New opportunities to tackle the challenge of financial inclusion

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Abstract
In this paper we review the relevance of formal financial services –and in particular savings— to poor people, the economic factors that have hindered the mass-scale delivery of such services in developing countries, and the technology-based opportunities that exist today to make massive gains in financial inclusion. We also highlight the benefits to government from universal financial access, as well as the key policy enablers that would need to be put in place to allow the necessary innovation and investments to take place.

Half the world's population is financially excluded

It is estimated that half of the world's population does not have access to financial services. In developing countries, over 70% of the population is excluded. Of the estimated 2.6 billion people living on less than $2 per day (almost 40% of the world's population), less than 10% have access to formal savings products.

The book Portfolios of the Poor documents the variety of ways in which poor households 'push' and 'pull' money on a daily, weekly or seasonal basis; how from time-to-time they act as microfinanciers, loaning funds out to friends and family when they have disposable funds; and how they are in turn subjects of credit from local shops, employers and moneylenders. The variety of financial tools used by poor people is what surprises most readers of this carefully researched and vividly written book. Without finance, people would be relegated to a hand-to-mouth existence. For poor people with little income security, finance (understood as the ability to transfer value over time, space and people) is a necessity.

The informal financial mechanisms poor households patch together scarcely give them adequate tools to manage their meager existence, much less to plan an escape out of poverty. They ought to have better financial options –more reliable, less costly, more private— making them less reliant variously on the kindness, fortunes and greed of those around them. Having greater access to formal financial services, especially savings, would help them live healthier and more productive lives, allowing them to stabilize their livelihood and plan for their future.

Formal institutions have not typically seen much profit in offering savings. There is now a historic opportunity to use emerging technology, especially mobile phones, to enable very small banking transactions to happen through local non-bank retail agents in a secure way that gets the economics right for both clients and banks.

Box 1: Key background readings on access to finance

Topic	*Sources*
Financial practices and needs of the poor	D Collins, J Morduch, S Rutherford and O Ruthven (2009). *Portfolios of the poor: How the world's poor live on $2/day* (Princeton: Princeton University Press). Rutherford, S (2001). *The Poor and their Money* (New Delhi: Oxford India Paperbacks).
Measures on financial access	A Chaia, A Dalal, T Goland, MJ González, J Morduch and R Schiff (2009). *Half the World is Unbanked.* Financial Access Initiative Framing Note. P Honohan (2006). Household Financial Assets in the Process of Development. World Bank Policy Research Working Paper no. 3965.
Financial access policies	T Beck, A Demirguc-Kunt, P Honohan (2007). *Finance for All? Policies and Pitfalls in Expanding Access* (Washington, DC: The World Bank). A de la Torre, JC Gozzi and S Schmukler (2007). *Innovative Experiences in Access to Finance: Market Friednly Roles for the Visible Hand?* World Bank Policy Research Working Paper no. 4326.
Branchless banking	I Mas (2009). *The Economics of Branchless Banking.* Innovations, Volume 4, Issue 2 (Boston, MA: MIT Press). T Lyman, D Porteous, and M Pickens (2008). *Regulating Transformational Branchless Banking: Mobile Phones and Other Technology to Increase Access to Finance*. CGAP Focus Note 43 (Washington, D.C.: CGAP).

Financial inclusion as an engine for poverty reduction

Two economic factors perpetuate poverty. One is low and stagnant labor productivity, whether in farming, microenterprises or other livelihood activities, due to insufficient adoption of new technologies and underinvestment in non-labor inputs. The other is the occurrence of adverse shocks, most often health- or weather-related, which overwhelm family finances and may prevent families from hanging onto accumulated assets (including productive assets and sustaining their children's education). Low labor productivity makes it difficult for families to plan an exit out of poverty, while adverse shocks can quickly sink families into spells of extreme duress. As a result, the poor lead precarious, anxiety-ridden lives with risks looming much larger than opportunities. This perpetuates the cycle of underinvestment and undereducation.

Financial services provide tools which can help on both fronts: first, to finance microenterprises' investments in new production technologies, farmers' purchase of productivity-enhancing inputs such as fertilizers, laborers' search for better job opportunities, or children's education; and second to mitigate people's exposure to large lifecycle events or unpredictable risks. To meet these needs, the poor need a range of relevant financial services which are reliably available, appropriately sized and packaged, and affordable.

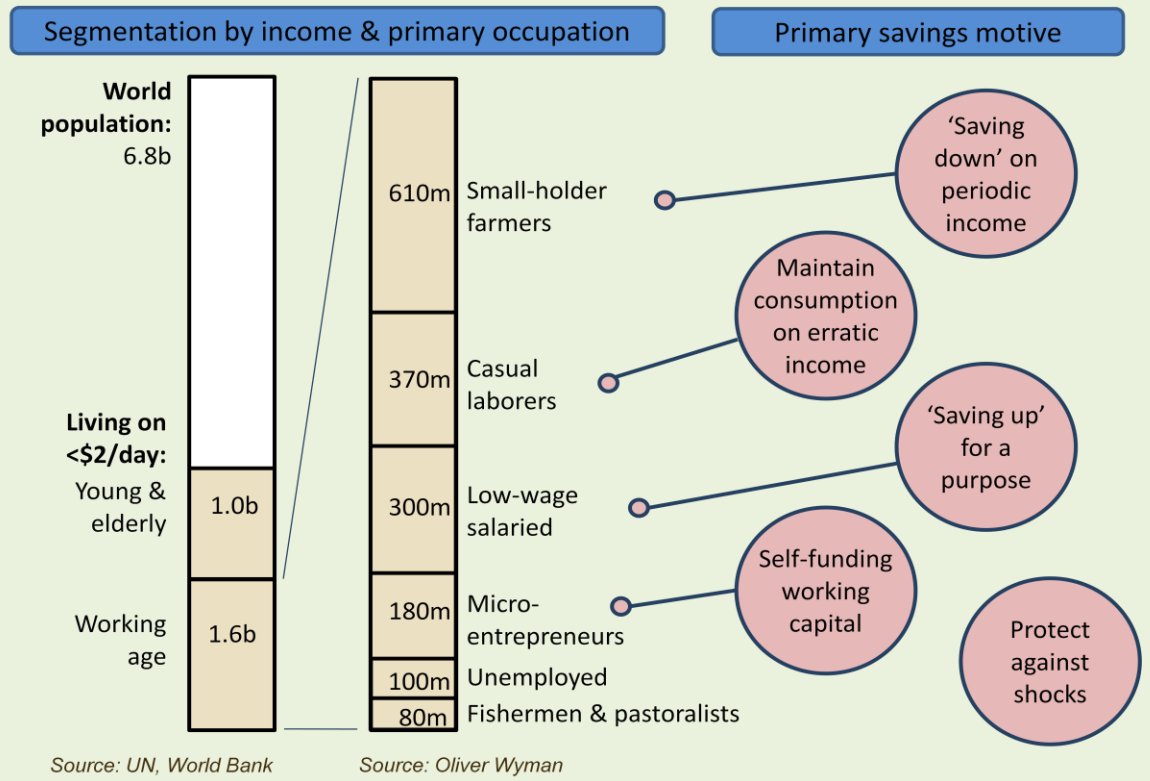
Financial access is a loose term which we use in the broadest sense to describe whether poor people are able to contract relevant financial services as and when they need them. The option to save –to self-fund investments and to self-insure against adverse events-- should be the heart of a financial services proposition for poor people. On top of that, they should have access to

institutions that are willing to fund and insure them through a broader range of credit and insurance services.

Poor people do save

Let me stress how real is the need to save by poor people. Of the 6.8 billion people in the world, almost 40%, or 2.6 billion people, live on less than $2 a day. Let's take a look at who these people are, and in particular the primary source of income of the 1.6 billion who are the bread-earners (the other 1 billion are their dependents). The following segmentation data is from a study that Oliver Wyman conducted for the Bill & Melinda Gates Foundation, and is summarized in Box 2.

Box 2: Primary source of income and savings motive of the world's poor



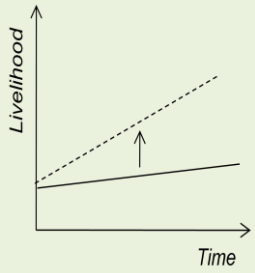
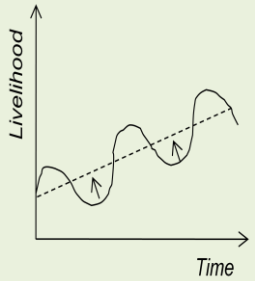
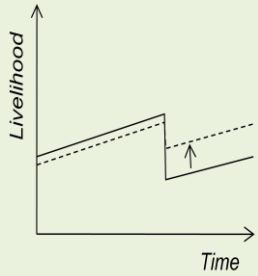
The biggest category, 610 million, are small-holder farmers. Do they save? Of course they do, all their income is concentrated in one or two periods during the entire year. Most of the time, they are living off their savings.

Then there are the 370 million casual laborers. Many are paid daily, but cannot be sure there will be a job for them to do tomorrow. They need to insulate their daily expenditures from this income volatility, and that's a saving story.

The 300 million salaried have more income stability, but still, their daily income is low, they need to accumulate small amounts from their daily wages to be able to pay school fees when they are due or some house repairs. Income comes in small bits, but some expenditures are chunkier. Their primary concern is to build useful lump sums, in the words of Stuart Rutherford.

Then there are the 180 million people whose primary occupation is some micro-business. These are the folks that traditional microcredit addresses, but note that it's a relatively small proportion of the poor. They need working capital to sustain and grow their micro-business. If you think microcredit is a good opportunity for them, imagine how much more they could do if they could self-fund that through savings and not have to pay interest instead.

Box 3: Why save, if you are poor?

The challenges poor people face		***The opportunities presented by savings***
Raising productivity Poor people find it difficult to escape poverty because they are engaged in economic activities with little or no productivity growth.		By saving small amounts over time, poor people can fund lump sum investments in their businesses, such as purchasing equipment or buying goods at wholesale prices. Savings can also fund a search for more productive forms of employment. If they are able to self-finance these investments, they can fully capture the productivity gains derived, lower the required profitability threshold on their microenterprises, and become less exposed to onerous obligations in times of duress.
Stabilizing daily lives Poor people face unpredictable daily income streams, often translating into erratic food intake and schooling for their children.		Utilizing savings tools effectively allows families to smooth short-term cash flows, thus stabilizing their caloric intake and education investment. This in turn raises productivity. Credit introduces fixed repayment schedules which may be unhelpful when dealing with short-term liquidity requirements.
Protecting against shocks Poor people face a variety of risks (often related to health, death or crop risks) which can easily overwhelm their means.		Adverse shocks related to ill health, death, or bad weather can have lasting effects on welfare and knock out productivity gains. Risks commonly faced by poor people are unpredictable in their timing but not in their nature or probability of occurrence. If insurance products are not available, households ought to be able to protect against such foreseeable risks by planning ahead through savings. This avoids poor families having to go into debt when they can least afford it.

And for all of them, savings can protect them against shocks. We tend to think of the poor as a uniform mass of people who trundle along. The reality is that if you observe a group of poor people over, say, five years, a significant fraction of them will have escaped poverty during this time. The problem is that just as many will have fallen back into poverty because of some kind of

shock. A health problem, a failed crop can set them back many years. But if people had good savings cushions or insurance mechanisms, they would be able to weather these shocks without setting them back many years.

Box 3 summarizes how savings can offer opportunities for poor people to better manage their lives. But if they do not have access to banks, how *do* they cope?

The shortcomings of informal savings options

Poor people save small balances through a variety of informal mechanisms: hiding cash at home, loaning funds to relatives, participating in savings groups with their neighbors (ROSCAs), engaging deposit collectors, buying livestock or other physical goods such as jewelry or construction materials. This surprising diversity of savings mechanisms is in fact because none of them are very good (see Box 4).

Local informal savings arrangements tend to be risky, due to theft and/or asset depreciation. Risks are everywhere: cash and jewelry stashed at home can be stolen, livestock can succumb to illness, and ROSCAs may not pay out if members default.

A particular limitation to informal savings mechanisms is that they operate strictly within the family or community where the saver lives, and hence require the saver to rely on other poor people in similar circumstances. This introduces an unhelpful covariance between a household's condition and its ability to draw value from savings: the household's savings will be least effective when they are needed the most. The sale value of livestock and other physical assets may be less in times of need when other villagers are trying to sell them as well. Payback on loans to friends or collections from ROSCAs may not materialize during hard times when the entire community is under pressure. Even the value of cash may depreciate faster during hard macroeconomic times.

In addition, informal savings options may not be very liquid, due to high transactions costs associated with saving and dis-saving, inherent delays with which savings can be made liquid, and the lumpiness of savings vehicles. Saving in jewelry entails transaction costs in the form of buy/sell price differentials or pawnshop fees. Livestock may not be sold so quickly, and cannot be sold partially to meet smaller liquidity needs. Saving in ROSCAs is virtually costless, but they generally operate under rigid schedules which may not match households' immediate needs. Loans to friends and family may not be recalled instantly. Cash is in fact the most liquid asset, which explains why poor households maintain a significant portion of their wealth in cash.

Local informal savings arrangements also tend not to be very private, creating social pressure to share any accumulated wealth with family members and friends. This may actually create a disincentive to save.

Local informal savings arrangements based on community-level trust share two additional characteristics. First, they tend to be short-term, since in the absence of any kind of legal or

institutional protections people need to continuously test the trustworthiness and liquidity of their savings arrangements. Second, they tend not to be portable, making it difficult to transfer one's savings to another community (e.g. when seeking employment in another city).

Box 4: The trouble with informal savings

Savings Device	*Limitations*
Hiding cash at home	Risk of theft; temptation to spend readily available funds; exposed to capture by friends and relatives; fully exposed to inflation.
Loans to friends and relatives	Risk of default, especially in response to community-wide shock or due to social pressure; low returns, often due to social pressure; lack of privacy (community can observe asset accumulation).
ROSCAs	Savings amounts are pre-determined; limited liquidity given the need to accommodate claims of other members; risk of group failure; lack of privacy.
Deposit collectors	Expensive, often earning negative interest rate; lack of privacy.
Livestock	Risk of theft; subject to disease and premature death; indivisible (difficult to dis-save to meet smaller liquidity needs); pro-cyclical prices (high prices during good times when households want to buy them in order to save; low prices during bad times when households want to sell to access savings); lack of privacy .
Physical assets (e.g. jewelry)	Risk of theft; indivisible; significant transactions costs, especially on short-term savings, due to the spread between buy and sale prices.

We have seen that poor people have a tremendous need for financial services. So the question is: where are the banks in all of this? Why are they not more ready to help poor people to achieve these small feats with their money? For instance in Nigeria, the most populous country in Africa, 79% of the population are unbanked. In fact, 75% have *never* had a bank account. Why is that?

The problem is cash

The main problem of access is the high transaction costs that both customers and financial service providers need to incur to contract with each other. A large cost component is handling the cash payments that underpin most financial transactions (deposits or repayments, withdrawals or disbursements). Other costs are informational: it is sometimes costly for customers to establish their identity or proof of residence as required by regulatory authorities, and it is costly for a credit provider to ascertain customers' character and financial condition.

When people transact infrequently or in small amounts, or when they are located in remote or low-density areas, these transaction costs can wipe out the profitability as perceived by financial service providers. Financial institutions, especially large commercial banks, do not have the business model that allows them to deal with the triple whammy of low savings balances, small transaction sizes and a large number of customers.

As financial institutions cannot justify on commercial grounds the roll-out of a broad-based retail infrastructure to serve poor households, they typically pull back their physical presence in rural or poor areas or place restrictions to discourage the custom of poor people (e.g. high

minimum account balances). In effect, they pass the access cost onto customers, who need to travel to distant branches and face long queuing time. In turn, many poor people reject financial institutions that serve the middle and upper classes. They don't trust them, and don't feel equipped to deal with them.

Poor people experience four main pain points with cash in their daily lives: *(i)* it is hard to make remote payments with cash; *(ii)* it is unsafe to travel with cash; *(iii)* it is often difficult to hang onto cash balances beyond pocket money due to both safety and discipline issues; and *(iv)* there is little or no build up of a financial history that can help individuals gain trust from creditors from various sources. But the bigger obstacle from being immersed in a cash economy is that few if any financial institution have an interest in marketing financial services to them.

In order to be useful to poor people, formal financial institutions need to be able to capture these savings "at source," that is, right when and where the money is earned. Every time a poor person earns money there is a savings opportunity. But it can only be exploited if people are able to deposit (and withdraw) money near the places where they live and work. Proximity is particularly important for savings. In a moment of need a person might travel 10km to obtain a loan, and will subsequently travel that distance regularly to repay the loan to maintain future access to a credit 'lifeline.' But that person is probably not willing to travel 10km to save some money earned on that day.

Ensuring that poor people have low-cost ways of transacting is essential, so that they can be served profitably by a range of financial service providers. The ability to undertake remote transactions in the vicinity is therefore a key element of financial access.

Making the economics work for the poor

To achieve universal access, new banking systems are needed that work for the poor and yet are commercially sustainable. What poor people need is: first, convenience, being able to transact near where they live and work; second, trust, putting their money with organizations that seem to care for them and who they feel are going to be there for them when they need them the most; and third, affordability, being able to transact in small amounts at reasonable cost.

To be successful at mobilizing savings of poor people, three key aspects need to be addressed:

- **Distribution**. Customers are not willing to travel far or wait long in queues to save relatively meager balances. Each village and neighborhood where poor people live ought to have a transactional point where cash can be converted into electronic value (and *vice versa*).
- **Brand**. Customers need to feel that their money is safe, yet they are often in no position to ascertain the financial condition of financial institutions. They also need to feel like they are welcome and their interests are being protected.
- **Products**. In order to adopt formal savings, the poor must be offered a ladder of savings-related benefits. There is a *saving chasm* between the short-term, informal saving they do today and the longer-term, formal saving that would be most impactful in their lives.

So what can we do about it? The key is to take banking outside of banking halls. Banks need to use stores that already exist in every village and in every neighborhood to offer banking services. Depositing and withdrawing money from your account should be just another product that your local store offers, along with toothpaste and mobile prepaid cards.

Technology can be used to ensure that banks and their customers interact remotely in a totally trusted way through local retail outlets. This requires that: *(i)* customers be properly authenticated (for instance using cards or their mobile phones), *(ii)* customers transactions must be undertaken against the store's own bank account (so that stores in effect 'prepay' customers' deposits), and *(iii)* transactions are authorized and recorded in real time by the bank (using point of sale terminals or mobile phones to communicate with the bank).

With the spread of mobile communications networks, all this can happen in real time, in which case there is minimal credit risk: the transaction is done and settled by the time the customer walks out of the door, and the store's cash is always the store's. There are an estimated 1 billion people in developing countries who have a mobile phone but not a bank account. In Africa alone, 50% of the population has cell phones, more than double the number of people who have access to bank accounts. With that alone we can go a long ways to cracking the problem of getting bank accounts to the poor.

Box 5: Interventions to promote safe savings by FSP

Approach	*Rationale*	*Sample projects*
Agent networks (including mobile banking)	Financial access is fundamentally a problem of distribution. We need to leverage existing retail outlets that already exist in every village and in every neighborhood to offer banking (and broader payment) services. With appropriate technology (including mobile phones), these transactions can occur in a reliable, secure fashion. Customers' cash problem becomes a revenue generation opportunity for stores.	* POS-based agent networks *Mobile banking
Development of relevant products	Savings (and insurance) products need to be designed in a way that meets poor households' range of needs, from daily cash flow management to long-term accumulation, and matches their cash flow profiles. They need to include features that build discipline and play into people's main savings triggers.	*Sustainable insurance models *Product develop-ment informed by randomized control trials
Safe and sound institutions	Financial institutions targeting relevant products to poor people through scalable agent networks need to be trusted by their customers, have the appropriate technical capacity to effectively intermediate funds, and have the marketing muscle to effectively promote new products to a dispersed base of first-time users.	*Governance and institutional strengthening *Expand successful banks to new geographies

Box 5 summarizes the key enablers of a branchless banking system. In essence, branchless banking –the idea of building ubiquitous transactional 'rails' on which financial services can ride—seeks to fundamentally change the economics of retail banking, by:

- Leveraging infrastructures that already exist: retail stores and real-time communication networks
- Minimizing sunk costs at the customer front-end: paying transaction-based agent commissions
- Specializing roles in the service delivery chain, and developing the right scope, scale and competencies for each: new partnerships spanning the banking, telecoms and retail sectors. Banks have not and cannot do it alone.

This system could be used by bank as a "front end" to enable people to send money to the bank of their choice, right from their neighborhood store. The incremental cost per customer and per store is reduced to a bare minimum. Now, having millions of $1 transactions begins to be profitable. If these models prove sufficiently replicable and scalable, it will be possible for millions of people to make small deposits into their bank account through a variety of cash handling outlets right in their neighborhood, on a daily basis, as and when money is earned. This will enable poor people to manage more effectively their productive activities and daily cash flows, build up assets, and handle health or livelihood shocks.

Activist policy enablement

Box 6: Key policy principles for branchless banking

High-level principles	*Specific implications*
Regulations should permit banks to use agent networks	Deposit-taking through agents does not entail non-bank payment risk, as long as cash payments between client and agent are offset in real-time by a corresponding transfer of electronic value authorized by the bank. Agents should not be treated like bank branches.
Know Your Customer rules should create scope for on-the-spot account opening through agents	Accounts below a certain size (e.g. $1000) and usage (e.g. daily transactions not exceeding $300) have a low risk of use for inappropriate purposes. Banks should be able to delegate KYC on such accounts to non-bank agents, as long as they can demonstrate proper training and monitoring of agents undertaking KYC activities, and proper enforcement of the transaction limits. Government agencies ought to be able to consult with FATF on the advisability of policy reforms prior to implementing them.
There should be a special license for deposit-taking institutions that do not on-lend funds	The need for prudential banking regulation arises from the lack of transparency in the value of banks' assets, not so much from their deposit taking activities. Licensing should take into account banks' *investing* activities, allowing room for institutions ("e-money issuers" or "narrow banks") who invest the entire value of deposits raised in liquid bank or government securities. This could spur low-cost mobile money services.
All government payments to people should be channeled through banks	Governments are often one of the biggest micro-payers to poor people (for pensions and social welfare programs). The government can best promote the spread of agent networks in rural and remote areas by channeling their payments through them. Paying through bank accounts can also serve as a hook to offer savings and other financial services to poor beneficiaries.

The government can play multiple roles in support of financial inclusion: regulator, provider (through state-owned banks), market participant (as payer and collector), and market shaper

(e.g. through financial education campaigns). There needs to be clear policy direction across these various government activities, which can be used to set out concrete financial inclusion objectives and monitor progress over time. Policy should aim to help market players unlock profit opportunities at the base of the pyramid, without undermining the stability of and the public's confidence in the financial system. Box 6 illustrates the main specific policy enablers of branchless banking.

As part of the overall policy framework, regulations often need to be adjusted to reflect new scalable technology-enabled business models that are possible today. The regulatory framework should allow for sufficient business model experimentation, permitting banks to deploy agent networks and giving non-bank players appropriate roles in financial service delivery. The key challenge for regulators will be to assess the true nature of the risks involved, and avoiding overly prescriptive regulations before the benefits and risks are sufficiently well known.

The political economy of financial inclusion

There is a growing sense of inevitability about branchless banking across the developing world: it has become widely accepted that banks cannot sustainably reach the bulk of poor people through dedicated brick-and-mortar infrastructures. M-Pesa in Kenya is a showcase in leveraging retail outlets and real-time mobile communications to offer safe and convenient transactions to the public, but it is only now starting to deliver meaningful financial services. There is substantial interest in replicating this experience in many countries: CGAP has counted over 100 deployments of mobile money alone.

It will be difficult for any single organization to achieve success in distribution, product development, and institutional capacity. It is more likely that multiple players will make it happen through partnership models which allow different players to specialize in each piece of the value chain. The financial inclusion landscape will look very different to today's.

Policy and regulatory norms frame the operating environment in which commercial actors innovate and develop new partnerships, business models and products. Substantially broadening financial access necessitates political will and a safe yet innovation-friendly regulatory environment. Specifically, banking regulators must step up to the triple challenge of: *(i)* re-evaluating their definitions of and assessment methodologies for risk, based on the set of technologies that are available today; *(ii)* adopting proportionate risk-based measures that take into account the needs, circumstances and transaction patterns of the poor; and *(iii)* stepping up competitive pressure on banks to serve the poor.

But why should banking regulators, whose primary mission is to ensure banking stability, take up the cause of financial inclusion and expose themselves to new challenges? It is necessary to find ways to energize governments and regulators around these solution sets by shining a sustained spotlight on the opportunities associated with expanding financial access, and building communities of stakeholders around financial inclusion.

If everyone has access to safe savings accounts serviced through technology-enabled retail networks and connected to the national payments systems, we expect that multiple stakeholders, including households, governments, and commercial providers, would benefit in many and diverse ways, as depicted in Box 7.

Box 7: Who gains from electronic savings accounts and payments?

Poor people	**Families** could accumulate balances to make lump sum investments in their businesses and cushion themselves against unexpected events. They could also connect to the wider economy e.g. through electronic remittances, wage payments, social payments. **Women** could accumulate savings in accounts outside the home, thus increasing their decision-making power over household resource allocation. **Economic migrants** could accumulate buffer stocks for use as they search for more productive forms of employment. They could also channel resources to their families back home more cheaply and conveniently. **Microentrepreneurs and smallholder farmers** would be better equipped to self-finance and hence more directly profit from their business activities.
Government	**Development ministries** could ensure that households had savings tools to (i) *self*-insure against shocks and (ii) build lump sums to purchase other development inputs (e.g. school fees, medicine, seeds, fertilizer). The **central bank** could gain a better handle on the velocity of money in the economy by reducing cash holdings "under the mattress," and therefore could control more tightly the relationship between monetary and real aggregates. The **ministry of finance** could collect taxes and fines more cost effectively. **Social ministries** could distribute welfare payments more cheaply and effectively, directly into people's bank accounts, even if they live in small rural towns**.** **Interior ministries** would be better able to trace suspicious financial transactions. **Politicians** could connect with previously disenfranchised people. Access to savings also reduces the vulnerability of the poorest, and hence promotes social and political cohesion.
Commercial providers	**Banks** could profitably serve poor or rural customers who were previously not considered commercially viable. **Public utilities** could reduce the cost of bill collections. **Microcredit institutions** could leverage a lower-cost, third-party transactional platform to reduce the cost of disbursing and collecting loan payments. **Mobile operators** could gain extra revenue from their mobile money transfer services and can increase the loyalty of their prepaid airtime customer base.

Conclusion

Using new technologies, alternative distribution channels, and new partnerships everyone can have a safe place to save. We're optimistic such models can transform the economics of financial service delivery, which will in turn give poor people more tools to manage their lives and plan paths out of poverty. The key to reducing microfinance transaction costs is to push the conversion of hard cash into electronic value as close as possible to where people live and work. Leveraging increasingly ubiquitous mobile communication networks, developing countries can leapfrog to a banking system that is built into the retail fiber of every community,