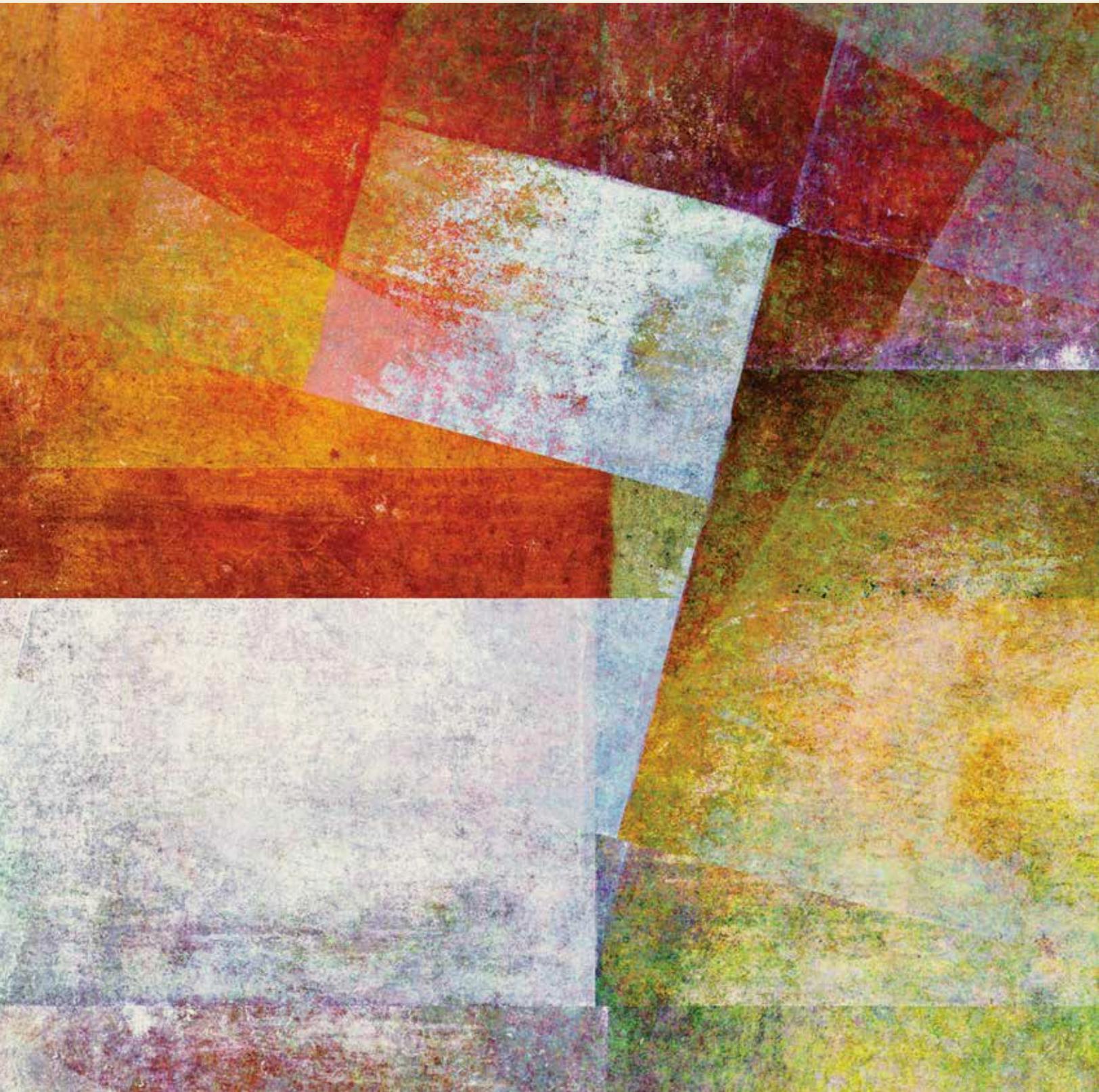
While the G-20 Basic Set aims to provide an essential, yet simple picture of the financial inclusion landscape, additional indicators are needed to present a more comprehensive view. The GPFI Data and Measurement Sub-Group is developing additional indicators beyond the Basic Set to capture more access, usage, and quality dimensions of financial inclusion. Progress thus far is creating even more demand for increasingly detailed and segmented data. And this is a good thing.

This report goes beyond simply measuring access to finance. It analyzes the underlying market dynamics and linkages to broader financial sector and economic growth indicators. A better insight into the drivers of access and the relevance of financial access to broader financial architecture and the real economy is critical for informed policymaking.

As organizations focused on financial inclusion policy and the on-the-ground development of robust provider ecosystems, we find that our interests can and indeed must come together on behalf of the billions of poor people still without access to responsibly delivered financial services. Credible, sound, and comprehensive data provide us with a better foundation to ensure we are each playing our appropriate roles for "Financial Inclusion for All" to become a reality.

**Tilman Ehrbeck**  
*CEO and Director*  
CGAP

**Peer Stein**  
*Director*  
IFC Advisory Services | Access to Finance





## Executive Summary

**H**alf of the adult population around the world does not have an account at a formal financial institution. And 75 percent of poor people are unbanked (Demirgüç-Kunt and Klapper 2012). Yet, research shows that people have active financial lives and need a range of services to take advantage of economic opportunities and manage and mitigate risks (Collins, Morduch, Rutherford, and Ruthven 2009). Expanding access to a broad range of financial services to households and enterprises has never had such strong momentum among national policy makers and global standard setters.

To create inclusive financial systems that serve more people with a range of services at lower cost, a diverse set of providers, supporting financial infrastructure, and protective and enabling policies will all be needed. As the financial landscape has become more complex with an ever wider array of providers and delivery channels, the data architecture for capturing financial inclusion is also evolving. To have a comprehensive view of access to financial services—payments, savings, credit, and insurance—data must be collected from more sources, and on a variety of dimensions, including access, usage, and quality.

Each year, the *Financial Access* report aspires to include data on an increasing number of financial service providers, based on data availability. *Financial Access 2011* was an exception that provided an overview of the supply-side data landscape with little fresh data. *Financial Access 2012* builds on the work done in *Financial Access 2009* and *Financial Access 2010* to provide new data on financial access. Using eight years of data (2004–2011) from the IMF’s Financial Access Survey (FAS) in combination with other relevant data, *Financial Access 2012* further contributes to measuring and analyzing the current state of financial inclusion. (See Annex 3 for FAS definitions and data availability.)

### ***Expanded data coverage provides a broader and better understanding of market dynamics***

This year’s report is an important step in leveraging the FAS data to provide an up-to-date and in-depth view of the state of financial inclusion today, complementing other supply- and demand-side data initiatives in data collection and analysis. Available data have expanded every year, though they remain far from complete.

As regulators work to meet the financial inclusion needs in their countries, they increasingly recognize the importance of information on the supply of financial services. Regulators are expanding their data collection efforts in this area, beginning with data on the deposit-taking regulated institutions they oversee while also starting to include data from other financial service providers. This broader view of all institutions that serve poor people underpins improved policy design.

Chapter I presents a trend analysis of the evolving state of financial inclusion using commercial bank data. Across all markets, not surprisingly, data within the purview of the financial regulator, the source for the IMF’s FAS, are of the highest quality for commercial banks. Whether in the front-line of service delivery or as partners to mobile network operators or refinancers of microfinance institutions, commercial banks are likely to be an increasing part of the broad ecosystem of providers that will help extend financial services to previously unserved or underserved client segments. Moreover, previously specialized pro-poor financial institutions are transforming into commercial banks, and local commercial banks are showing new interest in reaching the base of the pyramid.

The evolution in deposit and loan penetration shows a clear, albeit still nascent, recovery from the financial crisis. Over the eight-year period of 2004–2011, the number of deposit and loan accounts per

1,000 adults continued to rise steadily, though with very little growth in 2009 and 2010 and an upturn in 2011. Interestingly, the growth rate of deposit accounts was slightly higher than the growth rate for loan accounts, following a pattern of deposit penetration increasing faster than loan penetration established in 2008. Coming out of the financial crisis, people's willingness to save may have been greater than their willingness to take on loans. Also, the slow-down of lending in the crisis environment, especially given the banking crisis in high-income countries and greater risk aversion from providers, may also have been a contributing factor.

The rapid (and consistent) increase in the number of bank branches and automatic teller machines over 2004–2011 has also helped deepen access to commercial bank services across all regions of the world. However, there is a wide dispersion in deposit and loan penetration across regions and country income quartiles. High-income countries have over 10 times the deposit penetration as low-income countries, and lower-middle-income countries have almost three times the deposit penetration of low-income countries. Differences in loan penetration follow a similar pattern. Deposit penetration, by commercial banks, is the lowest in sub-Saharan Africa. Though from a low initial base, growth in 2011 in commercial bank deposit accounts comes from low-, lower-middle-, and upper-middle-income countries, with high-income countries stagnating.

Notwithstanding the role commercial banks are increasingly playing, nonbank financial institutions (NBFIs) contribute significantly to reach unserved and underserved clients in many markets. Indeed, deposit-taking NBFIs are playing a more important role in deposit and loan penetration, and NBFIs loan penetration increased relative to that of commercial banks everywhere in the world, with the exception of high-income countries.

Chapter II provides trend analysis based on preliminary data on access to insurance. Based on still incomplete coverage, FAS data show that high-income countries account for the vast majority of the global insurance market, historically as well as today. However, the number of insurance policies has more than doubled since 2004, and low-income countries

are beginning to catch up from a low base. While high-income countries experienced very little growth, the average annual growth rate in the number of policies for the lower-middle-income countries was 9 percent in 2011. Life insurance is the dominant service provided (this is confirmed by sources complementary to FAS, such as the Latin America and the Caribbean and Africa microinsurance landscaping studies). The 2008 financial crisis did not affect life insurance policies, presumably because they are longer-term contracts by nature, though it did negatively affect nonlife insurance policies as well as reduce insurance technical reserves.

Chapter III includes an overview of access to finance by small and medium enterprises (SMEs). Access to finance for managing cash flows, funding investments, and insuring against risk is one important barrier for SMEs' growth, alongside non-financial barriers such as infrastructure. For this reason, in 2012 FAS included questions on SMEs for the first time. Though still incomplete, FAS data show that higher-income countries tend to have more developed SME finance markets than that of developing countries as measured by ratios of SME finance volume-to-GDP and SME loan accounts-to-total firm loans. In low-income countries, only a small percentage of enterprise loan accounts are held by SMEs.

Chapter IV analyzes the complementary relationship between demand- and supply-side data and what purpose they each serve. Twenty-twelve was a milestone year for financial inclusion data: the enhanced FAS released in September 2012 provides the most extensive supply-side data available to date, and Global Findex released in March 2012 offers the most extensive demand-side data to date on a global scale. FAS and Global Findex are by design complementary, and not substitutes. Supply-side data surveys such as FAS offer a relatively low-cost means of data collection, with frequent and comparable data that are viewed as highly credible by national authorities. Demand-side surveys such as Global Findex offer rich information on the many dimensions of financial inclusion, from the perspective of individuals. Conducted annually as a written survey sent to financial regulators, the unit of analysis for FAS is regulated financial institu-

tions. Conducted triennially through interviews with individuals, Global Findex gathers data on the usage of financial services from regulated, unregulated, and informal institutions.

The two surveys generally tell similar stories of financial inclusion, though they do not necessarily give the exact same number for data points at the country level. For loans, it is to be expected that FAS and Global Findex do not have similar results because FAS asks for “all outstanding loans” while Global Findex asks for “all loans taken in the past 12 months.” For deposits, the story is more nuanced. Countries with low income levels and less developed financial systems are more likely to have similar FAS and Global Findex rankings. For many countries where FAS and Global Findex tell divergent deposit stories, FAS data show greater inclusion.

Policy makers and regulators make use of FAS to understand the offer of financial services by institutions under their purview. FAS can help provide an understanding of the market structure, pointing to strategies to work with different kinds of financial institutions to increase access. A deeper understanding of the profiles of users through Global Findex can lead to more access-friendly policies, legislation, and regulation, potentially targeting the groups that are most underserved or are priorities for the government. Providers, as well as donors and investors, can deepen their understanding of client profiles and behavior via Global Findex, including client segments that are persistently underserved. Both FAS and Global Findex can be used for benchmarking across countries and are endorsed data sources for the G-20 Basic Set.

Finally, Chapter V explores the links between financial inclusion and financial sector and macroeconomic variables. Although such analyses continue to be works in progress, some interesting results have emerged. FAS data show that greater financial inclusion (measured by deposit penetration) correlates with higher income levels (GDP per capita and GDP per capita growth) and a reduction in income inequality. Higher financial inclusion is associated with less inequality, though a certain degree of financial access and usage and financial sector depth is required before inequality improves; for a country with low levels of financial inclusion and financial depth, inequality increases at first, then decreases as the financial system becomes deeper and more inclusive.

While the theoretical (and intuitive case) for linking responsible financial inclusion and financial stability is strong, demonstrating empirical evidence is a challenge. A growing body of literature suggests a positive relationship between financial inclusion and financial stability; however, empirical evidence does not yet confirm this. Although financial stability overall has a low correlation with access, depth, and efficiency, financial access and financial stability correlate better in low-income and lower-middle-income countries, where access issues are more acute.

Lastly, greater financial inclusion is associated with more developed financial infrastructure, and a sounder institutional and legal environment. A stronger business environment is linked to greater deposit and loan penetration.

## Evolution of the State of Financial Inclusion— What Commercial Bank Data Tell Us

**A**n increasingly broad range of financial service providers of all legal statuses offers financial services to poor people. In more and more countries, previously specialized pro-poor financial institutions are transforming into commercial banks, and local commercial banks are showing new interest in reaching the base of the pyramid. Moreover, whether in the front-line of service delivery or as partners to mobile network operators (MNOs) or refinancers of microfinance institutions (MFIs), commercial banks are likely to be an increasing part of the broad ecosystem of providers that will help extend financial services to previously unserved or underserved client segments.

Notwithstanding the role commercial banks are increasingly playing, nonbank financial institutions (NBFIs) contribute significantly to reach unserved and underserved clients in many markets. Though still far from providing a complete picture of nonbank providers, the 2012 FAS provides increased coverage of these types of institutions that serve unserved and underserved people.

This chapter focuses on data on commercial banks. Across all markets, not surprisingly, data within the purview of the financial regulator, the source for the IMF's FAS, is of the highest quality for commercial banks, allowing for technical (econometric) analysis. The analysis in this chapter tracks the evolution of commercial bank deposits, loans, and commercial bank physical access as well as trends by country income group and region using FAS data. To complement the commercial bank data, available data on NBFIs are presented in Box 1. Another important development is the new ways in which MNOs and other service providers are rapidly reaching an increasing number of clients. Unfortunately, data collection efforts have not yet caught up with the rapid expansion of mobile-based financial services. See Box 2.

### *A clear, albeit still nascent, recovery from the financial crisis*

The evolution of deposit and loan penetration tends to move together both within country income groups and regional groups. Both deposit and loan penetration growth rates—measured by the growth in the number of accounts or accountholders of deposit/loan per 1,000 adults—slowed considerably in 2008 and started to pick up after the financial crisis. The growth rate of loan and deposit accounts per 1,000 adults recovered in 2010, and even more strongly in 2011. The growth rate of deposit accounts was slightly higher than the growth rate for loan accounts, following a pattern of deposit penetration increasing faster than loan penetration established in 2008 (Figure 1). This reversed a previous three-year period (2005–2007) of loan penetration increasing more rapidly than deposit penetration.

The world as a whole added about 48 deposit accounts and 24 loan accounts per 1,000 adults in 2011, which amounts to 1,314 deposit accounts and 264 loan accounts per 1,000 adults. This suggests that coming out of the financial crisis, people's willingness to save may have been greater than their willingness to take on loans. Also, the slowdown of lending in the crisis environment, especially given the banking crisis in high-income countries and greater risk aversion from providers, may also have been a contributing factor.

The change in deposits-to-gross domestic product (GDP) led that of loans-to-GDP, reversing the 2005–2007 trend of loans-to-GDP increasing more rapidly than deposits-to-GDP (Figure 2). The recent trend in the growth rate of outstanding loans-to-GDP and deposits-to-GDP may stem from one or both of the following factors: (i) a greater variation in loan and deposit volumes as a post-financial crisis effect (higher loan amounts in 2011) and (ii) the lim-

## The Growing Importance of Nonbank Financial Intermediaries

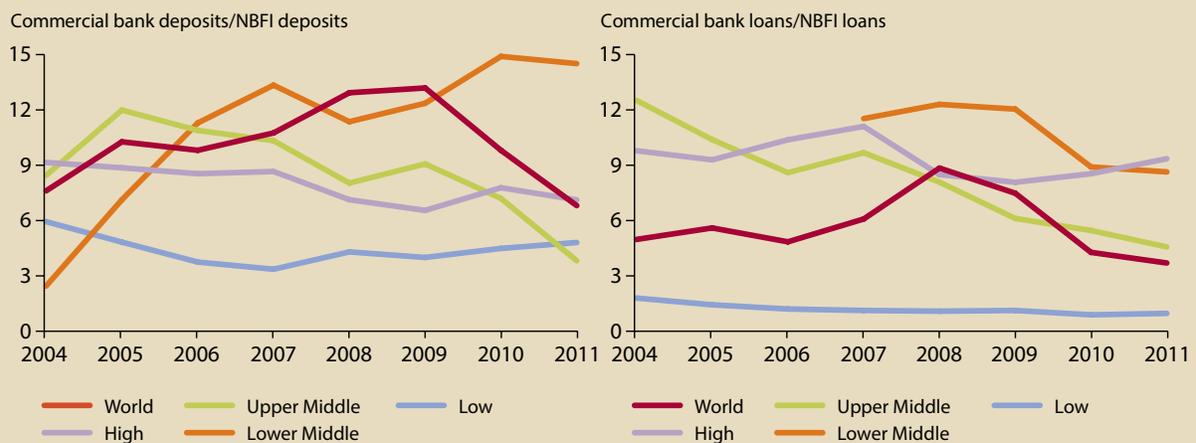
In many parts of the world, specialized financial institutions with an explicit focus on poor people or specific segments of the unserved/underserved have emerged alongside commercial banks. These NBFIs classified in FAS as “nonbanks” are either (a) “other depository corporations,” including credit unions and financial cooperatives, deposit-taking MFIs and other deposit-taking institutions (which include saving and loan institutions, building societies, rural banks, agricultural banks, savings banks, and post banks) or (b) “other financial corporations,” which are not deposit-taking.<sup>a</sup>

These NBFIs often play an important role in the financial system, and many have explicit financial inclusion mandates. However, the financial regulator often has only partial purview of them. For this reason, the data on NBFIs in FAS are not as complete as for commercial banks. This box provides an overview of the role of the NBFIs in financial inclusion, drawing on available FAS data, which quite certainly under-represents the role they play in many markets.

**Deposit-taking NBFIs are playing a more important role in deposit and loan penetration.** Burundi, for example, reported a larger number of deposit accounts and loan accounts in credit unions than in commercial banks. Based on the latest data available in FAS, the ratio of commercial bank deposit accounts to NBFIs deposit accounts started to decline especially after the financial crisis around the world, except for low-income and lower-middle-income countries. The role of NBFIs is even more prominent in loan penetration. NBFIs loan penetration increased relative to that of commercial banks everywhere in the world, with the exception of high-income countries (see Figure B1.A).

**Total number of deposit-taking NBFIs in the world remained more or less constant** at around 40,000 throughout 2004–2011, while the total number of commercial banks declined from around 16,000 in 2004 to 14,200 in 2011. As of 2011, about half the deposit-taking NBFIs are in high-income countries. The remaining institutions are divided among upper-middle-, lower-middle-, and low-income countries, at 16 percent, 14 percent, and 20 percent, respectively.

**FIGURE B1.A. Deposit and loan penetration of deposit-taking NBFIs (relative to commercial banks)**



Note: Loan data for lower-middle-income countries do not have sufficient coverage to calculate pre-2007 commercial bank loans-to-NBFI loans ratio.

a. See Annex for the classification of financial institutions used by FAS.

FIGURE 1

Percentage change in commercial bank deposit and loan accounts (annual medians)

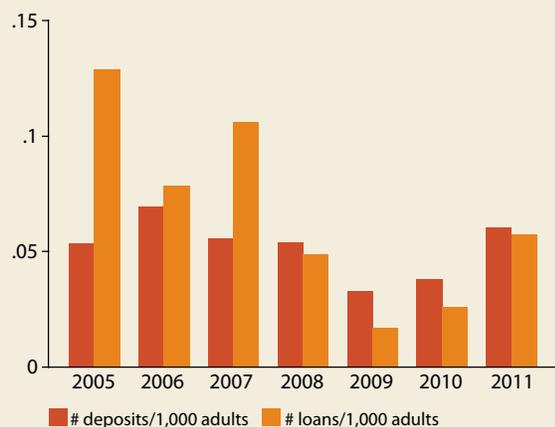
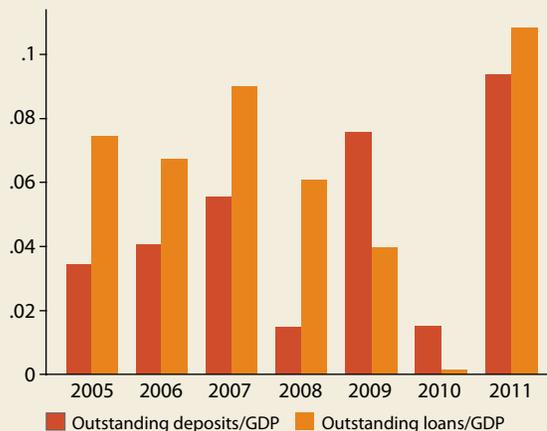


FIGURE 2

Percentage change in commercial bank deposit and loan volumes (annual medians)



ited GDP growth, including lower GDP growth in 2011, indicating that a recovery of the financial sector may have preceded that of the real economy. The 2011 increase in outstanding loans and deposits to GDP may thus be explained by higher loan amounts and lower real GDP growth in 2011 (with the exception of a very slight increase in real GDP growth in sub-Saharan Africa [SSA], where the low growth rate in 2010 in loan volume to GDP is attributable to higher real GDP growth rates, which were not sustained in 2011).

#### Wide dispersion in deposit and loan penetration

Across regions, South Asia (SA) and SSA experienced the largest average increases in deposit penetration in 2011. A look at differences across country income quartiles (country ranking by income) indicates that high-income countries have over 10 times the deposit penetration as low-income countries and lower-middle-income countries have almost three times the deposit penetration of low-income countries. Differences in loan penetration follow a similar pattern. We shall see in Chapter V that both deposit and loan penetration are correlated with GDP per capita (the greater the GDP per capita, the greater the degree of financial inclusion)

and with inequality (the greater the income equality, the greater the degree of financial inclusion).

## Deposits

### *Over the eight-year period of 2004–2011, deposit accounts per 1,000 adults rose steadily*

Trend analysis shows renewed growth in deposits in 2011 (Figure 3). The number of deposit accounts per 1,000 adults rose steadily, albeit with very little growth in 2009 and 2010, but with an upturn in 2011. The number of depositors per 1,000 adults also increased over the period, but with a slightly different trajectory: the number of depositors dipped in 2007 and then recovered from 2008 onward. On average, the number of depositors per 1,000 adults increased at a faster rate than deposit accounts per 1,000 adults, suggesting that overall there are more people/enterprises in the formal financial system. While the recovery from the global financial crisis is still considered fragile (World Bank Global Financial Development Report 2013), the 2011 data are nevertheless encouraging in terms of penetration figures for deposits.

## A New Frontier—Capturing Data on Branchless Banking and Mobile Money

### The Opportunity

Banks, MNOs, and other financial service providers are finding new ways to deliver financial services to unbanked people. Rather than using traditional brick-and-mortar branches, they offer banking and payment services through postal and retail outlets, including grocery stores, pharmacies, seed and fertilizer retailers, and gas stations, among others. Various models of branchless banking through retail agents have emerged: some led by banks and others led by nonbank commercial actors using information and communication technologies, such as cell phones, debit and prepaid cards, and card readers to transmit transaction details from the retail agent or customer to the bank and provide cash-in and cash-out points for customers.

As branchless banking deployments start to reach scale, it will be increasingly important to include them in the wider data architecture to get a complete picture of financial inclusion. Financial service providers, the source of supply-side data, track the services they deliver as part of their everyday business. They should start systematically tracking numbers of registered and active branchless banking and mobile money agents, registered and active mobile money customers, and other types of transactions, such as person-to-person transfers or insurance premium payments made over a mobile platform.

Mobile money data are still missing from many datasets or are poorly represented, and there is a lack of common definitions and indicators. However, efforts are underway to improve the situation. There are currently three global/multicountry supply-side

financial inclusion datasets that cover some aspects of branchless banking and mobile money. They are IMF's FAS, the World Bank Global Payments Survey, and the GSMA Global Mobile Money Adoption Survey, which covers around 60 percent of the mobile money deployments worldwide.

### Challenges

Even though some branchless banking data are already captured in these surveys, a large gap still exists. For example, there is no consensus around how the services are defined and distinguished in terms of the channel used for the provision of financial services and the actual service provided. A lack of clarity in thinking about channels and financial services can lead to double counting of services.

In addition, the current surveys do not completely capture the landscape. The GSMA Global Mobile Money Adoption Survey, for example, provides deep information on mobile money deployments, but does not capture card-based deployments that serve the poor through agents. Moreover, the data are publicly available only at the market level and not at the deployment level, as there is currently little incentive for MNOs to make their figures public. Likewise, the fact that MNOs are usually regulated by the telecommunication regulator in many countries makes it challenging for a survey such as the IMF's FAS to capture the full spectrum of branchless banking providers. FAS goes to regulators who collect data on financial service providers such as banks and MFIs, but excludes other providers such as MNOs and third-party providers, including data from their respective agent networks.

**Growth in 2011 in commercial bank deposit accounts comes from low-, lower-middle-, and upper-middle-income countries**

The difference between high-income countries and the rest of the world in terms of commercial bank deposits per 1,000 adults is striking (Table 1). Over time, deposit accounts per 1,000 adults declined in high-income countries from five-plus accounts per adult to around four accounts per adult. The continuing economic and financial crisis in Europe seems to be a factor. The greatest growth in deposits is in the upper-middle-income countries, slightly passing the deposit penetration of high-income countries. There was strong growth between 2010

and 2011 in the number of deposit accounts in countries such as Azerbaijan (+28 percent), Panama (+16 percent), Peru (+16 percent), and Venezuela (+17 percent). At the same time, deposit account penetration increased in low- and lower-middle-income countries, but there is still a large gap. While the 15.3 percent increase in deposits in low-income countries is impressive, it is based on a far lower starting point, and low-income countries still lag far behind.

Deposit penetration also varies greatly within the country income level categories (Figure 4). For example, there is very low deposit account penetration in the Democratic Republic of Congo (20 accounts per 1,000 adults) and Afghanistan (88 accounts per 1,000 adults). However, Kenya has 611 accounts, Bangladesh 539 accounts, and the Gambia 320 accounts per 1,000 adults. Individuals in low-income countries may use nonbanks to save (e.g., cooperative and community-based structures in SSA). This may influence not only the comparison with higher-income groups, but also the dispersion within the low-income category.

**As with deposit account penetration, deposit volumes to GDP show a consistent increase across country income groups**

In a comparison of country income groups (Figure 5), the variation of deposit volumes to GDP within the same income group is larger for high-income and upper-middle-income countries. This is partly due to variation in GDP (including the financial crisis effect in these two income groups) and in part to differences in deposit volume. Low-income coun-

FIGURE 3

**Number of deposit accounts per 1,000 adults**

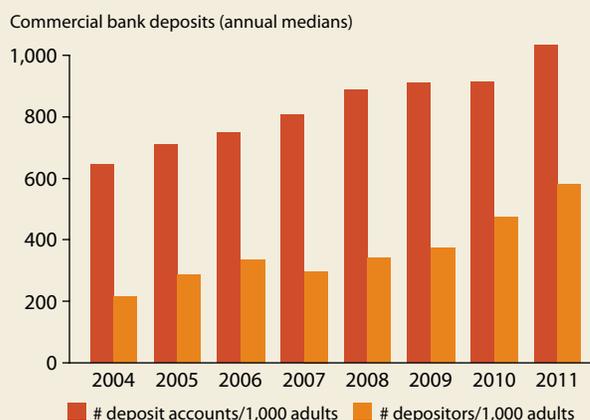


TABLE 1 Deposit accounts/1,000 adults, by income groups

Deposit accounts/ 1,000 adults	World	Low	Lower Middle	Upper Middle	High
2004	1124	240	529	774	5205
2005	1162	238	623	908	5086
2006	1152	256	626	984	4975
2007	1170	256	656	1045	4765
2008	1200	275	696	1132	4127
2009	1208	248	752	1138	3912
2010	1266	288	802	1270	3897
2011	1314	332	863	1322	3878
<b>Increase in 2011</b>	<b>+3.8%</b>	<b>+15.3%</b>	<b>+ 7.6%</b>	<b>+ 4.1%</b>	<b>0.4%</b>

FIGURE 4

**Number of depositors per 1,000 adults across and within income groups**

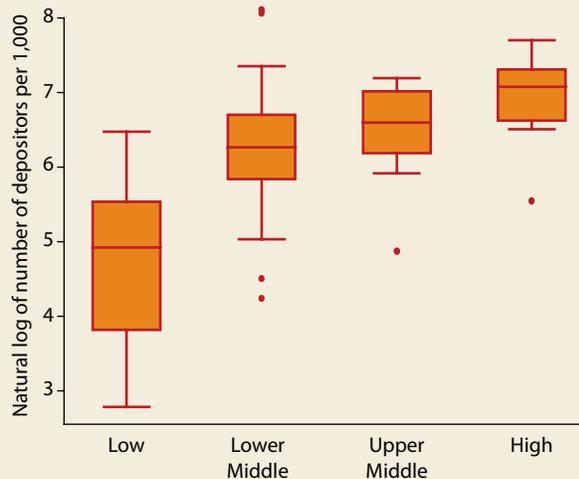
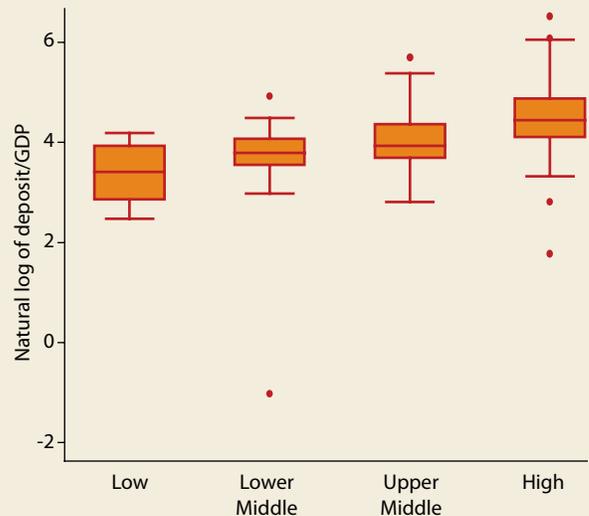


FIGURE 5

**Deposit volume per GDP**



tries have low deposit volume relative to GDP because of (i) less developed financial sectors in low-income countries (less depth) and/or (ii) more use of nonbanks for deposits, notably in SSA.

**Deposit penetration varies widely across and within regions**

SSA is the region with the lowest number of accounts per 1,000 adults on average and has the greatest variation within the region. This is tied to a low-income effect within SSA (and income disparity within the region), as well as differences in use of commercial banks as opposed to nonbanks for savings. For example, Burundi had 32 deposit accounts per 1,000 adults in commercial banks, while it had a total of 124 deposit accounts per 1,000 adults in credit unions and financial cooperatives, deposit-taking MFIs and other deposit-taking institutions.

The variation in deposit volume is the largest in East Asia and the Pacific (EAP). This may be explained by the large disparity in GDP per capita in EAP countries, e.g., Singapore, Hong Kong, and Malaysia in the higher-income zone (with a corresponding higher number of deposits per GDP) and Cambodia, Indonesia, Mongolia, Timor Leste, and

Vietnam in the lower-income segment (with a corresponding lower number of deposits per GDP).

**Loans**

**Loan penetration varies considerably across income groups**

As with deposits, there is a direct relationship between loan penetration and country income levels (Figure 6):<sup>1</sup> the higher the income level, the greater the number of loan accounts and the greater the number of borrowers.

**Number of loan accounts per 1,000 adults continued to increase globally over 2004–2011, with declines in 2009 and 2010 due to the financial crisis**

The trend line over the period is steepest for the upper-middle-income countries, with upper-mid-

1. Boxes show the observations between the 25th and the 75th percentile, with the line in the middle of the box showing the median for each group. The extent of whiskers shows the normal range for each group, while observations that fall outside the normal range, if any, are represented as dots above (and below) the highest and lowest points of the whiskers.

FIGURE 6

**Number of borrowers/1,000 adults in 2011—Across and within income groups**

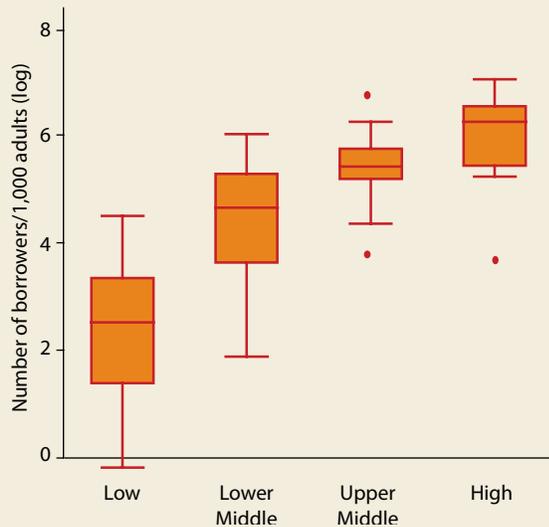
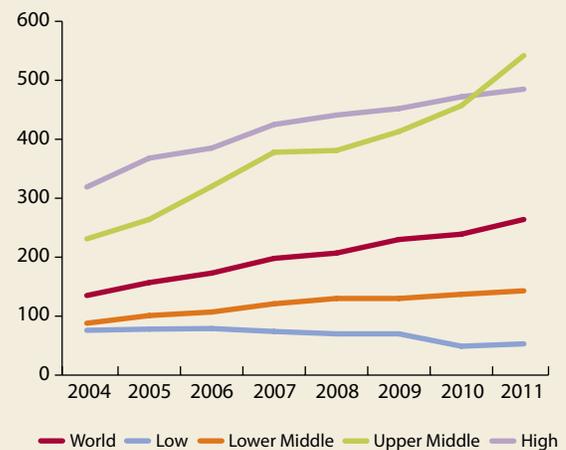


FIGURE 7

**Commercial bank loan accounts per 1,000 adults (by income groups)**



dle-income countries catching up with and passing high-income countries in 2010 (Figure 7). For example, the growth rate for loan accounts per 1,000 adults was striking for Argentina (average annual growth rate of 22 percent for the period 2004–2011, with no change in 2009, reaching 615 in 2011), Venezuela (28 percent per year, also with a small decline in 2009, reaching 494 in 2011), and Peru (16 percent annual growth, albeit with slower growth in 2009, reaching 247 in 2011). The upward slope is less steep for lower-income countries, and the number of loan accounts per 1,000 adults dips downward for low-income countries. Over the same period, percentage changes in SSA are high while the number of accounts per 1,000 adults in 2011 remains very low (Rwanda, 9 up from 0.5; Burundi, 6.6, up from 2.6; and the Gambia, 37.5, up from 8.8).

Differences in loan maturities across income groups may help explain the differences in trends displayed in Figure 7. In high-income countries, loan maturities are longer, even up to 30 years for mortgages, while in low-income countries, loan maturities tend to be much shorter, usually less than one year. The longer loan maturities in high-income countries mean that it takes much longer to register changes in the overall number of loans in

times of crisis or credit retrenchment. In low-income countries, short loan maturities mean that there is a higher loan turnover, and a decline in new loan issues would be reflected much faster. The shorter maturity of loans in low-income countries makes FAS data closer to flow data in these countries, although by definition, FAS data are stock data (i.e., FAS asks for outstanding loans). Thus, the effect of a crisis on lower-income countries may be overstated in relation to effects shown in higher-income countries.

***The post crisis upswing in the number of borrowers came a year earlier than the renewed increase in loan accounts***

The number of loan accounts per 1,000 adults continued to drop in 2010, whereas the number of borrowers per 1,000 adults turned upward in 2010. The relatively fewer loans per borrower in 2010 (Figure 8) suggest caution in the number of loans a borrower is willing to take, or banks are willing to issue.

***Variations in loan penetration across and within regions are striking, but as expected***

High-income countries have the highest loan penetration and numbers of borrowers, while SSA has

FIGURE 8

Commercial bank loans (annual medians)

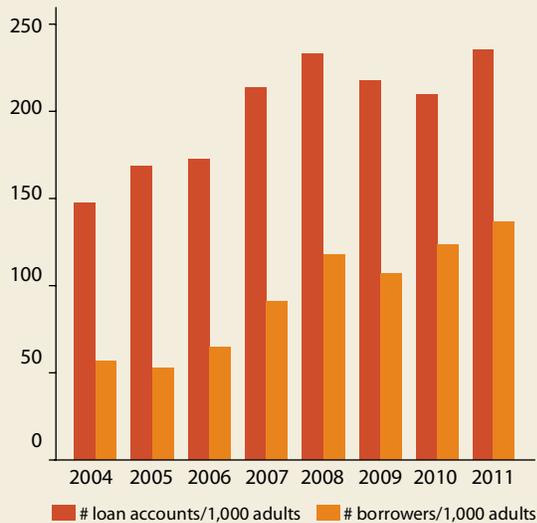
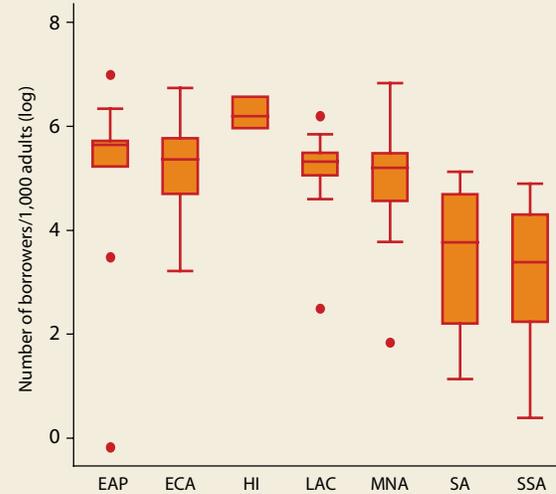


FIGURE 9

Number of borrowers/1,000 adults in 2011—Across and within regions



the lowest. Less-developed regions have greater dispersion within the region, SSA in particular. Overall, the results correspond to the income levels of regions (Figure 9). On average, the differences across regions are less in terms of outstanding loans (as percentage of GDP), while dispersion within regions is higher in developing countries.

**Physical Outreach**

*Measured by the rapid (and consistent) increase in the number of bank branches and automatic teller machines (ATMs) over 2004–2011, access to commercial bank services has deepened across all regions of the world*

Overall, the number of commercial bank branches and ATMs increased steadily during 2004–2011. The trend lines between ATMs and bank branches are similar (Figure 10), with a slowdown in the crisis years and picking up in 2010. Not surprisingly, ATMs grew slightly faster than bank branches, as ATM expansion is less costly in terms of infrastructure. Rapid ATM expansion is linked to branch expansion (i.e., a dual effect of more branches and more ATMs per branch.)

Despite the positive growth in low- and lower-middle-income countries in both ATM and branch networks throughout the period, there is still a large gap between lower-income and upper-middle- and high-income countries. The distribution of ATMs is strikingly different among the country income quartiles. The world as a whole had 47 ATMs and 17 commercial bank branches per 100,000 adults in 2011. Low- and lower-middle-income countries had 3.2 and 13.1 ATMs per 100,000 adults in 2011, respectively, while this figure is 76 in upper-middle-income countries and 123 in high-income countries.

There is considerable inequality across regions and within regions in terms of commercial bank branches per 100,000 adults (Figure 11). Low- and lower-middle-income countries had 3.8 and 9.6 commercial bank branches per 100,000 adults, respectively, in 2011. In contrast, upper-middle and high-income countries had 26 and 34, respectively. SSA saw the largest growth in branch network, from a low base, with an average of 6.8 branches per 100,000 adults, with many countries having considerably fewer branches, including Malawi, Tanzania, Ethiopia, the Democratic Republic of Congo, and Sierra Leone.

FIGURE 10

**ATMs and commercial bank branches (annual medians)**

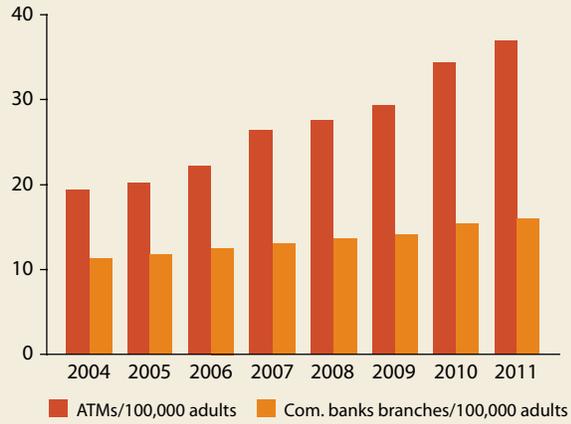


FIGURE 11

**Commercial bank branches per 100,000 adults, regional dispersion, 2004 and 2011**



## The State of Access to Insurance—Preliminary Data

Insurance is broadly recognized alongside payments, deposits, and loans as one of the four main categories of financial services. Insurance services are helpful to manage and mitigate risk, which is especially important for poor households and small businesses that are particularly vulnerable to shocks. With the help of insurance, individuals and firms can pass risks on to others, building resilience against disasters, whether personal or large scale. There is also evidence that insurance can help improve investment opportunities and returns, enabling individuals and firms to borrow more and grow.

While informal risk transfer mechanisms are prevalent in many parts of the world, formalization is seen as important to ensure the soundness of the insurance and reinsurance industries, facilitate risk-pooling across geographies, and provide adequate consumer protection.<sup>2</sup>

Insurance data in FAS include the number of corporations, number of policyholders, number of policies, and technical reserves. Information on policies and technical reserves are available for life and non-life policies both as a combined number and segregated. Life insurance is any form of insurance whose payment is contingent upon the death of the insured (e.g., term life insurance) or whose payment is contingent upon the survival of the insured to or beyond a specified point in time (e.g., endowment insurance and annuities). Nonlife insurance includes provision of insurance services other than life insurance: accident and fire insurance; health insurance; travel insurance; property insurance; motor, marine, aviation, and transport insurance; and pecuniary loss and liability insurance.

While FAS is the major source of globally comparable data on the number of insurance policies, policyholders and insurance technical reserves, data coverage on insurance is still far from com-

plete. Recent landscape studies on microinsurance help to provide a deeper understanding of the use of insurance in the low-income market. See Box 3.

### ***High-income countries account for the vast majority of the global insurance market, historically as well as today***

On average, there were 21.5 insurance corporations per country in the world in 2011, which amounts to less than one (0.6) per 100,000 adults. In developed countries, this average is as high as 120 per country, corresponding to approximately nine insurance corporations per 1 million adults, while in SA, where penetration is the lowest, it is four per country or six per 10 million adults (see Figure 12). The small island economies in Latin America and the Caribbean (LAC) have a large number of insurance corporations relative to their population, e.g., Bahamas (48 per 100,000 adults), followed by Grenada and St. Kitts and Nevis (with 30 per 100,000 adults each). With the exception of the Middle East and North Africa (MENA), the number of insurance corporations declined on average across all regions and income groups throughout the period. The number of insurance corporations alone, however, is insufficient to analyze the level of insurance development in a market.

### ***The number of insurance policies increased throughout 2004–2011***

In 2011, on average, there were 709 insurance policies per 1,000 adults in the world, and 269 insurance policyholders per 1,000 adults.<sup>3</sup> The number of policyholders more than doubled since 2004.

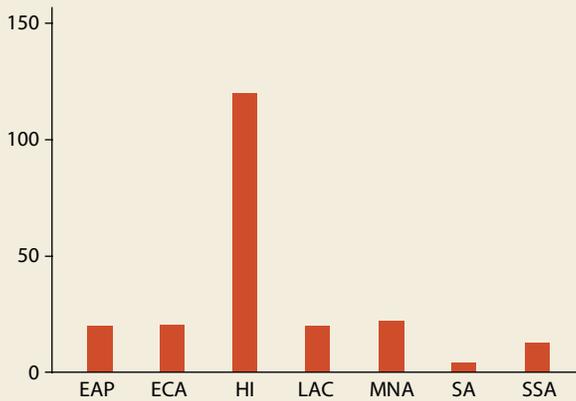
2. The “Application Paper on Regulation and Supervision Supporting Inclusive Insurance Markets” of the International Association of Insurance Supervisors (IAIS) is straightforward on this point: “in the event that informal services exist, then formalisation is needed” (IAIS 2012, p. 6).

3. The number of insurance policyholders refers to the number of life and nonlife insurance policyholders that include only nonfinancial corporations (public and private) and households. A policyholder is a person or an entity that pays a premium to an insurance company in exchange for the coverage provided by an insurance policy. Number of insurance policies refers to the number of insurance policies held by nonfinancial corporations (public and private) and households. An insurance policyholder may have multiple insurance policies (life, health, property, etc.). Also, the FAS survey is not able to distinguish between individual and group policies/policyholders.

FIGURE 12

Number of insurance corporations

Median number of insurance corporations, 2011



Median number of insurance corporations, 2011

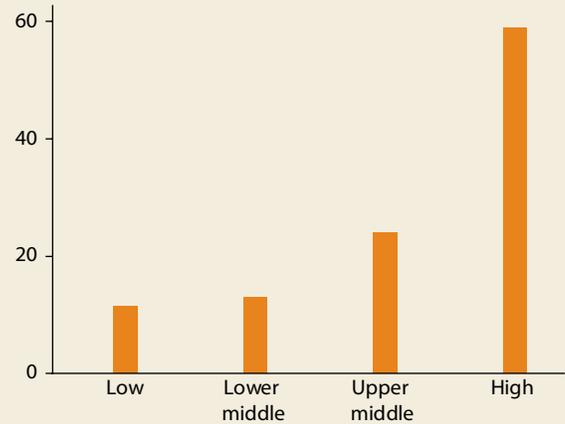
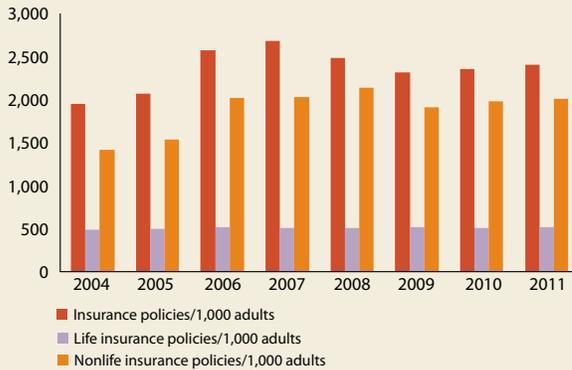


FIGURE 13

Number of insurance policies over time

Number of insurance policies/1,000 adults



High-income countries have an average of 1,723 insurance policies per 1,000 adults, while the low-income countries have an average of 203. However, low-income countries are beginning to catch up. While high-income countries experienced very little growth, the average annual growth rate in the number of policies for the lower-middle-income countries was 9 percent.

*The 2008 financial crisis negatively affected nonlife insurance policies in particular*

Figure 13 shows that, throughout 2004–2011, overall the number of total insurance policies and the number of nonlife policies per adults increased, though both decreased following the crisis and then picked back up. In contrast, the number of life insurance policies per adult globally remained more or less constant throughout 2004–2011 around one policy for every two adults. As life insurance policies are longer-term contracts by nature compared to nonlife insurance policies, it is intuitive that the nonlife insurance sector was most affected by the financial crisis.

*There is a big difference in insurance penetration between high-income economies and developing economies*

Although insurance penetration—measured by insurance policies per 1,000 adults—almost doubled in developing economies throughout 2004–2011, there is still a big gap between high-income economies and developing economies. While there were almost 2.5 insurance policies per adult in high-income economies throughout the period, there were only 0.5 policies per adult in developing economies in 2011 (Figure 14).

FIGURE 14

**Insurance policies per 1,000 adults:  
High-income vs. developing economies**

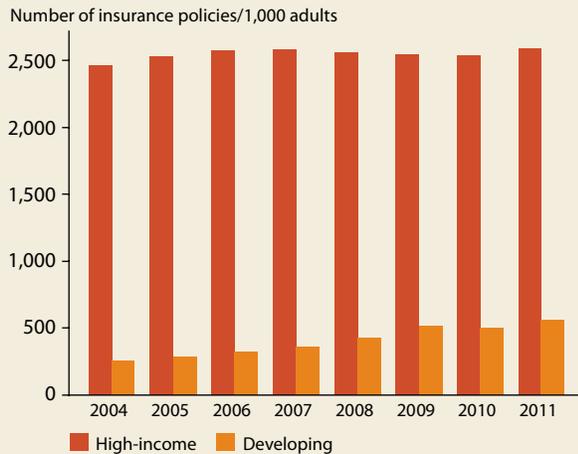
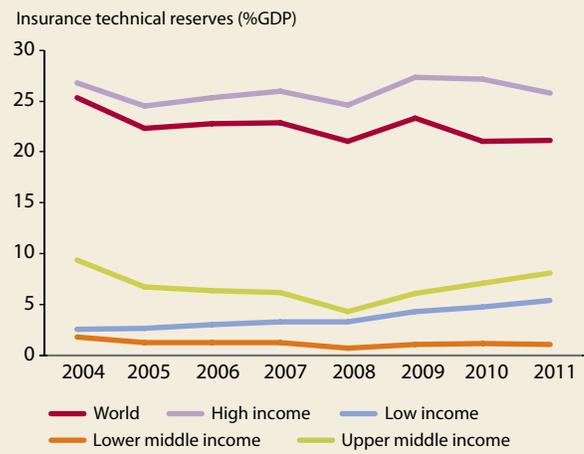


FIGURE 15

**Insurance technical reserves across  
income groups**



**The 2008 financial crisis reduced insurance technical reserves**

FAS defines insurance technical reserves as net equity of households in life insurance and prepayments of insurance premiums and reserves against outstanding claims. As FAS does not cover pension funds, net equity of households in pension funds is not included here. In essence, insurance technical reserves amount to the difference between the present value of expected future premiums and the present value of expected claims and expense payments, as well as provisions for claims in course of settlement or expected to have occurred but have not been reported. A major part of life insurance can be considered savings of households.<sup>4</sup>

Figure 15 plots the trend in insurance technical reserves (relative to GDP) for the world, as a whole as well as for the four country income groups over 2004–2011. Although the dip in 2008 is more visible for the world as a whole and for the high-income and upper-middle-income countries (1.3 and 1.9 percentage points, respectively) that have larger in-

surance sectors and where the financial crisis hit the hardest, a decline in insurance technical reserves-to-GDP in lower-middle-income countries (60 basis points) can also be observed. The effect on low-income countries was in the form of stagnation rather than a decline.

**Life insurance dominates in terms of volumes**

The median number of global life insurance policies made up 21 percent of total insurance policies in 2011, up one percentage point from 2005. Despite the small portion of total policies, the median level of global life insurance technical reserves accounted for nearly 70 percent of total technical reserves in both 2005 and 2011.

For the number of policies, policyholders, and technical reserves, the proportion of life and non-life insurance to total insurance varied greatly across regions and income groups. Life insurance policies as a percentage of total policies were highest in SA (63 percent) and SSA (49 percent) in 2011. Conversely, life insurance policies accounted for only 14 percent of total policies in the MENA

4. Note that a comparison of asset holdings instead of technical reserves would have been more relevant; however, data on insurance corporation assets are not available.

region for the same period (see Figure 16).<sup>5</sup> Life insurance policies ranged from 58 percent of total policies in low-income countries to 20 percent in the upper-middle-income group (see Figure 5, upper left panel).

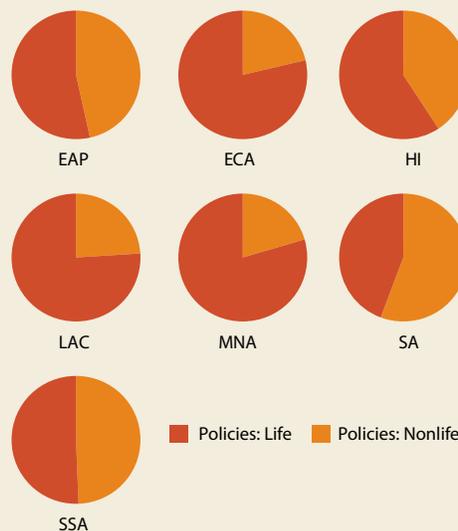
The preliminary data on insurance from FAS provide a useful starting point for understanding the dynamics of access to insurance globally. Yet more complementary data, such as asset holdings and subsegmentation by product type, are needed to draw deeper insights on the underlying characteristics of insurance markets globally and how inclusive they are.

5. SA average uses data on percentage of life insurance policies in total policies from Bangladesh (93 percent) and Bhutan (33 percent) only; SSA average is based on Rwanda (79 percent), Seychelles (12 percent), and Mauritius (55 percent) only; and MENA average is based on Saudi Arabia (8 percent) and Tunisia (17 percent).

FIGURE 16

### Life vs. nonlife insurance policies by region (2011)

Graphs by region



#### BOX 3

### Microinsurance in Latin America and the Caribbean and Africa

Two landscaping studies focusing on the low-income insurance market in LAC and in Africa complement FAS data and also provide deeper insights on the development of insurance markets in the two regions, with a focus on the low-income market.\*

#### Key Findings from the LAC Microinsurance Landscape Report

- Of the 45.5 million identified lives and properties covered, 71 percent had life insurance (excluding credit life), 53 percent had some form of accident insurance, 35 percent had credit life insurance, 23 percent had some form of health insurance, and 6 percent had property insurance.
- The five countries with the greatest number of insured (Mexico, Brazil, Colombia, Peru, and Ecuador) account for just over 90 percent of all lives and property covered in Latin America. Of 19 countries reporting microinsurance in LAC, 55 percent of the people and properties covered were in Mexico and Brazil.

- Around 90 percent of the organizations identified are formally regulated providers, and they are the market leaders.
- The growth of insurance in the low-income market in LAC has happened largely without donors and regulatory inducements, which has given the region a different character than Africa or Asia. The result of this maturing insurance market is a positive mix of broader outreach, a greater variety of distribution, and a movement toward products that likely offer greater value to the low-income market. The positive developments there are likely to continue, with more insurers achieving profitability in working in low-income markets.

#### Key findings from the Africa Microinsurance Landscape Report

- The Africa landscape survey identified 44.4 million lives and properties covered at the end of 2011. More than 60 percent of this coverage comes from South Africa.
- Although life products cover more lives than all other products combined, most of the products reported were health

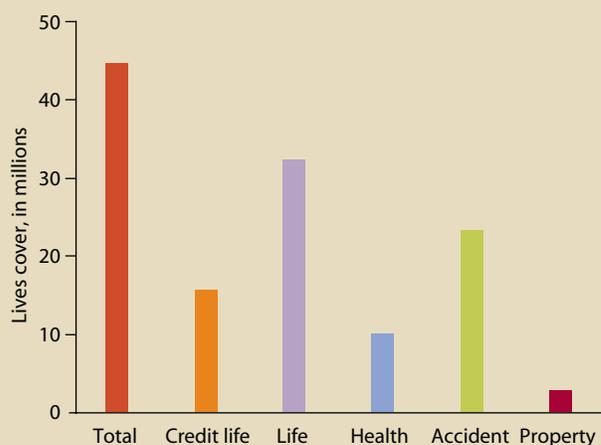
**BOX 3** (continued)

products, due to the large numbers of mutuals and community-based organizations, primarily in West Africa.

- Considerable regional differences in product outreach exist:
  - Southern Africa represents the majority of the population covered by life and credit-life products because of the strong presence of funeral insurance.
  - West Africa has the greatest number of people covered by health products, primarily because of strong donor promotion of group insurance policies through community-based health insurance programs in francophone Africa.
  - East Africa has the greatest agricultural coverage and, due to one large insurer, the greatest accident coverage.
- The region remains dominated by funeral coverage, the main driver of growth, with Southern and East Africa representing the greatest number of lives and properties covered.

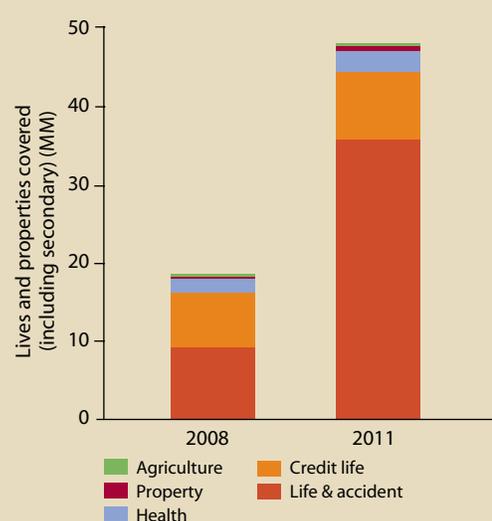
- There has been a significant increase in life coverage in Africa, which is important, but not sufficient. Credit life in particular is often considered an entry product. But the sector has not yet progressed from credit life to more complex products such as health and agricultural insurance, both important for low-income people.
- New distribution channels, such as life insurance products embedded into savings accounts and bundled into mobile phone subscriptions, have helped to expand the industry in terms of covered lives in the past two years. These types of developments hold great potential to dramatically increase coverage, though they also raise important issues of consumer education, protection, and regulation.
- Despite the large number of community-based organizations (77 percent of the organizations identified), regulated commercial insurers account for 78 percent of the lives covered. The fact that commercial insurers are the drivers of growth in the microinsurance industry has positive implications for scale, profitability, and sustainability of microinsurance.

**FIGURE B3.A. LAC: Lives covered by types of coverage**

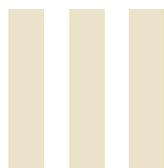


Source: McCord, Tatin-Jeleran, and Ingram (2012) and McCord et al. (2012).

**FIGURE B3.B. Africa: Number of lives/properties by product**



\* The work for the two landscaping studies was executed by the Microinsurance Centre with support from the Multilateral Investment Fund for Latin America and Making Finance Work for Africa and the Munich Re Foundation for Africa (McCord, Tatin-Jaleran, and Ingram 2012; McCord et al. 2012). Both studies define microinsurance as “insurance that is modest in both coverage and premium levels based on the risks insured.”



## The State of Access to Finance by SMEs—An Update

**J**obs are a central priority for policy makers in both developed and developing economies. The focus on jobs has spurred strong interest in SMEs. At the end of 2010, total commitments of public funders to SMEs were around \$24.5 billion (Siegesmund and Glisovic 2011). The G-20 is also committed to improving access to finance for SMEs in developing countries, and the Global Partnership for Financial Inclusion (GPMI) has prioritized SMEs as one of its four priority topics.<sup>6</sup>

Recent studies suggest that SMEs contribute more to the employment share than large firms do, and their contribution is larger in low-income economies than in high-income countries (Ayyagari, Demirgüç-Kunt, and Maksimovic 2011). Many barriers to SMEs' growth exist, however. Some are nonfinancial barriers, including lack of infrastructure such as electricity.<sup>7</sup> Access to finance for managing cash flows, funding investments, and insuring against risk is another barrier. Given the importance of SMEs to GDP and employment creation, expanding SMEs' access to formal banking services is critical.

This chapter provides an overview of SME financing volumes provided by commercial banks using FAS data. Data on SME loan volumes were collected by financial regulators in only 37 out of the 187 economies surveyed by FAS in 2012 (Figure 17).<sup>8</sup> As 2012 was the first year FAS included questions on SME loan volumes, the hope is that more countries will provide SME data in future rounds of FAS.

### ***The higher the GDP per capita, the greater the volume of SME lending***

The share of SME loans as a percentage of total loans in commercial banks varies greatly across

countries (Figure 17). Overall, higher-income countries tend to have higher ratios of SME finance volume-to-GDP (Figure 18, left panel) and SME loan accounts to total firm loans (Figure 18, right panel), suggesting a more developed SME finance market compared to developing countries.

### ***In low-income countries, only a small percentage of enterprise loan accounts are held by SMEs***

There are large variations across countries surveyed with regard to whether SMEs have a basic loan account (Figure 19). For example, in India, Madagascar, and Georgia, a very small percentage of enterprise loan accounts in commercial banks are held by SMEs (less than 20 percent). This is largely consistent with the recent evidence from the World Bank's Enterprise Surveys. For example, the latest survey data from Madagascar (2009) indicate that 36 percent of small firms and 46 percent of medium firms identify access to finance as a major constraint.<sup>9</sup>

As mentioned previously, questions on SME access to finance were only recently added to the FAS survey. Over time and as regulators improve reporting, FAS will have time series data on SME finance that will allow for a thorough trend analysis. Box 4 is a first attempt to illustrate SME finance trends in Bangladesh, where the regulator was able to provide historical data for the period 2004–2011 to FAS.

### ***Establishing common definitions and data standards for SMEs remains challenging***

There is no standard definition for an SME, and countries measure SMEs by different yardsticks. In addition, the heterogeneity of SMEs themselves—with highly varying sizes, levels of formality, capacity, and financial needs—makes it challenging to standardize information across different countries. This is compounded by the different levels of

6. <http://www.gpmi.org/about-gpmi/sub-groups-and-co-chairs>

7. See IFC (2012) for more information on the importance of nonfinancial services for SMEs.

8. Although SME definitions vary across countries, many central banks that submitted SME data to FAS used the World Bank definition to report the data. See Annex for further details.

9. [www.enterprisesurveys.org](http://www.enterprisesurveys.org)

FIGURE 17

SME lending as percentage of GDP

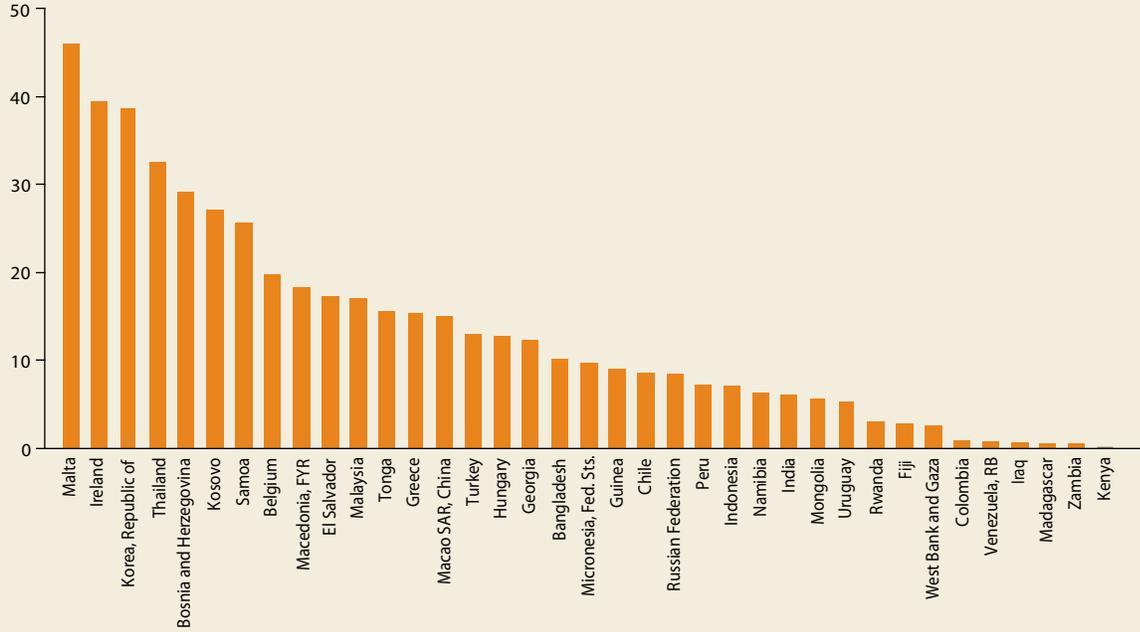


FIGURE 18

SME lending by commercial banks (2011)

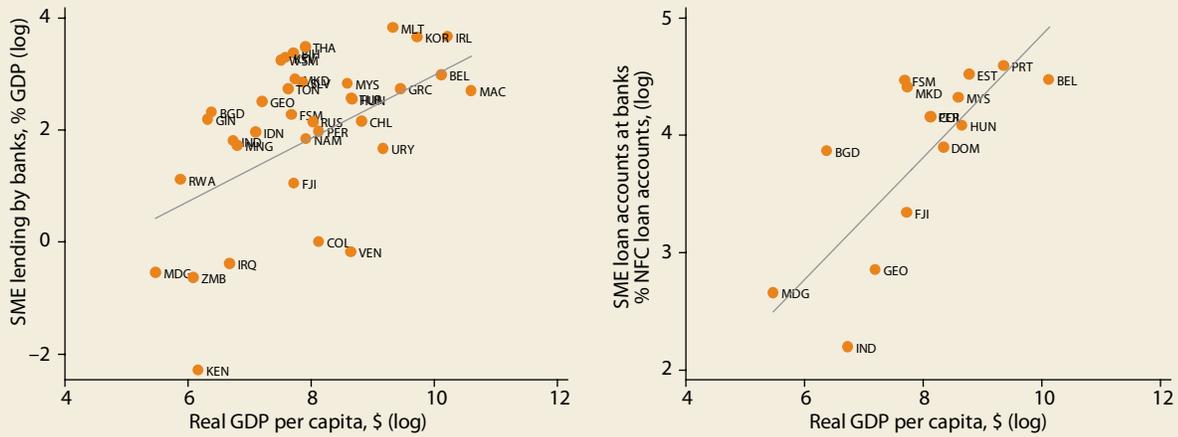


FIGURE 19

**SME loan accounts as percentage of total firm loans in commercial banks  
(% nonfinancial corporation loan accounts in commercial banks)**



knowledge, data, and measurement capacity within different countries.

Nonetheless, efforts to harmonize SME data definitions and practices to better measure, track, and assess the state of access to finance for the SME sector at the national and global levels are underway. The work of the GPFI Sub-Group on Data and Measurement is just one example. The Organisation for Economic Co-operation and Development (OECD) has also developed an OECD Scoreboard that provides a comprehensive international framework for monitoring SMEs' and entrepreneurs' access to finance over time (OECD 2012). In addition, a number of ongoing efforts among development finance institutions aim to streamline and harmonize SME definitions. Recently, IFC constructed a database of formal and informal micro, small, and medium enterprises (MSMEs) around the world to estimate global and regional gaps in enterprise finance. Key findings of this study are summarized in Box 5.

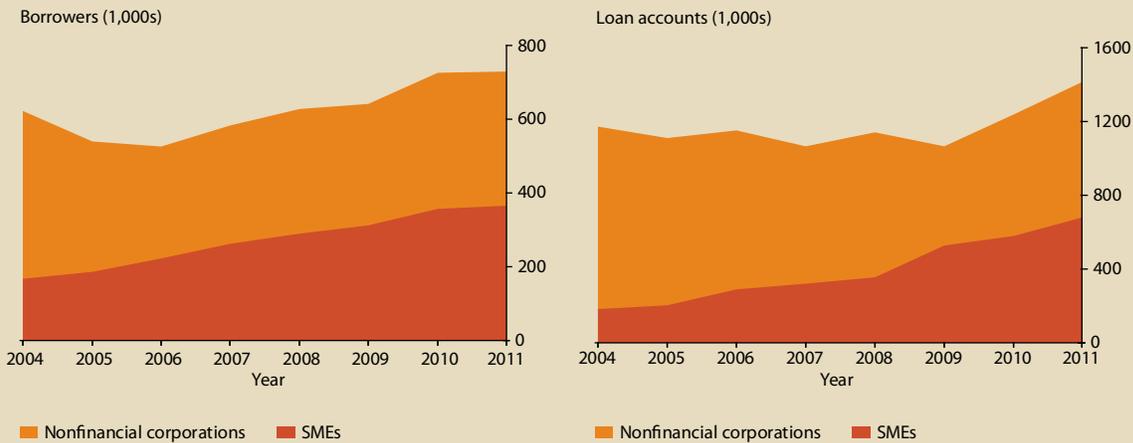
BOX 4

### SME Lending Trends in Bangladesh

Bangladesh is one of the few developing economies that provided detailed responses on the SME-related questions of the FAS survey, allowing for deeper analysis. Trend analysis of the FAS data indicates that the development of SME finance in Bangladesh has progressed significantly over time, with the share of SME borrowers to nonfinancial corporation borrowers (enterprises other than financial institutions) increasing from 27 percent in 2004 to 50 percent in 2011. The number of SME loan accounts nearly tripled over the same period (Figure B4.A).

SMEs are important for growth and employment for the Bangladeshi economy. SMEs constitute 90 percent of all industrial firms in Bangladesh and generate 25 percent of GDP. Thirty-one million people are employed by SMEs, and SMEs contribute to 75 percent of household income (Abdin 2012). It is estimated that SMEs of 250 or fewer employees contribute to around 21 percent of employment in Bangladesh (Ayyagari, Demirgüç-Kunt, and Maksimovic 2011). The government has recognized the SME sector as an important driver of economic development and employment creation, and also sees women-owned businesses as a priority (MIDAS 2009).

**FIGURE B4.A. Number of SME borrowers and number of SME loan accounts in commercial banks in Bangladesh**



Source: IMF FAS.

## Estimating the Global SME Finance Gap

IFC recently conducted a study on the state of access to finance for formal and informal MSMEs, based on data from the World Bank's Enterprise Surveys. The study defines MSMEs as micro (1–4 employees), very small (5–9 employees), small (10–49 employees), and medium (50–250 employees) enterprises. Key highlights from the study on SMEs are as follow:

- **Total number of SMEs:** ~36 million–44 million formal SMEs globally and ~25 million–30 million formal SMEs in developing economies
- **Women-owned firms:** ~31–38 percent (8 million–10 million) formal SMEs in developing economies have full or partial women ownership
- **Total credit gap:** 55–68 percent of formal SMEs (14 million–18.6 million) in developing economies are either unserved or underserved
- **Value of credit gap:** ~\$0.9 trillion–1.1 trillion gap in credit for formal SMEs in developing economies (~26–2 percent of current outstanding SME credit in developing economies)
- **Women-owned firms' credit gap:** ~63–69 percent of women-owned SMEs (5.3 million–6.6 million) in developing economies are either unserved or underserved, which amounts to a financing gap of ~\$260 billion–320 billion.
- **Regional variations:** The gap relative to current outstanding SME credit varies widely across regions, e.g., SSA and MENA require a greater than 300 percent increase in outstanding SME credit compared to 7–8 percent and 25–30 percent in East Asia, and Eastern Europe and Central Asia, respectively.

Source: IFC Enterprise Finance Gap Database 2011. The database will be publicly available on the SME Finance Forum at [www.smefinanceforum.org](http://www.smefinanceforum.org).

*Methodology Note:* Total number of firms (aggregate and different sizes) is based on data from national statistical offices, business registries, etc., and may include firms that are out of business. See IFC MSME Country Indicators ([www.ifc.org/msmecountryindicators](http://www.ifc.org/msmecountryindicators)) and Kushnir, Mirmulstein, and Ramalho (2010) for details. World Bank Enterprise Surveys are conducted in developing economies, and not all countries are covered. Data for the noncovered countries are extrapolated based on regional averages. Based on the Enterprise Surveys database, IFC Enterprise Finance Gap Database develops four categories of constraint levels: (1) well-served; (2) underserved; (3) unserved; (4) no need. "Unserved" enterprises are those that do not have a loan or overdraft but need a loan; "underserved" enterprises are those that have a loan and/or overdraft but have financing constraints.

## Putting Supply- and Demand-Side Data Together— What FAS and Global Findex Tell Us

**T**wenty-twelve was a milestone year for financial inclusion data: The enhanced FAS released in September 2012 provides the most extensive supply-side data available to date, and Global Findex released in March 2012 offers the most extensive demand-side data to date.

Much attention—and high expectations—has been focused on the enhanced FAS and Global Findex and how they can, together, assess the state of financial inclusion and help point to needed policy reforms and market opportunities.<sup>10</sup> Both data sets are international reference points in the evolving financial inclusion data architecture that can be used for benchmarking and are sources for the G-20 Basic Set of Financial Inclusion Indicators. Questions about how the two data sets re-

late to each other, what they are best useful for, if and how they contradict each other, and if so why.

This chapter seeks to help policy makers, practitioners, and funders interested in financial inclusion data better understand the two data sets, what they measure, and what they do not measure. It also compares the results of the two data sets, as part of a matching exercise (analysis of the extent to which these two data sets match—and do not match—for a set of key variables) and offers hypotheses as to why and when the data sets do and do not match.

### What is the difference between FAS and Global Findex?

*FAS and Global Findex are by design  
complementary, and not substitutes*

While FAS provides a supply perspective, Global Findex measures demand. One survey is not meant to replace the other.<sup>11</sup> Table 2 summarizes the differences between FAS and Global Findex on select dimensions.

FAS obtains data directly from financial regulators through a comprehensive written survey. The survey questions cover data that financial service providers already report—or should be reporting—to central banks, other regulators, and supervisory agencies. Global Findex goes straight to the individuals using financial services through nationally representative, individual surveys that are interview based (face-to-face or on the telephone). Both surveys share common features, such as comprehensive country coverage allowing for cross-country comparisons and public availability of data, which underpin the robustness of both FAS and Global Findex.

11. See IFC (2011).

10. Indicators developed from both FAS and Global Findex are expected to complement other sources, including thematic and country-led efforts.

#### BOX 6

### Global Findex

Global Findex is the new public demand-side database on financial inclusion developed by the World Bank, with a 10-year grant from the Bill & Melinda Gates Foundation, and implemented by Gallup, Inc., as part of the annual Gallup World Poll. The data are based on interviews with more than 150,000 nationally representative adults in 148 economies. Covering over 40 indicators, the database provides insight into how people around the world save, borrow, make payments, and manage risk. All indicators can be further refined by gender, urban, or rural residence, as well as age, education, and income. See [www.worldbank.org/globalfindex](http://www.worldbank.org/globalfindex).

**TABLE 2 Comparing FAS and Global Findex on key dimensions**

	FAS	Global Findex
Unit of analysis	Financial institution	Individuals
Frequency	Annual	Triennial
Survey method	Survey of financial regulators (mostly central banks)	Interviews with individuals (face-to-face in developing countries, phone interviews in developed countries)
Coverage	Global Time series available: 2004–2011	Global Time series: Available in early 2015
Types of institutions	Regulated only*	Regulated, unregulated, informal
Access indicators	Yes	No**
Usage indicators	Yes (limited)	Yes
Sampling	None—administrative data	Representative sample of 1,000 individuals in each country***
Products	Deposits, loans, insurance	Deposits, loans, payments, insurance (limited)
Data type—Loans	Stock (all outstanding)	Flow (past 12 months)****
Comparative advantage	Access provided by different institutional types, broad measures of usage	Usage cuts of the data by age, gender, income, education level, urban–rural

\* Data on financial institutions that are not regulated by the central bank (primary financial regulator) may be available for some countries.

\*\* Global Findex has data on how individuals use different channels to access financial services rather than the availability of these channels.

\*\*\* Sample size is larger than 1,000 individuals for some countries.

\*\*\*\* Data on loan series are flow, but data on loan purposes are stock.

***Supply-side data surveys such as FAS offer a relatively low-cost means of data collection, with frequent and comparable data that are viewed as highly credible to national authorities***

- FAS uses administrative data and should provide the exact number of accounts and account holders in an ideal situation. Administrative data, however, may have measurement and recording errors. Dormant accounts and multiple counting are also persistent issues.
- It is possible to use FAS to measure access to different types of financial institutions, and to have broad measures of usage of savings, loans, and insurance offered by different types of institutions.
- FAS has data on access points and urban–rural breakdown for access indicators.
- Country ownership for supply-side data is strong, with national governments collecting and often easily validating the data.

- FAS is conducted by the IMF and is linked to other IMF statistical efforts, such as the International Financial Statistics and the Financial Soundness Indicators.

- Coverage of semi-formal or informal providers of financial services is by definition weak, if included at all, given the survey method.

***Demand-side surveys such as Global Findex offer rich information on the many dimensions of financial inclusion***

- Global Findex has detailed data on the users of financial services enabling a deep and nuanced understanding of financial inclusion from the individual perspective.<sup>12</sup> It also includes subjective assessments of the barriers to access to finance from the perspective of individuals.

12. See Allen, Demirgüç-Kunt, Klapper, and Martinez Pería (2012) for further details on the determinants of account ownership and usage around the world using Findex data.

- Global Findex uses a sample of roughly 1,000 respondents to estimate the value of the indicators for the whole country, a cost-effective way to capture the financial inclusion story in a given country.
- Global Findex facilitates analyses of how different types of financial behaviors—both formal and informal—fit together at the individual level.
- Global Findex can generate an estimate of the percentage of account holders in the world. As with all individual-level surveys, the precision of the estimate is affected by sampling design, question wording, and response biases (especially related to individual recall and perceptions). Global Findex indicators thus have standard errors attached, which define the range within which the estimates would fall if the same exercise were to be repeated.
- Ownership from national governments for demand-side data conducted by an external party may vary from country to country. A number of countries are in the process of developing their own demand-side surveys to have a deeper understanding of usage of financial services based on their country-specific conditions.

### ***FAS and Global Findex are used for different reasons***

Policy makers and regulators make use of FAS to understand the offer of financial services by institutions under their purview. FAS can help provide an understanding of the market structure, pointing to strategies to work with different kinds of financial institutions to increase access. A deeper understanding of the profiles of users through Global Findex can lead to more access-friendly policies, legislation, and regulation, potentially targeting the groups that are most underserved or are a priority for governments. Providers, as well as donors and investors, can deepen their understanding of client profiles and behavior via Global Findex, including client segments that are persistently underserved. Both FAS and Global Findex can be used for benchmarking across countries.

### ***How do FAS and Global Findex compare at the country level?***

Should FAS and Global Findex tell the same story at the country level? Though it is reasonable to expect

the two surveys to tell similar stories of financial inclusion, they do not necessarily give the exact same number for data points at the country level, even after correcting for the differences in definitions of similar concepts to the extent possible.

FAS and Global Findex do not have similar results for loans. But this should not be surprising. FAS and Global Findex are expected to differ fundamentally in terms of loans because FAS asks for “all outstanding loans” while Global Findex asks for “all loans taken in the past 12 months.” The differences are expected to be particularly significant in countries where loans with maturities over 12 months are available. As noted, FAS data are also susceptible to including dormant and multiple accounts. Essentially, FAS has stock data for loans and Global Findex measures flow.

For deposits, the answer is more nuanced. The analysis that follows focuses on comparing results on deposits across FAS and Global Findex.

### ***Fifty of the 103 countries that are covered by both FAS and Global Findex (49 percent) have indicators on the usage of deposit accounts that match<sup>13</sup>***

There are many ways to approach the comparison of the two datasets. To provide a simple and intuitive comparison of the FAS and Global Findex results that does not require a deep technical analysis, we simply ranked countries based on the levels of usage reported against two variables: “account at a formal financial institution” (Global Findex) and “total depositors” (FAS).<sup>14</sup> Countries were considered either a “match” or “no match” based on the closeness of their relative orders in FAS and Global Findex (with  $\pm 10$  range in the ranks being consid-

13. Since the surveys do not measure deposits in the exact same way, we had to construct a total depositor variable before comparing the two.

14. To construct the total depositor variable, we summed the FAS depositor data for 2011 for four types of financial institutions in the survey (commercial banks, credit unions, financial cooperatives, deposit-taking MFIs, and other deposit takers). Since most countries did not have all of these data, we substituted the 2010 data where available. In cases where deposit account data were provided but not depositor data, to correct for multiple and dormant accounts, we divided the deposit account data by three (see Kendall, Mylenko, and Ponce [2010, p. 22–24] and Table 16) and used it as an estimate for depositors, essentially assuming that, on average, each depositor has three deposit accounts.

ered a match).<sup>15</sup> Beyond the initial evidence of a 49 percent match, deeper analyses provide clues for the reasons for the 50 percent nonmatch between the two data sets. Weak financial data management within the financial institutions included in the FAS responses could be a source of errors. Weak systems likely lead to over-counting of depositors and deposit accounts as a result of dormant, multiple, and joint accounts. In the case of the Global Findex sampling design, question phrasing, the use of phone interviews in developed countries instead of face-to-face interviews, and the general sensitivity of asking about financial behaviors can also affect results. There are studies on the effects of different approaches to questionnaire administration on data quality that suggest that data from different modes of administration may not be comparable.<sup>16</sup>

***Countries with lower income levels and less-developed financial systems are more likely to have similar FAS and Global Findex rankings***

There is a higher rate of matching for countries with less-developed financial systems measured as a percentage of adults participating in savings clubs, percentage of population living in rural areas, percentage of adults with loans from private lenders, and depth of credit information. For example, the “match” group averages for percentage of adults participating in savings clubs, percentage of population living in rural areas, and percentage of adults with loans from private lenders are significantly higher than those of the “no match” group, while the average score on the depth of credit information for the “match” group is significantly lower than that of the “no match” group. Confirming this, low-income countries had the highest match rate among income groups, and SSA had the highest match rate among regions, with high-income countries and Eastern Europe and Central Asia (ECA) having the lowest match rates. Why? There may be fewer discrepancies between supply-side and demand-side markets in areas where financial sectors are not very deep and complex, and where there

are simply fewer suppliers of financial services. It is also likely that there are fewer multiple accounts in low-income countries.

***For many countries where there is not a match, FAS data show greater inclusion***

More than half of the nonmatching countries had a higher number of depositors in FAS than in Global Findex. Thirty-three of the 53 countries (62 percent) in the “no match” group had a higher rank in the FAS dataset than in Global Findex. Countries with a higher Global Findex rank had twice the average per capita GDP. These countries also had significantly more commercial bank branches per capita. Furthermore, of the 12 countries where some or all of the Global Findex survey was conducted via telephone, 10 had Global Findex rankings that were higher than FAS.

FAS and Global Findex have together considerably improved the availability of data on access to and usage of financial services. Great progress has been made, and as more information is available, there is interest in going even further. For example, policy makers, practitioners, and funders have indicated that they would like to see better firm-level data. FAS added SME data only recently in 2011, and responses were not as complete as loan and deposit account information from commercial banks. The Enterprise Surveys provide data on developing countries only, and are conducted only every three to four years. Also, there is interest in developing deeper coverage surveys that can provide even more nuanced usage data than what Global Findex is currently providing, as well as information on financial literacy, for example.

FAS and Global Findex can help inform national and global financial inclusion policy making. Combining data from multiple sources can provide policy makers with more information on which to base decision-making. For example, the use of spatial technology together with demand- and supply-side data could offer a more comprehensive picture of the financial inclusion landscape, identifying geographic areas where access is limited but where there is high demand. This, in turn, can provide actionable observations for financial inclusion policy makers and other actors. Some countries such as Malaysia and Brazil are in the process of developing financial inclusion indices that aggregate various dimensions of financial inclusion drawing on different data sources.

15. Global Findex accounts data are used together with the relevant standard errors in ranking the countries, allowing for a margin. Also, rankings are normalized to reflect different numbers of observations in the two data sets: while FAS had 126 observations for “total depositors,” Global Findex had 148 observations for “account at a formal financial institution.”

16. See, for example, Kasprzyk (2005) on how measurement errors may differ for different types of data collection modes as well as other measurement errors in household surveys.

## Linking Financial Access Indicators to Economic Development and Financial Systems Development

**F**inancial inclusion is important because it contributes to improving poor people's lives. It does so by providing the tools to manage cash flows, build assets, mitigate risks, and plan for the future of families and businesses.

There is increasing evidence that inclusive financial systems are positively correlated with broader financial sector development and growth as well as complementary to financial regulators' core goal of ensuring financial stability. The most recent data from FAS and other sources help show the relationship of financial access to broader financial sector development and to the real economy through correlations of selected financial inclusion indicators (deposit and loan penetration) with other macroeconomic and financial sector variables. Deposit and loan penetration are also correlated globally with indicators of economic development as confirmed also in earlier *Financial Access* reports and background papers, e.g., Gini coefficient, education level, population density, road density, mobile phone coverage (CGAP 2009; CGAP and the World Bank Group 2010; Kendall, Mylenko, and Ponce 2010; Ardic, Heimann, and Mylenko 2011).

This chapter explores relationships among financial access and financial systems and economic development parameters using commonly accepted and widely available indicators:<sup>17</sup> (i) financial access as related to growth and the reduction of income inequality; (ii) financial access as related to other financial sector parameters, notably financial stability; and (iii) financial access in relation to financial infrastructure and the business environment. The complex relationship between financial inclusion and financial stability has stirred increasing interest in international financial sector policy discussions.

The correlations and trends that follow suggest important possible effects of financial inclusion beyond the individual and business level. However, it is important to caution that these effects are not necessarily evenly distributed across and within countries and may not manifest themselves directly in the lives of the most vulnerable and poor segments of society. Also, the indicators used and related measurement issues call for caution in drawing definitive conclusions. In exploring the relationship between financial inclusion and financial stability, challenges exist in both the choice of indicators used for financial stability and the availability of data, notably for lower-income countries. For example, the use of bank nonperforming loans as a percentage of total bank loans is a commonly accepted indicator for financial stability and is useful in that there is greater data availability than for more sophisticated indicators, but this indicator can miss important dimensions of stability as it does not capture the off-balance sheet operations of banks nor the operations of shadow banks.

### Financial access, growth, and the reduction of income inequality

Considerable work has been done in the past 10 years on the relationship between financial access and income levels. Well-established literature shows that the degree of financial intermediation is not only positively correlated with growth but is generally believed to causally impact growth and reduce income inequality (Levine 2005, Demirgüç-Kunt and Levine 2008; and World Bank 2008). FAS data also show that greater financial inclusion correlates with higher income levels (GDP per capita and GDP per capita growth) and a reduction in income inequality.

17. The most commonly used indicators are *access*, which is measured by the number of ATMs per 100,000 adults; *usage*, which is measured by commercial bank deposits per 1,000 adults; *depth*, which is measured by domestic credit to private sector (% GDP); and *stability*, which is measured by bank nonperforming loans (% bank loans).

***Deposit penetration is positively and statistically significantly associated with GDP per capita and GDP per capita growth***

FAS data show a number of important relationships between deposit penetration and income levels and between deposit penetration and the growth of GDP per capita. The number of commercial bank deposit accounts per 1,000 adults is positively and statistically significantly associated with real GDP per capita and the growth rate of real GDP per capita, as well as with market capitalization (percentage of GDP) and domestic private credit (percentage of GDP), both indicators of financial depth.

Where data are available for SSA countries for the 2004–2011 period, the positive correlation of real GDP per capita and number of accounts per person is particularly noteworthy, especially for Burundi, DRC, Ghana, Liberia, Lesotho, Mozambique, Rwanda, Tanzania, and Uganda.

***Higher financial inclusion is associated with less inequality, though a certain degree of financial access and usage and financial sector depth is required before inequality improves***

Until recently, research on financial development mainly used indicators of financial depth and stability rather than financial access/financial inclusion. This is because country-level aggregates of access to and usage of financial services were not available at a large scale that is comparable across countries and over time.<sup>18</sup> The literature shows that financial development under normal circumstances does not merely contribute to economic growth; it also divides the growth more evenly.<sup>19</sup> Poor households and enterprises, notably SMEs, leverage the opportunity of access to financial services into greater assets and higher incomes, nourishing their growth potential (IFC 2011).

FAS provides a large enough panel data set to allow statistical analyses that use both the time and cross-country dimensions to explore the linkage of financial inclusion to income equality. Figure 20

shows that as access (shown by ATMs/100,000 adults), usage (shown by loan accounts/1,000 adults), and financial depth (shown by domestic credit to the private sector as a percentage of GDP) all increase, inequality (shown by the Gini coefficient) first increases and then decreases. This finding merits further exploration to determine possible policy implications in terms of defining appropriate risk-based measures to foster greater financial access at earlier stages of financial development.

***For a country with low levels of financial inclusion and financial depth, inequality increases at first, then decreases as the financial system becomes deeper and more inclusive***

Figure 20 uses three dimensions of financial development and associates them with income inequality: (i) financial inclusion (access and usage), (ii) financial depth, and (iii) financial stability (measured by the percentage of nonperforming bank loans). The relationships of access, usage, and depth to income inequality are, to varying degrees, expressed in inverted U-shapes. This means that a certain degree of financial sector size is required before inequality improves. Wealthier segments of the population benefit first; beyond a certain threshold, income inequality declines with financial development. For a country with low levels of financial inclusion and financial depth, inequality increases at first as the financial system becomes deeper (as the wealthier segments are better positioned to access and use financial services), before decreasing, as the financial sector becomes more inclusive. Overall, developed financial systems are associated with less inequality.<sup>20</sup>

## **Financial access and financial stability**

In recent years, a growing number of governments—many of them lower-income countries with high levels of financial exclusion—have made financial inclusion a policy priority, alongside the traditional focus on efficient financial intermediation within stable financial systems. Yet, there remain significant gaps in the knowledge and capacity of many

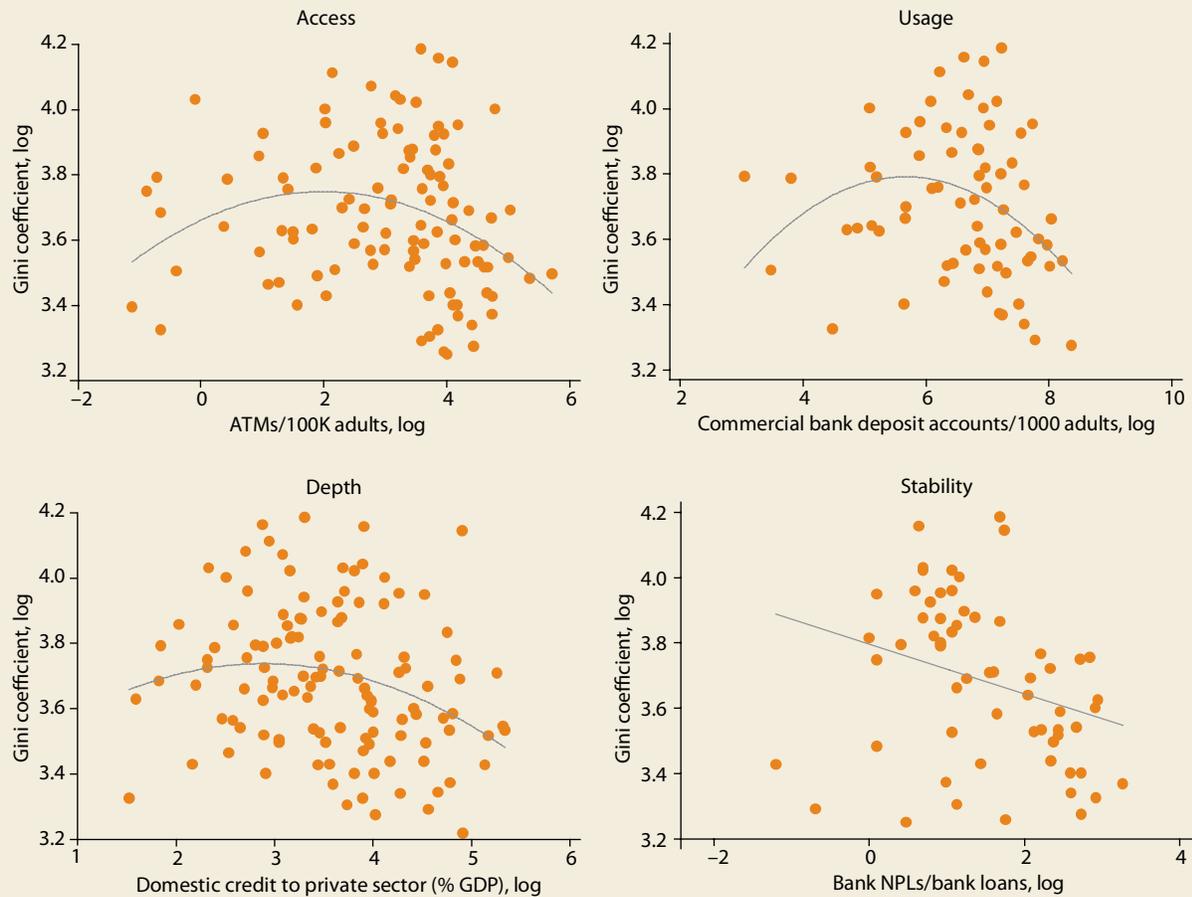
18. Examples of earlier research include Beck, Demirgüç-Kunt, and Martínez Pería (2007) and Honohan (2008); more recent studies using data from CGAP/WBG *Financial Access* include Kendall, Mylenko, and Ponce (2010) and Ardic, Heilmann, and Mylenko (2011), and those using Global Findex include Demirgüç-Kunt and Klapper (2012) and Allen, Demirgüç-Kunt, Klapper, and Martínez Pería (2012).

19. See Jahan and McDonald (2011).

20. This analysis updates and expands on that of Jahan and McDonald (2011).

FIGURE 20

Financial development is associated with less inequality



policy makers seeking to bring about a shift to pro-inclusion policies, balancing concerns of financial inclusion, financial stability, financial integrity, and financial consumer protection. Increased evidence to understand and explain these linkages is critical to help inform the thinking of national policy makers, standard-setters, and emerging global actors.

Current thinking suggests that financial inclusion—financial stability linkages—exist through a number of channels and under a number of conditions associated with financial sector development.<sup>21</sup> Financial inclusion increases financial depth, with its effects on growth and income equality. This has effects at the macro level (increased savings, greater

financial intermediation, lowering of systemic risk) and at the micro level through labor market effects and enterprise development (greater entry)—i.e., a livelihoods effect. Recent analyses suggest that a virtuous circle between financial inclusion and financial stability is created when other conditions are present, and that an important factor is responsible financial inclusion.

This section explores and contributes to the available evidence on the relationship between financial access and financial stability. While the theoretical (and intuitive case) for linking responsible financial inclusion and financial stability is strong, demonstrating empirical evidence is a challenge. Linkages among inclusion, stability, integrity, and protection can be positive or negative. The goal for policy mak-

21. See Cull, Demirgüç-Kunt, and Lyman (2012) and World Bank (2012).

ers is to optimize linkages, which requires maximizing synergies and minimizing trade-offs and other negative outcomes.<sup>22</sup> Both the theoretical underpinning and the initial empirical evidence suggest the need both to control for other factors affecting these linkages and to identify factors required to optimize the linkages. These factors include, for example, elements of the enabling environment for finance, including measures to foster financial consumer protection and financial integrity.

***While a growing body of literature suggests a positive relationship between financial inclusion and financial stability, the empirical evidence does not yet confirm this***<sup>23</sup>

Current empirical evidence cannot prove a direct correlation between financial inclusion and financial stability. Statistically, financial inclusion (as measured by deposit account penetration in FAS data) does not correlate either positively or negatively with IMF Financial Soundness Indicators and with indicators on financial stability included in the World Development Indicators (WDI) of the World Bank.<sup>24</sup>

A similar finding is presented in the World Bank's (2012) *Global Financial Development Report* (GFDR) 2013, which frames four financial-sector characteristics as descriptors of financial development: depth, access, efficiency, and stability,<sup>25</sup> mea-

sured for financial institutions and for financial markets. Correlations between pairs of these four financial sector parameters for financial institutions show that correlations between access and depth and access and efficiency were statistically significant, whereas the correlation between access and stability was not statistically significant.

When the theoretical underpinning for the linkage is so cogent, why is there a lack of empirical evidence? There are a number of other intervening factors to consider that have a greater influence on financial stability. Overall, financial stability, as measured by the Z-score weighted averages for example,<sup>26</sup> is affected by many financial markets factors, and the financial inclusion market segment is a small piece overall. The lack of positive correlation may be due in part to a lack of solid data, but it may also mean that the relationship between financial inclusion and financial stability is not straightforward. These results call for a deeper examination of this relationship.

***Financial access and financial stability correlate better in low-income and lower-middle-income countries, where access issues are more acute*** (World Bank 2012, pp. 30–31)

Stability, as measured here by Z-scores, is not strongly correlated with country income levels, as was highlighted during the global financial crisis, when the financial sectors of many middle- and low-income countries were relatively isolated from the global turmoil and less affected by global liquidity shocks (World Bank 2012, pp. 30–31). At the same time, some higher-income, higher-access countries are linked to a number of factors that lead to greater instability: lower capital requirements, weaker regulations for nonbanking financial activities, lax nonperforming loans responses and related provisioning, inadequate bank equity and provision, and weak incentives for the private sector to monitor risks.<sup>27</sup>

22. CGAP has initiated multiple country-level research exercises on the linkages among inclusion, stability, integrity, and protection (I-SIP), aimed at elaborating and refining the methodological approach for the exploration of these linkages, as well as bolstering the evidence base for policy approaches likely to serve all four policy objectives. Work began with South Africa, prepared in the context of the GPF1 First Annual Conference on Standard-Setting Bodies and Financial Inclusion: Promoting Financial Inclusion through Proportionate Standards and Guidance, Basel, 29 October 2012. <http://gpmf.org/knowledge-bank/publications/issues-paper-3-financial-inclusion-pathway-financial-stability-understanding-linkages>

23. See Cull, Demirgüç-Kunt, and Lyman (2012); Beck et al. (2010); GPF1 (2012); Khan (2012); and World Bank (2012).

24. IMF Financial Soundness Indicators are available at <http://fsi.imf.org/> and World Bank WDI at [data.worldbank.org](http://data.worldbank.org).

25. The *Global Financial Development Report* (World Bank 2012) uses the following definitions for correlations among financial systems characteristics related to financial institutions: for depth, private credit to GDP (%); for access, accounts per 1,000 adults, commercial banks; for efficiency, 100 minus lending-deposit spread (%); and for stability, Z-score-weighted average for commercial banks (called the “distance to default” and defined as the sum of capital-to-assets and return on assets, divided by the standard deviation of return on assets).

26. The “Z-score-weighted average for commercial banks” (also called the “distance to default”) captures the probability of default of a country’s banking system, calculated as a weighted average of the Z-scores of a country’s individual banks. The Z-score compares a bank’s buffers (capitalization and returns) with the volatility of those returns and is defined as the sum of capital to assets and return on assets, divided by the standard deviation of return on assets. (See Čihák et al. [2012].)

27. See Čihák, Demirgüç-Kunt, Martínez Pería, and Mohseni (2012).

### ***A deep analysis of FAS data reveals some evidence for the inclusion–stability linkage***

There are negative and statistically significant correlations between financial access (measured by number of loan accounts per 1,000 adults) and two other indicators of stability:

- Bank nonperforming loans/loans, which is another indicator of stability at the institutional level. Loan penetration decreases as loan quality decreases—i.e., increases in nonperforming loans are associated with greater instability and less financial inclusion.
- Risk premiums. As loan penetration increases, risk premiums (the difference between the prime interest rate and the T-bill interest rate), an indicator of stability at the financial markets level, decrease. This means that when the financial system is more stable, financial inclusion increases.

On the other hand, there is also a negative correlation with bank capital/assets, meaning higher loan penetration in markets with lower capitalized banks. This may be explained by the fact that banks in low-income countries have higher capital-to-assets ratios (whether to meet regulatory requirements or simple prudence), given regulatory requirements and less sophisticated capital structures. This corresponds also to the fact that lower- and lower-middle-income countries in fact responded more proactively than high-income countries to adopt more prudent regulatory frameworks in response to the financial crisis (Čihák, Demirgüç-Kunt, Martínez Pería, and Mohseni 2012, p. 11).

### ***More competitive banking sectors are associated with greater stability and greater inclusion***

A lower interest rate spread indicates more competitive banking sectors (as competition drives the spread down) and therefore greater stability.<sup>28</sup> FAS data show that a lower interest rate spread is also associated with greater financial inclusion—i.e., the number of commercial bank deposit accounts per 1,000 adults is negatively and statistically significantly associated with interest spreads. This means that a higher deposit penetration is associated with lower spread and, in turn, with financial stability. Countries with more competitive banking sectors have higher deposit penetration and greater stability.

28. See Schaeck, Čihák, and Wolfe (2006).

Country evidence on the inclusion–stability linkage is still limited, but emerging country cases confirms the inclusion–stability linkage. Kenya is one such example. Research on the Kenyan financial sector (Beck et al. 2010) indicated that asset quality improved, liquidity positions improved, interest spreads declined (all three contributing to stability), while outreach improved (in the case of Kenya, driven by mobile payment services).

### ***Recommendations for further empirical research on the financial inclusion–financial stability linkages***

The analyses of the relationships described continue to be works in progress. More statistical work to quantify and collect data for factors that affect these relationships is needed. The increasing availability of FAS and other data will contribute to this work. Priority areas of study include the following:

- Isolating the effects of the global financial crisis where lower access seems to have correlated positively with stability, as the lower-income, low-access countries were less affected. In countries affected by the financial crisis, instability was high, and the crisis resulted in decreased access as financial institutions became more risk averse and levels of financial intermediation declined.
- Ascertaining the existence or nonexistence of systemic risk factors stemming from greater financial access. Available evidence suggests that the small loans associated with greater financial access do not contribute to systemic risk, but are rather counter-cyclical and that the increasing volume of small deposits contribute to a stable domestic savings base (J.P. Morgan and CGAP 2010).
- Better understanding the qualitative nature of access, with a focus on what constitutes *responsible access*. For example, it makes sense that greater financial protection, a key element of responsible finance, leads to less over-indebtedness overall, which in turn is important for stability.
- Understanding (a) how the regulatory environment determines how access is managed, while ensuring financial stability, and (b) where a proportionate regulatory and supervisory framework can play a role in fostering the linkage is needed.<sup>29</sup>

29. This dimension is explored in Cull, Demirgüç-Kunt, and Lyman (2012).

## Financial access and financial infrastructure

Financial infrastructure includes credit bureaus; collateral registries; and payment, remittance, and securities settlement systems—all of which are vital. When financial infrastructure is available, efficient, and reliable, the cost of financial intermediation falls. Financial products and services become accessible to greater numbers of citizens. Lenders and investors have greater confidence in their ability to evaluate and guard against risk.

### ***Greater financial inclusion is associated with more developed financial infrastructure, and a sounder institutional and legal environment***

A stronger business environment is linked to greater deposit and loan penetration. The relationship of “Doing Business” indicators on Getting Credit (i.e., getting credit rank, credit legal rights index, credit information index, private credit bureau coverage, public credit registry coverage) to loan and deposit penetration (measured by number of loan accounts per 1,000 adults and number of deposit accounts per 1,000 adults) is positive.

### ***Having deposit insurance in place is linked to more deposits, but also to more loans***

Deposit insurance is an important component of financial infrastructure. On average, countries that have deposit insurance have more deposit accounts per adult.<sup>30</sup> The same holds true for loans. For example, FAS data show that in 2011, the number of deposit accounts per adult was over 50 percent more in countries with deposit insurance compared to those without. The number of loan accounts was 30 percent more per adult in countries with deposit insurance in 2011. The same pattern is not statistically robust when deposit volume (percentage of GDP) and loan volume (percentage of GDP) are compared across groups of countries that have and that do not have deposit insurance. This may mean that deposit insurance is important for access, but not that important for depth.

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30. The source of information for the analysis here is the Bank Regulation and Supervision Survey by the World Bank, available at <http://go.worldbank.org/WFIEF81AP0>. Another important source of information and data on deposit insurance systems is the International Association of Deposit Insurers ([www.iadi.org](http://www.iadi.org)).



# Principal Financial Inclusion Data Sources

FIGURE A1.1

## Principal International/Multi-Country Data Sources



(...) = covers relevant financial sector data, but not explicitly focused on access.

Source: Adaptation from Bill & Melinda Gates Foundation. "The Measurement Challenge." Note prepared for Global Savings Forum, 2010.

## ANNEX 2

# The G-20 Basic Set of Financial Inclusion Indicators and ATMs—Latest Available Figures

TABLE A2-1

	Account at a formal financial institution (% age 15+)	Loan from a financial institution in the past year (% age 15+)	% SMEs with an account at a formal financial institution (5–99 employees)	% SMEs with an outstanding loan or line of credit (5–99 employees)	Commercial bank branches per 1,000 km <sup>2</sup>	Commercial bank branches per 100,000 adults	ATMs per 1,000 km <sup>2</sup>	ATMs per 100,000 adults
<b>Year</b>	2011	2011	Latest available	Latest available	2011	2011	2011	2011
<b>Source</b>	Global Findex	Global Findex	Enterprise Surveys	Enterprise Surveys	FAS	FAS	FAS	FAS
<b>Data Availability</b>	148 economies	148 economies	128 economies	128 economies	160 economies	160 economies	150 economies	150 economies
<b>World</b>	50	9	82	37	8	17.3	15.9	47.4
<b>Regions</b>								
High-income OECD	90.5	14.2	84.2	46.8	31.3	31.0	57.5	90.5
EAP	54.9	8.6	87.7	36.3	6.3	8.1	15.9	17.7
ECA	44.9	7.7	88.2	41.6	10.3	18.5	25.8	46.6
LAC	39.3	7.9	92.5	45.7	6.2	14.9	10.2	33
MENA	17.7	5.1	36.2	5.6	9	17.2	12.1	21.9
SA	33	9	80	28	21.6	8.3	17.2	5.8
SSA	24.0	4.8	86.6	21.2	0.9	3.4	1	4.5
<b>Income Groups</b>								
Low Income	23.7	11.4	84.1	20.5	1.2	3.8	1.2	3.2
Lower Middle	28.4	7.3	84.5	31.7	7.1	9.6	10.7	13.1
Upper Middle	57.2	7.9	92.3	42.9	8	25.5	17.3	75.6
High Income	89.5	13.8	90.9	50.3	27.1	33.7	69.5	122.9

Notes: Income group classification is based on World Bank Income Classification as of July 2012. EAP: East Asia and Pacific, ECA: Eastern Europe and Central Asia, LAC: Latin America and the Caribbean, MENA: Middle East and North Africa, SA: South Asia, SSA: Sub-Saharan Africa.

## FAS: Definitions and Data Availability

### 1. Definitions of Financial Institutions

The unit of analysis for the IMF's FAS is financial institutions. The classification of financial institutions in the IMF's FAS is based on a functional approach.<sup>31</sup> This approach emphasizes measuring access in terms of the type of financial service offered, such as deposit services, credit services, insurance services, and payments services. Financial institutions are classified into two groups: "other depository corporations (ODCs)" and "other financial corporations (OFCs)." IMF's *Monetary and Financial Statistics Manual* provides details of this classification.

**ODCs** include all deposit-taking institutions resident in a country other than the central bank:

- **Commercial banks (banks)** include all resident financial corporations and quasi-corporations that are mainly engaged in financial intermediation and that issue liabilities included in the national definition of broad money.
- **Credit unions and financial cooperatives** include financial institutions that are owned and controlled by their members (customers), regardless of whether they do business exclusively with their members.
- **Deposit-taking microfinance institutions (MFIs)** include institutions whose primary business model is to take deposits and lend to the poor, often using specialized methodologies such as group lending.

- **Other deposit takers** include all resident financial intermediaries other than central banks, commercial banks, credit unions and financial cooperatives, and deposit-taking MFIs that meet the definition of ODCs. These institutions have varying names in different countries, such as savings and loan associations, building societies, rural banks and agricultural banks, post office giro institutions, post office savings banks, savings banks, and money market funds.

In this report, credit unions/financial cooperatives, deposit-taking MFIs, and other deposit-takers are together referred to as **nonbank financial institutions (NBFIs)**.

**OFCs** consists of a diverse group of resident financial corporations that provide financial services, either through intermediation or auxiliary services, and that do not issue liabilities included in broad money. FAS covers two major types of OFCs—other financial intermediaries and insurance corporations:

- **Other financial intermediaries (OFIs)** include financial institutions that raise funds on financial markets, but not in the form of deposits, and use the funds to extend loans, mainly to nonfinancial corporations and households, actively competing with ODCs. OFIs include **nondeposit-taking MFIs**, which comprise formal (i.e., legally registered) financial institutions whose primary activity is microcredit.
- **Insurance corporations** include financial institutions that provide financial benefits to policyholders and their survivors in the event of accidents, illness, death, disasters, or incurrence of various or personal expenses. FAS disaggregates insurance corporations into life and nonlife insurance.

31. Alternatives to the functional approach are the institutional approach (measuring access in terms of the types of institutions—commercial banks, credit unions, cooperatives, MFIs, etc.), which was used by the CGAP/WBG *Financial Access*, and the product approach (measuring access in terms of the type of product—debit cards, home mortgages, etc.). See Barr, Kumar, and Litan (2007) for details.

The commercial banks category is the broadest in FAS, given that any resident bank functioning as commercial banks that meet the definition of ODCs are classified as commercial banks. Hence, the commercial banks category, in some countries, may include development banks or financial institutions that serve the poor, such as deposit-taking MFIs, depending on the financial activities these institutions are engaged in.

This report is based mainly on data from commercial banks, but also includes a box on NBFIs (i.e., ODCs other than commercial banks). Chapter II of the report discusses the state of access to insurance corporations. The state of access to finance by SMEs is described in Chapter III, mainly relying on commercial bank data. Data availability for each of these topics follows.

## 2. Data Availability

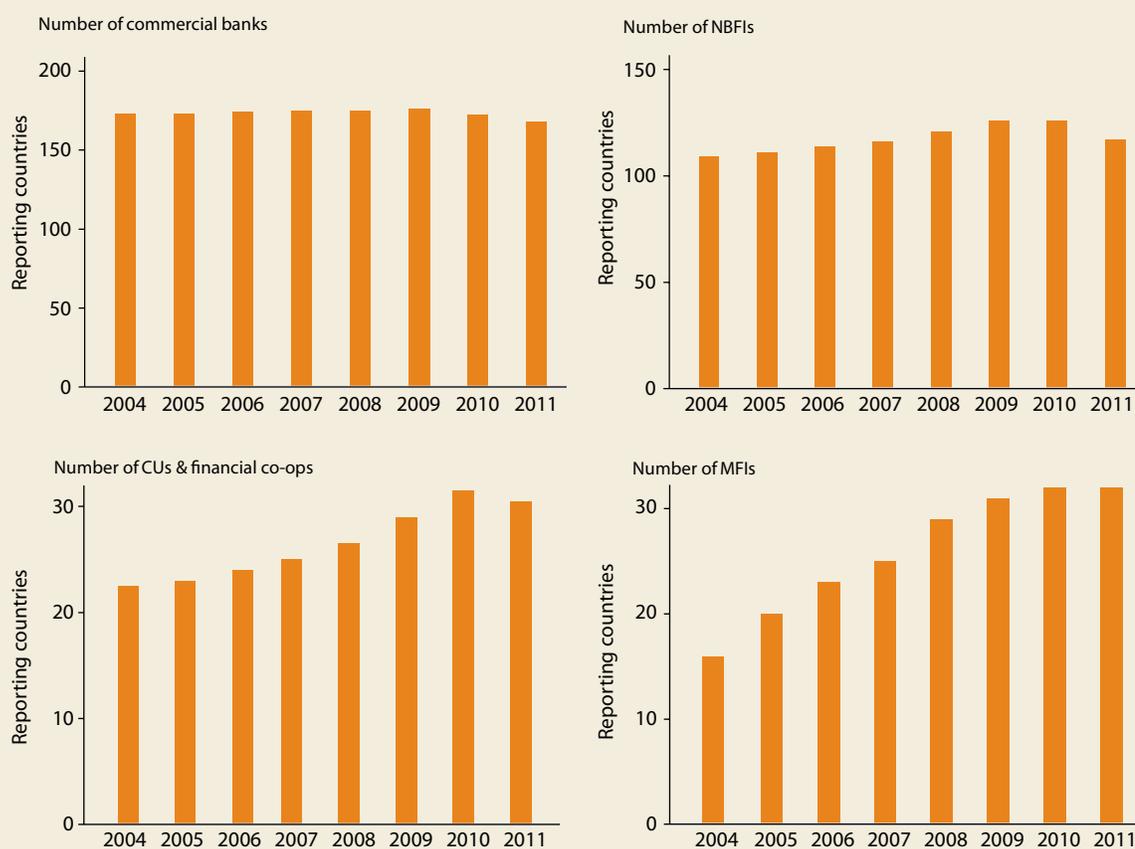
### 2.1 Commercial banks and NBFIs

Figure Annex 3.1 displays the number of countries that reported commercial banks and NBFIs (defined as credit unions and financial cooperatives, deposit-taking MFIs, and other deposit takers). But not all the countries that reported having deposit-taking NBFIs reported the access and usage information for these institutions.

Data availability on commercial banks is the best, although about 15 countries did not report the number of commercial banks, while a few others did not report any commercial bank data besides the number of commercial banks. Twenty-four countries reported no credit unions or financial cooperatives, while about 40 countries reported having no MFIs.

FIGURE A3.1

### Deposit-taking financial development institutions



## 2.2 Insurance Corporations

A total of 139 countries reported some insurance data as part of FAS. The most commonly reported series was the number of insurance corporations. In general, life insurance data were more widely reported than nonlife insurance data. Data coverage is the lowest for the number of policyholders, broken down by life and nonlife insurance. About 20 countries reported data on the number of policyholders, and about 30 reported on the number of insurance policies. Data availability on insurance corporations increases by year, with the most recent years having the highest number of reporting countries.<sup>32</sup>

## 2.3 SMEs

In 2012, the FAS questionnaire was expanded to include data on SMEs for the first time. SME definitions vary across countries. While the FAS questionnaire allows for the use of national SME definitions, it also provided the World Bank classification as guidance to the regulators. Table A3.1 lists the World Bank definitions. A firm must meet two of the three criteria on number of employees, assets, and sales volume to be classified as micro, small, medium, or large. IFC also uses loan size proxies as data on employees, assets, and sales volumes may not always be available. Since most governments track and monitor data for SMEs as a whole, data cannot be differentiated across different enterprise size and types—i.e., the number of loan accounts for small vs. medium enterprises.

Collecting data on access to finance by SMEs is still a challenge for many countries. Although FAS includes all regulated financial institutions, the majority of the regulators provided data on SME finance only for commercial banks (37 countries). Figure A3.2 shows SME data availability in FAS across different types of financial institutions, and Table A3.2 lists the available indicators.

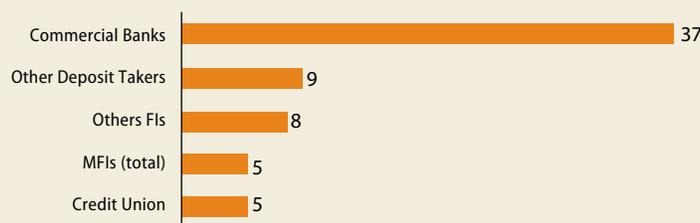
**TABLE A3.1. SME definitions by the World Bank**

Firm Size	Employees	Assets	Annual Sales	Loan Size Proxies <sup>±</sup>
Micro	<10	<\$100,000	<\$100,000	<\$10,000
Small	<50	<\$3 million	<\$3 million	<\$100,000
Medium	<300	<\$15 million	<\$15 million	<\$1 million (<\$2 million for some advanced countries)

<sup>±</sup> Used by IFC.

**FIGURE A3.2**

### Number of countries Reporting SME loan volume data in 2011



**TABLE A3.2. Key SME indicators in FAS<sup>†</sup>**

Deposits	Volume	Outstanding SME deposits (% GDP)
	Number	SME depositors (% NFC* depositors)
		SME deposit accounts (% NFC deposit accounts)
Loans	Volume	Outstanding SME loans (% GDP)
	Number	SME borrowers (% NFC borrowers)
		SME loan accounts (% NFC loan accounts)

<sup>†</sup> The underlying data are collected for the other four financial provider categories: credit unions, MFIs, other deposit takers, and other financial intermediaries, but the indicators listed here are calculated and disseminated only for commercial banks.

\* Nonfinancial corporation.

32. ECA and upper-middle-income countries provided the most insurance data when analyzing the data by region and income group. High-income and MENA countries provided the least amount of data. This makes part of the regional analyses not feasible.

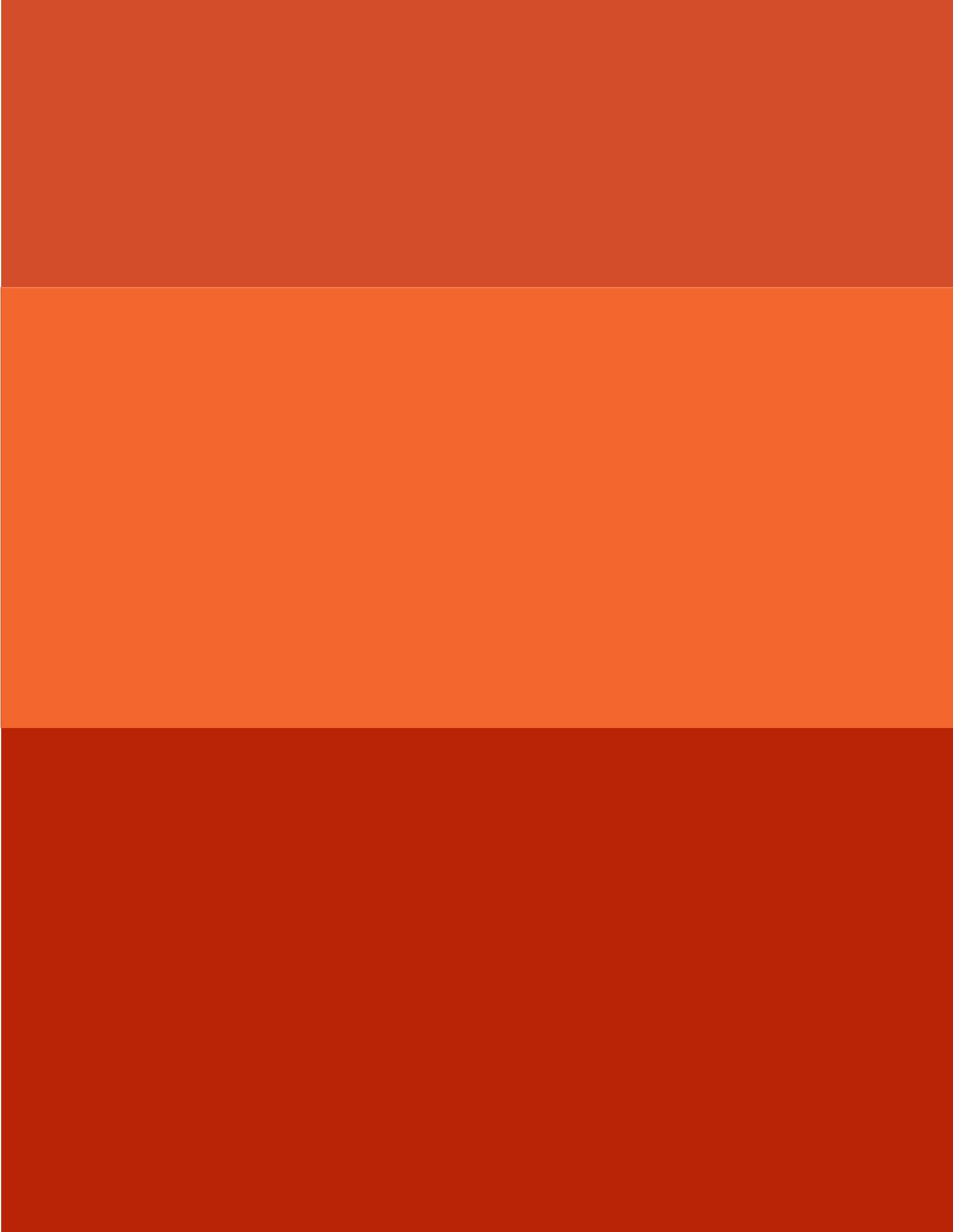


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"**M**uch progress was made in 2012 in mapping the landscape of financial inclusion. This revealing study would not have been possible just one year ago—and demonstrates how investment in robust supply and demand side data are helping policy makers and service providers understand the real state of access, quality, and usage of financial services. The opportunity now is to build on these global data sources to expand national data collection and use that is responsive to policy priorities and attuned to country contexts. Importantly, Financial Access 2012 demonstrates that while progress has been made, especially in basic access, there is still much to be done to reach poor individuals and SMEs. It also points to the relationship between financial inclusion and equitable economic development, which in the end, is what access to financial services is all about."

—**Her Majesty Queen Máxima of the Netherlands**, United Nations Secretary-General's Special Advocate for Inclusive Finance for Development (UNSGSA)

