

Being Able to Make (Small) Deposits and Payments, Anywhere

In this paper we put forth a vision in which people are able to make small deposits into their bank account through a variety of cash handling outlets right in their neighborhood. In fact, buying and selling deposits (i.e., depositing and withdrawing money from your current account) is just another product your local store or supermarket offers you, along with toothpaste and mobile prepaid cards.

Retail banking outlets work for all banks, and people spread their business across these outlets based on the quality and reliability of their cash handling service, the fees they charge, and perhaps the range of other products (bread, milk) they can buy at the same time. Neither depositors nor their banks need to have a particular level of trust in the retail outlet, beyond what they would normally expect when buying toothpaste or a mobile prepaid card. Banks, like Colgate with its toothpaste, can concentrate on product quality and marketing (i.e., branding) and can leave retail operations to third parties. Banks holding these deposits do not need to have any contractual relationship with the retail outlets themselves.

There is a growing interest in what has been called “branchless banking.” It is unlikely that banks will ever achieve ubiquitous banking by deploying branches ubiquitously, so they must take advantage of existing retail distribution networks. There is commercial activity everywhere—a store, a stall—so how can these be recruited in the service of banks to channel their wares to all customers, whatever their circumstances and wherever they may be? Regulators worry justifiably about trust at the retail interface: what happens, for instance, if the depositor hands over his cash at an outlet, but the retail outlet does not cause the account

to be credited? CGAP has been in the forefront of ensuring an adequate regulatory framework for such activities; we do not minimize these concerns, but seek to address them (Lyman, Pickens, and Porteous 2008).

It is unlikely that banks will ever achieve ubiquitous banking by deploying branches ubiquitously, so they must take advantage of existing retail distribution networks.

Current approaches to branchless banking, what we call “version 1.0,” are based on deposit-taking banks entering into contractual agreements with third parties to serve as their retail channels. But even where this model has been developed furthest—first in Brazil, then in countries like the Philippines, Peru, and Colombia, and soon in Bolivia, Mexico, India, and Pakistan—banking regulations require banks to retain legal and financial responsibility for the actions of all its retailers. Banks can outsource operations, but they cannot also delegate responsibilities. In fact, regulations in most of these countries require banks to enter into exclusive contracts with retail franchisees, and often each and every franchisee needs to be licensed by the bank regulatory authority.

This naturally tends to diminish banks’ appetite for entering into such arrangements and fragments the universe of retailers into exclusive retail bank franchises. Banks may achieve lower costs, but these retail arrangements do not transform the nature of the problem. It remains difficult and costly for banks to go after business where the volume of deposits is relatively low, either because of low population density or low income levels.

This Focus Note presents an alternative, *systemic* approach to branchless banking, a “version 2.0,” under which there is no need for a bank to have a contractual relationship with any of the hundreds or thousands of retail outlets through which it is absorbing deposits or meeting liquidity needs of its customers. This happens within a more fragmented ecosystem where each actor is playing a more specialized role suited to its commercial comparative advantages, but where the actors, together, are able to handle transaction risks more efficiently. With the appropriate mix of technology, business process, market conduct, and consumer protection regulations, trust may not need to be vested in the retail outlet by either depositors or their banks. The end result is that banks can create retailing strategies that are much more flexible.

The requirement underpinning v2.0 is that each retail outlet must have a bank account against which all its client cash transactions can be offset in real time. We call the outlet’s bank the “acquiring bank,” which may or may not be the same as the clients’ (“issuing”) bank. A retail outlet taking in a cash deposit sees the same amount taken out of its account by its acquiring bank instantaneously. Likewise, a retail outlet paying out a cash withdrawal to a client sees the same amount automatically credited to the retail outlet’s account by its acquiring bank. In this fashion, the agent’s financial position with respect to the client and his issuing bank is immediately assumed by the agent’s acquiring bank. This insulates the client and the client’s issuing bank from the agent’s credit risk. This now becomes a normal interbank transaction and hence is fully within the domain of the regulated banking system.

From a technical standpoint, v2.0 requires that the retail outlet and its acquiring bank have a secure, real-time transaction processing capability, either online using wireless or Internet connectivity or offline using smartcards capable of updating balances and record-

ing transactions. There also needs to be a payments network that allows the retail outlet’s acquiring bank to account for and settle transactions with all participating issuing banks. Proven secure technologies exist for both of these aspects.

From a regulatory standpoint, v2.0 requires that banks be able to operate through shared, third-party agent networks that have the appropriate technological and consumer protection safeguards in place to minimize the exposure of bank clients to agent risk. Additionally, the government might create a parallel network of trusted agents (composed of municipal offices, schools, medical centers, etc.) who can perform customer due diligence on behalf of all banks in remote areas where it would be too costly for banks to deploy their own infrastructure. There should be a renewed emphasis on bank regulation that focuses on preserving the value of customer accounts, while loosening regulations on customer interfaces.

From a commercial standpoint, banks will need to reassess the opportunities that are now available, thanks to new technology, to unleash the full potential of branchless banking in providing access to affordable basic financial services to everyone. Shared agent networks, combined with appropriate product design, effective marketing campaigns, and low-cost transaction processing platforms, can lead to viable solutions to target low-income populations. But for banks to be comfortable in sharing their agent networks, they will need to understand the power of broad reach over operational control of fewer agents and the requirement of competing on the basis of superior products and service rather than attempting to establish exclusive geographic zones with high barriers to entry.

The system presented in this paper is unproven: there is no example of branchless banking v2.0 in operation anywhere in the world today. Yet most of the ele-

ments are already in place. Visa and MasterCard are examples of card payment networks that separate the role of banks that serve customers and retail outlets. The popularity of card and automated teller machine (ATM) networks demonstrates the power of sharing infrastructure that allows customers to withdraw money from their account or pay for goods at *any* location. Achieving this for deposits is trickier, because the payout from customer to retail outlet exposes clients and their banks to agent credit risk. This is the specific problem this proposed solution addresses.

The main challenges in realizing this vision will be (i) putting in place the appropriate regulatory framework that allows testing of new banking distribution models suited for low-income and rural populations while still ensuring the policy objectives of consumer protection and preservation of confidence in the banking system; (ii) convincing banks of the benefits of sharing their agent networks in areas with low-income and rural populations and, consequently, of competing on product and service quality rather than on geographic footprint; and (iii) developing a business model that adequately rewards all players while still delivering low-cost solutions for low-value transactional and savings products for target segments. While these issues remain under discussion, policy makers would be well advised to take pragmatic steps that allow them to test various approaches to branchless banking. The vision laid out here may be more a *destination* than an immediate solution.

Scope and Approach

Only about one-third of people living in developing countries have any form of financial savings with formal institutions. In many countries, this statistic remains stuck at a level that is far below that of other indicators of socioeconomic development: access to

education, vaccination programs, sewerage, clean water systems, and so forth.

This paper is concerned fundamentally with those who cannot avail themselves of the services of formal financial institutions because of “supply-side constraints”: lack of proximity to a bank branch, inconvenience (e.g., long queues, feeling of intimidation), or high costs. We use the term “bank” in the broadest sense: any institution that is formally authorized to take deposits from the public. The focus of this paper is entirely on “transactional” accounts, which have three basic features:

- They are prefunded (i.e., not credit accounts).
- Balances are available on demand.
- They are enabled primarily for electronic payments.

Thus, in their most basic form, these transactional accounts would not include an overdraft facility or check-writing privileges and could be sold as “bank accounts” or “prepaid” accounts. Transactional account holders can accumulate balances they can dispose of freely at any time (up to certain limits based on the level of customer due diligence undertaken), as well as send and receive payments electronically. This paper does not address more sophisticated savings, credit, or insurance products, which involve a greater need to understand customer attributes and which raise a broader range of consumer protection issues. But having a transactional account can serve as a “gateway product” that supports the provision of these other financial products by linking them electronically to the transactional account. A time deposit or account or a loan can be funded from or repaid into, and its balance can be accessed through, a transactional account.

The term “deposit” is used throughout this paper to mean a customer’s surrender of cash at a banking outlet, whether for the purpose of storing value (savings) or conveying value to another party (transaction).

Both of these will go through the customer's transactional account and, hence, are analogous in their technical treatment.

This paper focuses on retail banking channels: the points through which customers interact with their bank. This element of the bank delivery chain introduces the operating rigidities and the high transactions costs that give rise to most of the "supply side barriers" to access referred to above—including the sheer absence of points of service in many areas where poor people live. *Trust* is the real issue in retail banking that gives rise to these problems, not the need for local retail infrastructure. As we develop a new approach for bank retail operations, we will be looking at each of the things that can go wrong in a retail transaction, where trust can be breached by either omission or commission, and we will explain how these issues could be solved in a relatively straightforward, low-cost fashion with the use of appropriate technologies.

In our analysis of alternative commercial and regulatory approaches to banks' retail activities, we draw on several analogies. Coca-Cola and prepaid mobile cards are used to illustrate the power of distributed retail networks. We also consider how telecom regulators use the notion of "network unbundling" to focus regulation as narrowly as possible to the specific activities that give rise to identified regulatory problems.

All of these analogies are about specialization: distributing retail functions flexibly across a range of players, circumscribing the regulations as precisely as possible to where prudential or market conduct risks arise. This allows a reorganization of banking functions across various players who can come together through the normal interplay of market forces to deliver a wider set of options to a broader set of people.

The next section of this paper lays out our vision for shared banking retail outlet networks and the signifi-

cant implications that has for all the parties in a banking transaction. We then address current approaches to branchless banking and the barriers that prevent the attainment of our vision. Next we present in detail a proposed solution to overcoming these barriers. The final section discusses the implications for bank regulation.

The Power of Distributed, Third-Party Retail Networks

Most businesses in the world do not have their own retail stores. Rather, they choose to sell their wares through a range of third-party sales outlets so that they can leverage existing facilities and customer relationships in an opportunistic, highly replicable fashion. Rather than incurring large fixed costs in an own-store infrastructure, their selling costs (commissions) are driven entirely by sales. Indeed, most businesses are "wholesalers"; having a retail store is the exception.¹

Consider two examples of how successful indirect distribution models propel companies and transform markets.

Coca-Cola

Why does Coca-Cola, a global company with an annual turnover of US\$40 billion, take it upon itself to push Coke cans and bottles to within 15 minutes of every person on the planet? And why is it that financial institutions like Barclays and Wells Fargo, with similar revenues, wouldn't even think about providing that level of service across the globe? Leave aside credit and checks and all the customer repayment issues around that: why don't such solid banking brands conspire to take the global transactional savings market by storm—precisely where competition is weakest?

¹ Even businesses with their own stores often treat them as marketing flagships to support their wholesale business. Many branded clothes manufacturers place a high-profile store on main street, but expect to make the volume of sales through third-party channels, such as department stores.

Big banks (whether national or international) do appear to have opted out of many local markets, leaving the field open to a plethora of smaller players. Why? Does it *need* to be this way? Here is where the Coca-Cola analogy may be instructive. The Coca-Cola company does not ignore poor people, wherever they may be, who might find value in one of its soft drinks, so why do large banks appear to neglect them as customers?

Conventional wisdom is that the margins on deposits are really too small to entice established, formal players. Again, why should this be? There are four reasons why savings products should be at least as profitable, if not more profitable, than selling Coke to poor people.

First, the transaction value would be smaller for a soft drink than for a typical deposit in most cases.² Hence, transaction costs would need to be that much more streamlined for Coca-Cola selling a soft drink than for a bank trying to attract that extra deposit.

Second, Coca-Cola has a bulky physical embodiment, whereas savings products do not—they are just *information*, an IOU from the bank, which may be recorded on paper (receipt or passbook) or just electronically. Providing savings products does require taking cash, which is costly to keep safe and move around, but buying a Coke has exactly the same cash management requirements for merchants.

Third, the Coke selling model is highly transactional, with repeat buying and customer loyalty achieved only through hard-earned branding and product differentiation efforts. Banking is a relationship business: I am extremely likely to give my savings today to the same institution that I gave my savings to yesterday. I do not question my loyalty to the bank each time I deposit a sum, the way I might each time I go to the

store to buy a refreshment. Being a relationship-based business, it ought to be easier for banks to achieve good customer profitability from small-denomination transactions.

Finally, one could argue that savings fulfills a more basic need, and hence customers might have a higher willingness to pay for the service or to put up with inconvenience to get the service.³

So what is preventing the “Coca-Cola-ization” of banking services? One possibility is that the lack of banking is simply because of a weakness in underlying demand.⁴ But how can that be? We don’t want to get hung up on the Coke analogy, but the use of the expression “Coca-Cola-ization of banking” is not as frivolous as it might appear. By “Coca-Cola-ization” we mean the design of a scalable business model that can deliver the necessary low cost and density of distribution. This is characterized fundamentally by a fully developed distribution model that is based on a web of (multi-product) distributors, which in turn is supported by a highly structured value chain that clearly delineates how value gets distributed across the brand owner, the bottler, the distributor, and the local merchant.⁵ And all of this happens in a distributed fashion, with no direct contract between Coca-Cola and each retail outlet.

Mobile prepaid cards

Mobile technology has experienced an adoption ramp-up that has been unprecedented in its speed and extent of population coverage. Although with some delay, this process is also happening in developing countries with similar impetus. This phenomenal adoption speaks to the benefits mobile technology brings to people. Customers immediately understand

2 Here’s a back-of-the-envelope calculation. Consider a family living on \$2 a day per person—low but not the most destitute. If half the family works (i.e., not counting the very young or elderly), the average effective daily wage is \$4. A Coke costs (say) 50 cents. Thus, buying a Coke is equivalent to making a deposit of 12.5% of a daily personal wage, which is not unreasonable (and remember that this comparison between a Coke and a savings transactions is based on the wage earner depositing *every day*).

3 We are not trying to position a *moral* argument here about the relative value of consuming a Coke and buying savings products. But if you are like us and believe that access to finance is a route to personal and economic development, then you believe that people would embrace finance at least as strongly as they would a Coke when given that option.

4 Many people cite proximate causes for lack of access to savings products: bank branches are too far, the queues are too long, they don’t make me feel like I belong there, I don’t trust them, etc. But all these are endogenous circumstances; surely if banks had actively wanted to seek out these customers, they would have found ways to overcome these customer purchase barriers.

5 In addition to its powerful local distribution networks, Coca-Cola’s product differentiation strategy is aimed at meeting the needs of various segments and, increasingly, adapting to local tastes (by varying the composition of core products or acquiring or developing local products and brands).

the value proposition. But if there is one single event that enabled an acceleration in the adoption curve, it was the rise of prepaid cards.

Mobile prepaid cards were initially conceived purely as an alternative form of payment. But it turned out to be much more than that: it was a “productization” of the service that allowed it to be distributed through normal retail channels—here was a package, with a fixed price, that could be put on shelves anywhere.⁶ Freed from contracts, operators no longer had to trust dealers to collect the necessary customer information to run credit checks and to process paperwork. And customers were actually comfortable paying a premium for it (relative to postpaid contracts).

When a new service with a great value proposition met mainstream retail channels, sales and penetration took off. Freed from the dual requirements of contractual commitment by the consumer (which required a more intensive sales model) and credit checks by the operator (to pay for the handset subsidies that typically supported the contract sale), prepaid cards enabled the product to be unshackled from the operators’ own-driven channels. It became easy to buy; customers felt more in control.

The Branchless Banking Frontier

Banks do not retail like that. They own their distribution networks—branches—or might share physical or virtual POS devices through which limited transactions can take place (paying for goods, cash withdrawals). They sell only their own products through their distribution networks. This approach is not scalable, if your definition of scalability is being within a 15-minute reach of every person in the world. In that void, a plethora of small, local institutions (microfinance institutions, credit unions, moneylenders) may—or may not—be

created. Why can’t the banks see the opportunity, or why can’t they act on it?

One thing holding banks back from retail ubiquity is regulatory concerns about preserving customer trust. Whether you buy a Coke or a prepaid card from one store or another, it makes no difference to the value you attach to your enjoyment of the product. If you buy a savings product from a store, you’ll want to know which bank is behind the product and that the store is, indeed, operating under the bank’s direct tutelage.⁷ Banking surely is not like Coke, and regulators do not allow such loose distribution arrangements. Without a flexible distribution model, banks pick their locations carefully; beyond that, they just don’t distribute.

Indeed, when banks sell deposits, they sell trust—the promise of future delivery of cash. Because banks are complex, not very transparent institutions, depositors may not be in a good position to assess the trustworthiness of banks. Regulators help to ensure deposit-taking institutions have the wherewithal to deliver on their promises. Regulators seek to “bond” bankers to the promises they make to their customers by ensuring that some of the bankers’ own money is at stake through capital requirements commensurate with the risks. Regulators also hold banks accountable for any operational risks at the customer interface itself, at the point when the cash is turned over, and those promises are recorded or extinguished. Regulations on branches may run many pages in regulatory books.

Deposit taking in particular creates the primary trust issue for banks and their customers. Interestingly, a lot of the microfinance industry has developed as *micro-credit* rather than *micro-savings*. Both products are about clients making many small payments against a larger receipt of funds, only the relative timing of these differ.

⁶ In addition to an alternative means of payment and an alternative distribution strategy, mobile prepaid cards have been used by mobile operators as a segmentation device. In particular, mobile prepaid cards typically have been targeted toward younger and less affluent people, for whom the financial freedom they offer and the mass market retailing are particularly attractive.

⁷ One further difference between handing over cash at a store to buy a Coke versus making a deposit is that, in the former case, there is a *physical* two-way exchange: cash for product. Customers therefore know instinctively when to hand over the cash: when the Coke is on the counter, ready to be bagged. However, there is no physical expression to a deposit, so customers might be confused (or misled) as to when they should turn over the cash; they may do so with no proof of the deposit taking place. This is explored further later in this paper.

⁸ For an exposition of the main issues and country examples on branchless banking, see Ivatury (2006) and Lyman, Ivatury, and Staschen (2006).

⁹ This has traditionally been referred to as “mobile banking.” To avoid confusion, in this paper we reserve this term for banking done through mobile telephones.

This may seem counterintuitive at first: if it is already inherently costly to offer small transactions to poor people, why would a financial intermediary also take on additional credit risk? Why not have the client trust you (by having the customer deposit in advance of withdrawals) rather than you having to trust the client (by giving money upfront, against future repayments)?

Partly, this stems from a belief that poor people lack the resources to save. Also, credit is deemed to be more profitable because it commands higher commissions. But it is also in part because deposits create greater cash management challenges: loan repayments are scheduled, while deposits, in principle, can be made at any time. In the absence of ubiquitous, flexible cashing points at their disposal, microfinance institutions have preferred to set up cash collection mechanisms around scheduled payments—credit—as a way to mitigate cash management costs.

Only if the cash deposit and withdrawal retail outlets can be set up and managed as a standalone business, without being restricted to serving individual banks with which they have a direct contractual relationship, can a truly systemic branchless banking solution emerge. This is where there is a set of specialized value chain players that operate independently of each other, but in combination fulfill all the banking needs of the community they serve. Technology makes it possible to eliminate the retail outlet from the trust equation, so that anyone can make a deposit to his bank account through the retail outlet, without either the client or the bank having to know, certify, supervise, or otherwise trust the retail outlet.

The driving vision behind CGAP's branchless banking initiative has been to harness a range of solutions that, together, allows customers to interact with banks without banks having to roll out their own physical infrastructure.⁸ But how closely do current branchless banking practices mirror these examples?

Branchless Banking v1.0: Outsourcing Retail Operations

There has been substantial channel innovation by banks. Most of these innovations have been enabled by technological advances. In rough order of appearance, these are as follows:

- **ATMs—bank branches in a box.** You can do all the basic transactions you would normally do at a branch, but through a machine rather than a teller.
- **Banking vans—a branch on wheels.**⁹ Vans (or, in some countries, boats) equipped with the appropriate information technology (IT) and communications systems and staff can service a broad area by traveling to several towns. This is used in low-density environments, where it is too costly to maintain a permanent banking infrastructure.
- **In-store POS systems—cashless payments.** This is used to pay for on-the-spot physical purchases and, more recently, for cash withdrawal from your bank account (“cash back”).
- **Internet banking—virtual POS.** This enables remote transactions and remote purchases of goods (for immediate online delivery or subsequent physical delivery) but obviously without cash capability.
- **Banking agents—outsourced branches.** Banks create a set of contractual relationships with established retail franchises or specific outlets, at which they deploy POS systems. Customers can make deposits, in addition to the payments and cash withdrawals they would be able to make using a regular POS.
- **Mobile (telephone) transactions—POS in your pocket.** This enables the same set of transactions you could do with Internet banking. But the mobility element allows you to do the transaction from the store, hence it can also be used as a functional alternative to the in-store POS.

⁸ For an exposition of the main issues and country examples on branchless banking, see Ivatury (2006) and Lyman, Ivatury, and Staschen (2006).

⁹ This has traditionally been referred to as “mobile banking.” To avoid confusion, in this paper we reserve this term for banking done through mobile telephones.

Each of these channels has been proven in the marketplace and is used to varying degrees. In some cases, these channels have induced *channel substitution* (i.e., shifted transactions that would otherwise have gone through a bank branch, whether because of greater convenience or lower cost to the user). As noted, traditional POS systems do not accept deposits; Internet and mobile channels by themselves have no cash transaction capability; and banking vans may not come around often enough to meet some customers' needs. Hence, these channels cannot individually replace traditional channels altogether.

In fact, these channels are most powerful when used *in combination* to reach new customer bases (whether geographically or by socioeconomic stratum) that were not previously being served at all. We are seeing that today: (1) a mobile phone enabling remote transactions (2) that is used as an in-store POS device by merchants (3) linked to a network of agents that handle cash transactions for customers.

This is what mobile operator Smart Communications has implemented in the Philippines since 2001: a mobile phone/card combo that allows transactions from/to a combination of banks, access to any MasterCard POS, cash in and out at a network of local agents signed up by Smart—all from a prepaid account. WIZZIT in South Africa has a similar service, one that works with any mobile operator, although with a single bank and few nonbank cash agents. Other mobile operators, such as Globe Telecom in the Philippines (GCash) and Safaricom in Kenya (M-PESA), have implemented mobile phone-only solutions.

These solutions can be seen as replacing the bank branch functionality with an ecosystem of players—involving some combination of banks, mobile operators, merchants, and cash agents. They are hard to build because they require strong multiparty orchestration, in principle spanning several regulatory domains, and the

proposition is severely weakened if any one element of the solution is not properly primed. Indeed, the commercial arrangements between the parties are what holds the system together.

Moreover, the mobile payment services pushed by Globe, Smart, Safaricom, and WIZZIT are complicated because of the platform nature of the service:

- They operate in a *two-sided market*. In the early stages, they may get caught in the vicious circle between signing up agents and signing up customers: customers are not interested while there are few options for cash or POS transactions, and agents won't sign up while there are few customers. And raising agent commissions in order to sign up new agents may discourage customer acquisition if that makes the service more expensive for them.
- They are subject to *network economies*. The value to a given customer depends on the number of customers on the network to whom payments can be made (keeping the number of agents constant). Many potential customers may adopt a wait-and-see attitude and sign up only once the system is "big enough."

These retail payment systems may be difficult to grow initially because of these reasons. But once a system reaches a certain size, there may be a tipping point, and the system takes on a practically unchallengeable hold on the market, creating anti-competitive issues for authorities.

Branchless banking v1.0 involves "outsourcing" certain functions to specialized players, but still within the context of one player being both the "leader" and, ultimately, legally and financially responsible for many of the actions outsourced to partners.

But does it need to be this difficult? Could all the different players come together through normal market

interactions, guided by the invisible hand, rather than through heavy-handed orchestration by a leading player? In other words, can we think of a “de-layering” of the banking process, whereby a set of specialist players naturally collaborate without necessarily a set of end-to-end contracts tying all the players together, but purely out of self-interest?

Branchless Banking v2.0: Creating a market for retail operations

Here is a specific vision of a transformed banking environment that works for poor people, and the role technology can play in delivering it.

Consider the following vignettes. In each case we first state the vision, then we state (in italics) some real-life examples that relate to the vision:

1. On her way home after a day of selling her produce at the town market, a villager stops by the local store to deposit 20 pesos she earned that day into her bank account. Every time she earns some money, she likes to set aside 10 percent—right away, into her bank account. She likes doing her banking at different shops at different times—store owners are notorious gossips, no sense in any one of them knowing all about her finances.

In Ghana, the susu collection system allows villagers to put away a fixed daily amount with a collector that visits them at their home or place of work.¹⁰ But these deposit collection systems remain informal, and book keeping is entirely paper based, so that customer trust is totally vested on the individual collector.¹¹

2. The store owner likes the villager to come in daily to make her deposit. That’s extra commission, and it increases foot traffic into the store. And as people come back to withdraw from their savings, it allows him to unload the excess cash he’s picked up in the course of daily business—it’s safer for him.

In Brazil, some 90,000 retail outlets have been signed up by banks to serve as cash-in/cash-out points for their banking services. However, these agents can serve only customers of banks with which the agent has a direct contractual relationship. In Kenya, Safaricom is using its network of prepaid card distributors to act as agents. In the Philippines, mobile payment operators Smart and Globe have developed their own network of agents.

3. The store owner’s banker is focused on small- and middle-scale enterprise clients. He likes dealing with retail stores or franchises because of all the supplier credit they take and all the transactions they generate. The banker has signed up the store as a cash outlet managed by his bank, enabling the store to be a cash deposit and withdrawal outlet for any bank in the country. (These cash transactions happen against the store’s bank account.) The banker has a happier, more loyal customer and gets a cut of the transaction commissions earned by the store. Indeed, for the acquiring bank, these accounts represent a transactional engine—volumes of cash going in and out, but all prefunded, no credit involved, no hard decisions to be made at the customer level.

This is entirely analogous to how Visa and MasterCard operate their acceptance networks. The acquiring (merchant-facing) and issuing (customer-facing) banks do not have any direct relationship to each other, but they are both part of the Visa or MasterCard network, hence they can service each others’ clients.

4. Another bank manager decides to do an aggressive customer acquisition campaign in a poor, periurban area. He offers a basic transactional savings account to all; customers need only show proof of identity. No credit checks, no minimum balances, no account opening fees, no stamp duties on transactions—easy for the customer. This account is entirely funded by the customer. No checks, no overdrafts, no monthly statements—easy for the bank. The bank advertises

¹⁰ Under the traditional susu savings system, susu collectors travel throughout the village collecting a fixed amount daily from each client for 31 days. At the end of the month, the collector returns all the proceeds less the amount for one day, which he keeps as payment for his services.

¹¹ Informal, paper-based arrangements are vulnerable to abuse, in a way that technology-based ones may not be. It is reported that 40% of savers in Ghana lost their money to run-away deposit collectors. See Aryeetey and Cockel (1991).

this product heavily; customers find out more and eventually sign up by calling the bank's contact center. (As discussed later in this paper, customer due diligence procedures can be performed by a government-sponsored network of trusted agents shared by all banks.) The bank then watches the deposits come in daily, weekly, without being involved in the cash collection process—it's all done through local stores with which the bank has no direct contractual relationship. The bank manager doesn't care whether the last \$10 that came in originated from one richer customer or from 10 individual customers—all dollars are equal.

Such accounts have been introduced in Brazil ("simplified accounts")¹² and in South Africa ("Mzansi accounts")¹³ as prime tools to increase bank adoption. They have been associated with most mobile banking systems (e.g., M-PESA, GCash, Smart Money, WIZZIT), under the guise of "prepaid accounts," as a way of avoiding the regulatory burdens and operational complexities of regular bank accounts.

5. A microcredit institution wants to loan a villager money for her microenterprise. Credit checks are done; the loan is approved. The villager finds the money in her bank account and knows to make repayments from her account to the microcredit institution's account at the local store—the loan officer doesn't need to touch any money. The transactional account is indeed your entry point into a fuller set of financial products. Customers can purchase term-based or programmed savings accounts, as well as loans and credit lines—from the same or from a different financial institution. These are entirely separate accounts: they may not be so liquid (higher yielding savings accounts), and they may not be prefunded (credit). As a result, opening these types of accounts may bear additional requirements. But once these accounts are set up, they can be funded directly from the transactional savings account.

Globe, the company behind the CGash mobile wallet product in the Philippines, is partnering with rural banks to support their entire product range with GCash's transactional capability.

The main benefits for all the key players relative to branchless banking v1.0 are shown in Figure 1 and can be summarized as follows:

- Customers will be able to spread their banking transactions across a larger set of retail outlets, increasing convenience and mitigating privacy concerns.
- Retail outlets benefit from better economies because they can serve (compete for) the customer of any bank.
- Pooling liquidity at the retail outlet level results in lower probability that customers may not be able to complete their (deposit, withdrawal, or payment) cash transaction.
- Banks can compete effectively in remote or marginal areas, without having to invest in large local infrastructures. Moreover, banks will not find themselves running "local monopolies" in the cases where only they have a presence; hence, they will be encouraged to concentrate competitive differentiation efforts on product and brand.¹⁴

This model becomes particularly powerful if it is deployed in conjunction with mobile payments platforms by banks. In this case, customers would have full access to payments and savings services remotely, without having to go to retail outlets at all. In effect, the mobile channel allows customers to transact directly with head-office systems. In addition to cashing in and out, customers would be able to make transfers to other users or accounts, pay bills, view bank statements, and so forth. The branchless bank becomes a reality.

¹² Brazil's simplified accounts were introduced in 2003. A feature that helps reduce their cost is that withdrawals can be made only by card (i.e., at an agent but not at a branch). Transactions are free up to certain transaction limits. Balances are limited to R\$1000, and conditions for opening a bank account are simplified, without the need for proof of income.

¹³ Introduced in November 2004, the number of new Mzansi accounts opened reached 3.6 million by the end of 2006. Finscope suggests that there are only about 2 million users (not counting duplicate or inactive accounts), and of these, 1.2 million were previously unbanked. See Porteous (2007).

¹⁴ This mirrors the experience in the mobile telephony sector. In the early days of network build up, competition was based almost entirely on physical network coverage. As all networks attained near-ubiquity, the competitive basis for the industry had to shift to product differentiation, quality of customer care, and loyalty schemes. In this fashion, the broader needs of customers are better met, and there is a higher level of product targeting based on customer segmentation strategies. This is what banks will need to go through if they want to compete effectively in downscale markets.

Strategic questions for banks

Banks will need to assess the opportunities derived from the vision just laid out against three main strategic issues: (i) the desirability of using shared retail networks rather than proprietary, more strongly branded, albeit likely smaller, agent networks; (ii) the operational and organizational changes required to take advantage of these opportunities; and (iii) the financial profitability of the third-party retail channel.

A bank’s decision about whether to share retail networks would be driven by two key considerations:

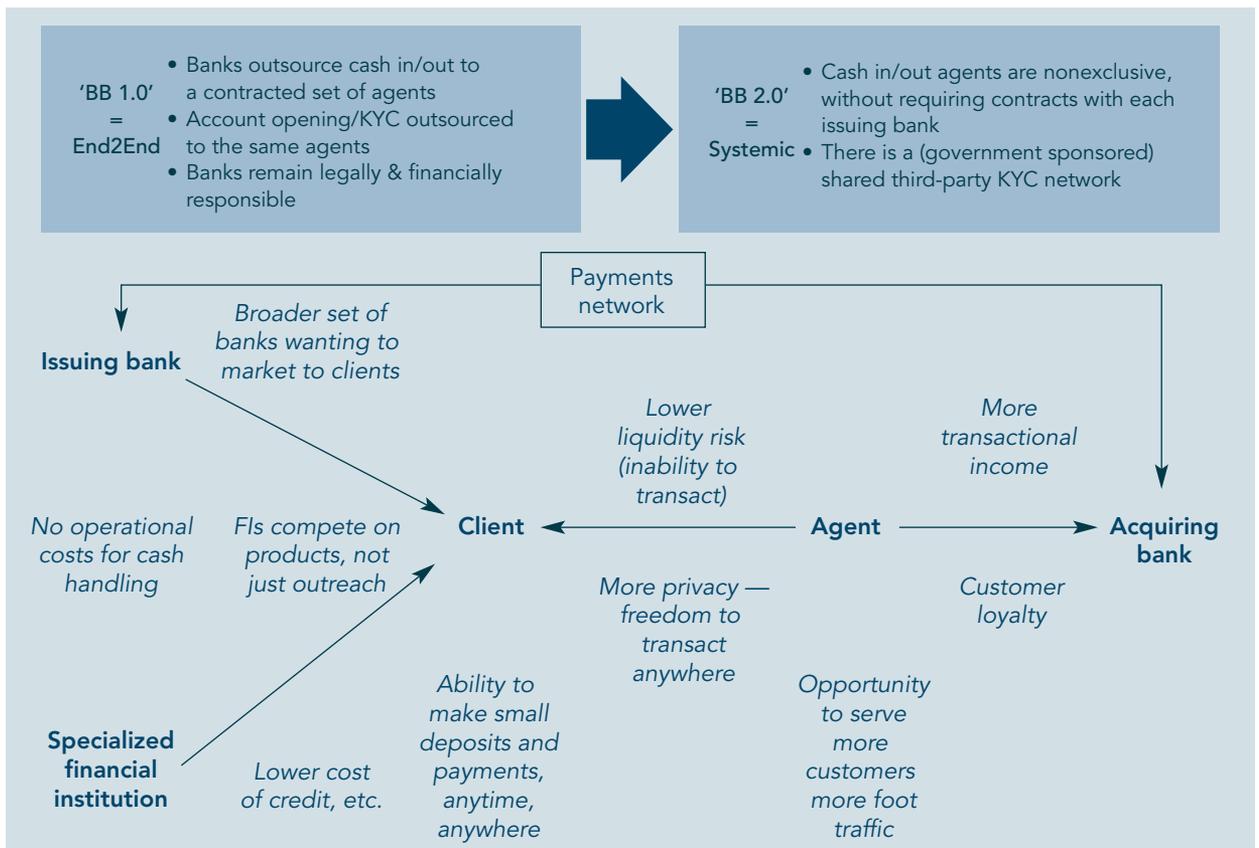
- *Basis of competitive differentiation.* Sharing retail networks with other banks has the effect of eroding

the value of geographic presence as a potential core differentiation strategy. It may also make it more difficult for a bank to achieve a consistent customer experience across all its touchpoints. It would therefore require banks to compete on other core attributes, such as product and service responsiveness.

- *Size of addressable market.* Sharing retail networks would allow each participating bank to develop a much broader addressable market than it could most likely achieve on its own.

Shared networks are likely to be viewed more positively by growth-oriented banks that have a strong segment and product orientation. Also, the speed of adoption of shared networks by banks is likely to be subject to strong network effects: as long as few outlets are shared,

Figure 1: Foreign investment microfinance landscape



banks have little incentive to “give up” their proprietary agents, because the potential gain in addressable market size does not compensate for the potential loss of competitive differentiation. But once the shared network is large, few banks could sustain a differentiation strategy based on exclusive geographic points. This raises the possibility of governments “seeding” shared retail banking networks by contributing government-controlled retail chains, such as post offices.

The transactional approach in Branchless Banking v2.0 also leads to a sharpening of branding roles. A bank’s brand can then truly stand for trust—trust that the value of my savings will still be there when I return for them and, in fact, trust that I will be physically able to access my savings for cash when needed through a dense network of retail outlets.

What role would brands have for the retail outlet? The retail outlet does not need to sell trust to the customer. Its brand can then focus on traditional retail aspects, such as convenience—service with a smile, no queues, long hours—and location, location, location. A bank-like brand can sit alongside a Western Union-like brand, mutually supporting each other, both in the service of the customer. It’s a fuller service and brand ecosystem.

The shared retail distribution networks would handle specifically the delivery of cash services to bank clients. But cash services constitute only one of the elements of the customer proposition. For a bank to take full advantage of the potential of branchless banking, it would need to redesign other processes and service elements in parallel, including the following:

- Developing products that are relevant for the low-income and rural customers who would be targeted through the branchless channel
- Rolling out a customer acquisition channel, in tandem with the transactional channel enabled through shared retail outlets

- Investing in high-volume, low-cost transaction processing platforms, to ensure a back-office cost structure consistent with the low-cost front-end branchless channel

A bank that is not prepared to make the necessary supporting investments in marketing, sales, and back-office systems will find little actual value in developing a third-party retail channel.

In principle, shared networks have the potential to lower the total cost of servicing low-income and rural populations for three reasons: (i) there would be less duplication of retail-level infrastructure; (ii) there would be a higher degree of specialization of value chain roles, and hence each may have more scalability in performing its role; and (iii) it would enable a higher degree of contestability (i.e., ability to compete) for customers among banks.

However, whether this results in lower actual costs for clients would depend on the outcome of commercial negotiations between the various players involved in delivering the transactions: the retail outlet, the acquiring bank, the payment network provider, and the issuing bank. If any had a position of market power over the others, it may appropriate the economic benefits from the scheme to the detriment of customers and other players. This might arise, for instance, if one bank had a far larger branch network than the other banks, which would allow it to capture the acquiring business, or the payments network provider may leverage a key brand role it may fulfill over the retail outlets and the customers. Therefore, it remains to be seen whether viable business models would emerge in most countries.

The Proposed Solution

In the previous section, we highlighted two transitions. The introduction of Branchless Banking v1.0 delivers lower cost infrastructure and service provision at the customer interface, by not requiring a special-purpose set of retail outlets. This transition is already happening in many countries. Branchless Banking v2.0 uses the existing retail infrastructure more efficiently and, hence, opens up the possibility of building a ubiquitous network of "deposit collectors." But it remains a theoretical vision that has not yet happened anywhere. (See Figure 2.)

We now turn to a description of the system that would deliver this vision. Our approach is to "unbundle" the activities of the bank branch to see in each case where the regulatory issues lie and how they can be either eliminated or repackaged to make them more tractable. The purpose is to see how much flexibility banks *could* have in designing their retailing strategy. Can we do away with bank branches and use normal retail channels as much as possible? This section is structured around each of the activities bank branches are engaged in, namely:

- conducting cash-in/cash-out services and handling payments
- marketing and selling accounts and conducting customer due diligence around that
- answering customer queries and offering financial advice

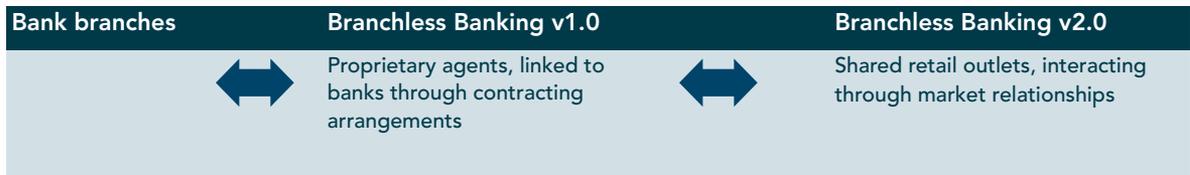
Retail outlets for cash in/cash out

The retail outlet trust problem

The act of a customer walking into his bank (the "issuing bank") to make a deposit into his bank account involves, on the face of it, a very simple setup. This is represented by the top arrow in Figure 3, going straight from customer to bank. The customer needs to trust the bank, but no one else, because there is no "middleman" in the transaction. But this hides a whole "trust" infrastructure the bank has invested in: a security guard and a safe, to protect against robbers; a sophisticated accounting system, to prevent errors; protocols on authorizations levels and countersignatures, to prevent employee fraud; and manuals, to ensure staff comply with all the banking regulations.

Indeed, much of this will be required by regulation, but the bank may even choose to go beyond what is strictly required: it knows that if there is a stick-up, or an error, or fraud, or a regulatory oversight, it will be held legally and financially responsible. The customer may not perceive any of these trust arrangements, but the bank will be sure to "package" them so the user can sense it: the luxury of the offices, the severe appearance of the branch manager, the branding that emphasizes comfort and trust, and so forth. Remember that the product the bank sells in exchange for customers' cash deposit is trust (in the eventual return of the cash).

Figure 2. Transitions from bank branches, to Branchless Banking v1.0, to Branchless Banking v2.0



Can things work differently? Can distribution (the paying and collection of cash associated with people’s transactions needs and small-scale savings) be outsourced to third parties? Surely it can, but can it be done in a way that preserves the bank’s total control over the fulfillment of its trust proposition to the customer? If the bank had to develop or underwrite trust in each retail outlet it signs up into its distribution network (à la Branchless Banking v1.0), it would, in fact, not be fundamentally different from it opening up a new branch directly, beyond some cost savings. But could the bank maintain no more than an arm’s length relationship with its retail distribution outlets, without that undermining the trust product?

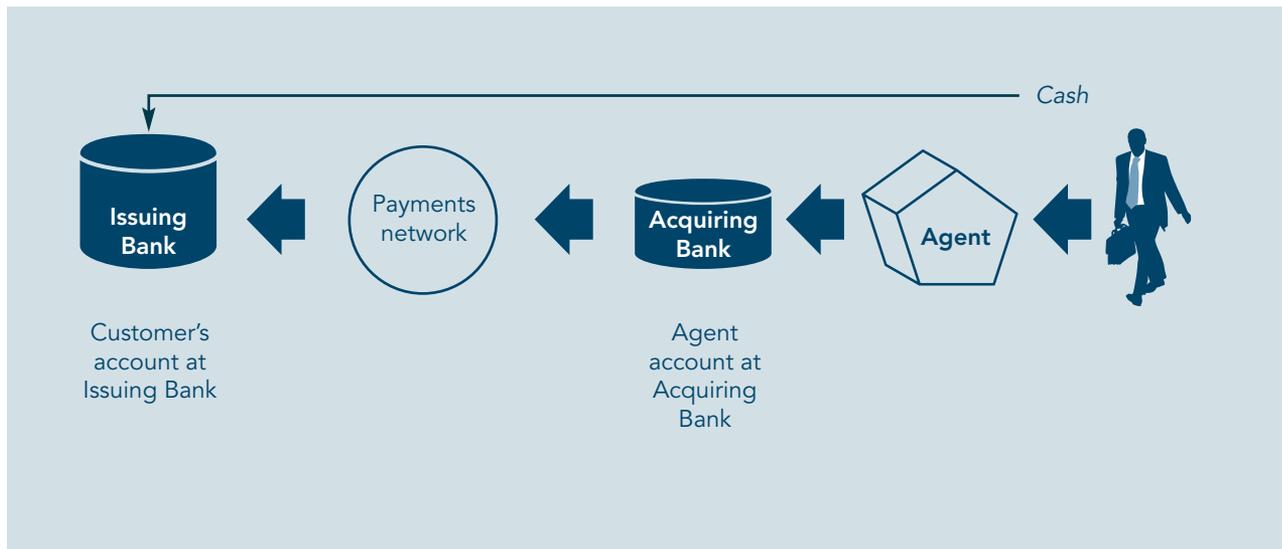
The bottom path in Figure 3 shows what a nonproprietary retail distribution network would look like. The customer deals only with a retail outlet—think of it as the corner store. This store may not have a contractual relationship with the customer’s issuing bank at all. In fact, this retail outlet has a relationship

with another bank—the “acquiring bank.” The issuing bank and the acquiring bank are both members of the national payments system and exchange monies through a payments network. The payments network is managed by a separate player that may be owned by a consortium of banks (possibly including the issuing and acquiring bank), by the government, or by a trusted third party.

Transaction risk analysis: Can the risk of retail outlet error and fraud be eliminated?

Consider this scenario. When the customer wants to make a cash deposit of, say, \$10 into his account at the issuing bank, he walks into the retail outlet and hands over the cash. The acquiring bank will be notified of this transaction and will instantly and automatically take \$10 out of the account it holds in the retail outlet’s name. Now the retail outlet accounts are balanced: in effect, the retail outlet has exchanged \$10 in its bank account for \$10 in its till.

Figure 3. Flow of deposit transactions



The acquiring bank will immediately notify the issuing bank of the \$10 it is owed on behalf of its client; the accounts will be adjusted in real time, although the money may be exchanged subsequently under agreed clearing and settlement procedures. From the perspective of the acquiring bank, its books are balanced: it took \$10 out of the outlet's account and paid out \$10 to the issuing bank. On receipt of the funds, the issuing bank takes the \$10 it received at its account on the clearing bank on the payment network and transfers it to the customer's account. The customer finds the surrendering of \$10 in cash to the retail outlet compensated by a \$10 increase in his bank account.¹⁵ The deal is done.

In this chain, how much trust does the customer (or the issuing bank, as the institution whose brand is on the line when the customer's trust is breached) need to have in the retail outlet to complete the deposit transaction? Does the issuing (or, on its behalf, the acquiring bank) need to give that big, fat manual to the retail outlet? Does either bank need to supervise the retail outlet at all?

In the example, all the parties to the transaction are notified in real time, and hence the banks are able to authorize the transactions with full knowledge and update their accounts immediately. There is still settlement risk, but that is purely between the acquiring and issuing banks. We now consider situations that might compromise the completion or integrity of the transaction, and discuss how the risks can be addressed.

For the deposit transaction to be completed successfully, all parties involved need to have accurate information on the transaction taking place. This would be violated if, for instance, the customer pays \$10 cash but the retail outlet fails to record it properly (whether because of error or fraud). In this case, neither the acquiring bank nor the issuing bank will know the

\$10 deposit ever took place, and they will not be able to initiate the required transfers. The cheated customer will be in for a surprise when he checks his bank account balance. To avoid this risk, the customer should be involved in the process of recording the transaction, not just trusting the retail outlet to do so. The customer could interact with a POS device directly (e.g., pressing "ok" on the deposit amount); the device then automatically reports the transaction to the acquiring bank, and the client can be reassured that the exchange of information has taken place.

A similar risk arises in the case of cash withdrawals. Here the employee of the retail outlet might think of creating fictitious transactions: he could claim that a customer withdrew cash—which the employee would pocket—and he would process the transaction according to the usual procedure. By the time the customer realizes she has been defrauded, the employee might have fled. As in the case above, though, having the customer physically validate the transaction by entering a personal identification number (PIN) in a secure POS device would protect against this risk, because it ensures the transaction is properly recorded.

A variant of this risk is where customer turns over the cash, then the transaction is denied because of lack of liquidity, but the retail outlet doesn't return the cash. This can be avoided by requiring that the electronic transaction be processed *before* the cash is turned over. When the authorization message comes back to the user, it should ask the user to turn over the agreed amount of cash at that point. It may be appropriate to have the user confirm via a return message once the cash has been turned over. This signals the finality of the transaction. A confirmation message to the customer would follow.

¹⁵ This example assumes no commissions. In practice, the \$10 cash deposit may result in a smaller bank deposit because commissions are earned through the chain.

The request/authorization messages to the user should come securely from the issuing bank—the customer's bank—rather than from the acquiring bank. This will avoid the situation where the retail outlet contracts with a company purporting to be an authorized bank and really is not. The issuing bank then has to “recognize” the acquiring bank and can check the legitimacy of this party to the transaction. The customer will not need to trust or even know whether a retail outlet is linked to an authorized acquiring bank because the outlet would not be receiving transaction messages from the issuing bank if it is not linked to the acquiring bank.

Through this mechanism, the customer is automatically “insured” against credit risk by the retail outlet; she doesn't need to trust the retail outlet. Instead, the customer faces two other types of transaction risks. First, the retail outlet's liquidity risk: if there are not enough funds to cover the transaction, the acquiring bank gives an instruction to the retail outlet (and the customer) denying the transaction, and the customer is not allowed to make the deposit. This risk creates inconvenience but not financial loss in and of itself. Second, the customer will be exposed to the acquiring bank's settlement risk (because the acquiring bank now holds the funds that will need to find their way into the customer's account). The issuing bank, the payments network, or a third party may assume this risk on behalf of its customer; in any case, being the credit risk of a regulated institution, this may be deemed to be acceptable.

If there is such an automatic settlement facility in place for the retail outlet's account and transaction and messaging flow is sequenced as outlined above, neither the issuing bank nor the acquiring bank needs to supervise the retail outlet's cash till. Say the customer's deposit is properly recorded, but the retail outlet employee misplaces or misuses the cash, or the retail outlet is robbed. In any of these cases, the

acquiring bank will have helped itself to \$10 in the retail outlet's account, so at that point, the cash that was collected by the retail outlet belongs entirely to the retail outlet. Anything that happens subsequently to the cash is entirely the retail outlet's problem. This might sound unfair to the retail outlet, but the retail outlet takes that risk every time it sells any product from its shelves—once the cash belongs to the retail outlet, it's the outlet's responsibility. The same applies if, say, the retail outlet goes out of business after the cash deposit is made but before the transaction is settled. By that time, \$10 will already have been taken from its bank account so the retail outlet will not owe any further money on that account.

Consumer protection

Technological solutions, such as the one envisioned in this paper, have the potential for not only promoting efficiency but also limiting abuse. Processing transactions in real time can minimize credit risks, and greater traceability of transactions can increase transparency. Of course, the flip side is the lack of anonymity with the risk it entails for consumer privacy.¹⁶ Nevertheless, technology by itself cannot ensure fair treatment of users by banks or retail outlets, so it will be important to frame these market relationships within a clear consumer education and protection framework.

Specific consumer protection issues with branchless banking arise from “outsourcing” the retail function to third-party agents and using electronic devices for transactional purposes—people are not accustomed to these two factors. But these factors—and hence their consumer protection implications—are common between v1.0 and v2.0. The fundamental difference between the two is that, under v1.0, only two parties are involved in serving the client (i.e., the bank and its retail agent), whereas, under v2.0, there may be at least four players (i.e., the retail outlet, its acquiring bank, the client's own issuing bank, and the payments

¹⁶ These points are made forcefully in Rosenberg (2006).

network). Therefore, it becomes important to specify who is responsible for resolving each consumer protection aspect.

The consumer protection framework underpinning v2.0 might consist of the following elements.

Consumer awareness safeguards. Customers will need a mechanism to determine at which retail outlets they can safely undertake cash transactions. In a situation where retail outlets are shared across many banks, it may not be effective to display the logo of each bank at a retail outlet. The most effective way of conveying this information might be by requiring authorized outlets to display a special logo that might be owned and issued by the payments network provider, much like Visa and MasterCard do on credit networks. The acquiring bank could enforce the appropriate use of the logo by the retail outlets it supports.

In addition, customers will need to be educated about the process they must follow to complete the transaction at a retail outlet and, in particular, when they should be turning over the cash. Each issuing bank should reinforce these messages with their clients, because, ultimately, they have the strongest interest in ensuring their clients are not frustrated or defrauded. But the most effective mechanism would probably be through appropriate signage at the retail outlet, and the acquiring bank would be in the best position to ensure this happens.

Transparency of fees. There should be transparency about the fees that may or may not be charged by the retail outlet and/or the acquiring bank to complete the transaction. Retail outlets should be required to post their standard cash deposit and withdrawal commissions (if any apply). Charges by any payments network provider that is involved should be transparent to all players. Acquiring banks could take an enforcement role in ensuring their retail outlets price transparently.

Residual risk bearing. All the parties will need to have clarity around who bears the risk of unauthorized transactions, the procedures to be followed in cases of claims of error, when transactions are considered final, and when they can be reversed. Regarding potential charge backs, there should be clarity about the grounds on which users can seek reversal of a transaction (e.g., identity theft, nonreceipt of money or goods, billing errors), any user fault standards that apply (e.g., consumer due care requirements, or delays in notification of error or theft), and the burdens of investigation and proof on the acquiring bank and the retail outlet. These are all contained in standard rules in card payment networks, but authorities will need to determine whether to keep these as private rulemaking by such networks or whether they need to be enshrined in regulation.

Complaints. Customers must be able to avail themselves of a quick and effective complaint and redress process in the event they feel harmed by an action of the retail outlet. Moreover, customers need to be made aware of the existence of this process and how they can trigger it. This should be the responsibility of the issuing bank (i.e., the bank with which the client has a direct, trusted relationship). For instance, if a customer has a problem with the retail outlet, it should raise the issue with the issuing bank, which then refers the case to the relevant acquiring bank, which in turn seeks to resolve the situation with the retail outlet.

Monitoring and reporting of suspicious transactions

Rules on anti-money laundering and combating the financing of terrorism require banks to monitor and report suspicious transactions and to keep records for a specified period. Because the issuing bank will have full knowledge of all transactions requested by its clients, it is in a good position to put in place the IT systems needed to conduct the necessary monitoring and storage of transaction data even if transactions flow through retail outlets.

However, because suspicion is inherently subjective, IT systems cannot replace the human element at the client interface. Some training or sensitization of retail outlet staff might be required, which could be undertaken by the acquiring bank. Retail outlets would raise any suspicions with their acquiring bank, which may in turn interact with the issuing bank to resolve the situation.

Interbank payments network

It is unlikely that the various types of players required in the Branchless Banking v2.0 ecosystem—issuing banks, acquiring banks, retail outlets seeking to engage in this as a new line of business, clients signing up for new accounts—will emerge independently of each other. There is a need for one or more specialized actors to play certain key market enablement roles, but falling short of managing full customer propositions or controlling the service delivery chain end-to-end.

Analogously to the role of the payment card networks, such as Visa, or interbank networks, such as Cirrus, the roles a payments network provider might play to develop this market include the following:

- **Establishing rules and processes for settling transactions.** This includes developing specifications to ensure cards work at the same POS terminals (e.g., card size, consistent account numbering), a charging structure that works across the chain of players, and rules on finality and reversibility of transactions (charge backs).
- **Interbank facilities for clearing and settlement.** The third party might provide the real-time messaging platform that allows the acquiring bank and the issuing bank to confirm transactions at the retail end.
- **Technical security standards and procedures underpinning the POS platform.** The third party might provide the technical specifications for the POS or mobile payment platforms that may be

used by issuing or acquiring banks to connect with their clients or retail outlets.

- **Guaranteeing interbank settlements.** In the transaction flow represented in Figure 2, we substituted retail outlet credit risk by acquiring bank credit risk (by having the acquiring bank instantly debit the deposit amount from the retail outlet’s account). That money still needs to go to the issuing bank, which gives rise to an interbank settlement risk. The market would be helped if a third party were to guarantee such interbank settlements, so that issuing banks truly did not need to care who the retail outlet or the retail outlet acquirer is—as long as the retail outlet acquirer is part of the system.
- **Card branding.** Having a common brand generally leads to greater acceptance of cards at merchants and helps build out the merchant network.
- **Retail outlet blacklisting.** Retail outlets might flaunt consumer protection rules or may have a security system that is too precarious. A third party could monitor customer complaints and create a blacklist that would be shared with all potential retail outlet acquirers to help them avoid demonstrably irresponsible or troublesome retail outlets.

Table 1 summarizes the main responsibilities of the three key banking players involved in a typical transaction: the issuing bank, the acquiring bank, and the payments network through which they interact. Under Branchless Banking v1.0, these responsibilities are held singly by “the” bank; under v2.0, these are split among more players but collectively represent the same level of protection for both clients and retail outlets.

Retail outlet liquidity

We have seen how a customer should be able to undertake a cash deposit (or, analogously, withdrawal) at a retail outlet with which neither he nor his bank has a direct contractual relationship, as long as (i) the customer is able to electronically confirm the transaction

Table 1: Respective responsibilities of issuing and acquiring banks

AREA OF RESPONSIBILITY	ISSUING BANKING	ACQUIRING BANK	PAYMENTS NETWORK PROVIDER
Technical platform		Equips, maintains, and monitors POS devices at retail outlets and POS connectivity to bank server.	Establishes general security and interoperability requirements. Manages interbank messaging network.
User authentication	Authenticates client.	Authenticates POS and POS operator at retail outlet.	Sets minimum authentication parameters.
Transaction authorizations	Withdrawals from client accounts: client has enough balance.	Deposits into client accounts: retail outlet has enough bank balance to offset the client's cash transaction.	
Client education	Primary responsibility, as the holder of the client relationship.	Secondary responsibility, through signage at retail outlet.	May engage in public education campaigns, on behalf of all banks.
Disclosure to clients of services, commissions, and other terms	Rights and responsibilities disclosed at least through client contracts.	Provides appropriate signage to retail outlet; its contract with retail outlet should specify obligation to post by retail outlet.	
Consumer complaints	All client complaints addressed to issuing bank. Bank must have well-publicized process for handling complaints.	Must cooperate with issuing bank (and liaise with its retail outlets) to resolve all client issues.	Establishes roles and responsibilities; sets rules on client charge back.

with his issuing bank, through a POS device, and (ii) the acquiring bank is able to automatically and instantly debit (in the case of a deposit, or credit in the case of a withdrawal) the retail outlet's account for the transaction amount. With these provisos, the customer does not need to place any special trust in the retail outlet to conduct the cash transaction (beyond physical safety). This solution allows a degree of liberalization of the cash-dispensing element of banking—exchanging bank balances for cash or vice versa.

Beyond traditional retailing skills (a service orientation, facilities management skills, etc.), a retailer who wants to enter the cash retail outlet business needs one more thing: ample liquidity. If you are a retail outlet

who has liquidity in the till and in the bank account, and you don't mind shifting it between these two repositories, you can earn commissions by accommodating customers' preferences between cash in hand and cash at the bank.¹⁷

The technology underpinning the solution to the trust issue can be made to work. But can we count on a decentralized network of retail outlets to meet the cash needs of the community it serves? Cash requirements around savings can be, on the other hand, very uneven and concentrated in time compared with the normal cash flows of most retail businesses.¹⁸

¹⁷ Financial intermediation is all about specialized players "renting" their balance sheet, to be able to take the other side of the transaction.

¹⁸ An additional point is that, in the event of a catastrophe, having the agent network in place offers an excellent mechanism for offering support to the community by being able to pump assistance quickly and effectively through liquidity injections.

There are three fundamental reasons for saving:

- *Smoothing consumption*—where inflows are uneven (e.g., because of salaries or remittances being paid) or unpredictable over time (e.g., because of the seasonality of agricultural crops), while day-to-day consumption is smoother. Under this savings motive, cash deposits tend to be more uneven than cash withdrawals.
- *Aggregating purchasing power*—where savers want to save small regular amounts to be able to fund a bigger expenditure (whether a good, school fees, or a productive investment).¹⁹ Under this savings motive, cash deposits will be small and steady, while cash withdrawals will tend to be uneven.
- *Self-insurance*—where savings balances are built up to meet future emergencies, and these are linked to an event affecting the entire community (a holiday, a drought). This is similar to the previous case, except that the combined cash withdrawal requirements for the entire community may be significant.

How then can we ensure such cash needs will be met? There are four mutually reinforcing elements that together may provide enough comfort that the community's needs will be met.

Banking outlet diversity. Banking outlets that have off-setting cash positions to the community's cash needs will naturally emerge. For instance, if the community requires a net cash withdrawal, or if there are substantially variable cash withdrawal needs, then store owners are ideal banking outlets—they take in cash during the course of business when they sell their wares and can naturally offset this cash position by facilitating cash withdrawals for depositors. In communities with uneven or large net cash deposit requirements, the businesses that will make better banking outlets are those with less recurring cash flow, such as service (rather than sales) outlets, or those that need to make frequent trips to bank branches

anyway. Therefore, banking outlets that emerge in each community should, in principle, largely reflect the cash requirements of the community as a whole.

Banking outlet incentives. Banking outlets need to be rewarded for the cash services they offer. They need an incentive to build up liquidity both in their till and in their bank account. The banking outlet's commission rewards it for three functions they perform: (i) offering customer service, including dedicated personnel and use of facilities; (ii) taking on the security risks of physically holding cash; and (iii) going to the bank from time to time to rebalance their liquidity between cash-in-the-till and cash-in-the-account.

The third function is crucial. Essentially, the community is delegating to the banking outlet(s) the function of going to the bank branch on its behalf. Trips to the bank are not eliminated; there is just a "pooling" on fewer players.²⁰ A banking outlet that is not willing to go to the bank very often will, other things being equal, run out of liquidity more often and will not be able to maintain as reliable a cash in/out service as another banking outlet that does. A banking outlet also will need to trade off the costs of physical security (cost of burglaries, investments to prevent them, etc.) versus the costs of going to the bank more often—the more frequent the trips, the less cash will need to be stored onsite for a given level of service.

Banking outlets should be free to determine their fees, so that they can devise their own competitive strategies. They should set their fees for cash services based on the volume of cash transactions they are willing to support, the alternative cashing locations customers may have, and the cost to them of managing their liquidity (including the cost of going to their bank branch with the necessary frequency). One might charge very low fees, but not keep much cash in hand; another one may charge higher fees, but offer a much greater level of reliability on the availability of cash

¹⁹ This is the case, made very vividly by Rutherford (2001), that poor people make frequent small deposits of money to build up a "usefully large lump sum" for life events and investment.

²⁰ This echoes the argument that a traditional deposit collection service is akin to a community assigning one person to run an errand for the community as a whole rather than having each person run the same errand independently. See Wright (1997).

services. All these are valid strategies that, in the end, should be validated by the preferences of the customers they intend to serve.

Banking outlet density. If a banking outlet runs out of cash (preventing it from effecting cash withdrawals) or liquidity at the bank (preventing it from taking in deposits), clients might be able to go to other banking outlets nearby that can offer the transaction instead. To be able to rely on banking outlet density, it is important that banking outlets be shared across banks rather than be proprietary so that the total liquidity of banking outlets in a given community can be optimized and deployed most effectively. If the banking outlet base is fragmented across banks, the total liquidity requirement to meet the community's cash needs will be larger than if the banking outlets constitute a single liquidity pool.

Online transactions. Finally, total banking outlet liquidity requirements will be smaller the more transactions are happening electronically, without cash. If salaries and wages are paid directly into people's accounts, and if people in turn buy goods at the store and pay for them electronically, then there will be fewer and more consistent cash deposits and withdrawals. Pressure on banking outlet liquidity will be reduced.²¹

This discussion suggests several reasons why the banking outlet liquidity problem is actually a lot more manageable if retail outlets work across all banks rather than being tied to specific ones. First, by pooling the liquidity across all retail outlets, the risk of liquidity crunches in the community is minimized. Second, there will be more retail outlets to the extent that systemic solutions drive broader adoption, and there will be a virtuous circle of more direct deposits and electronic payments across the community reducing cash requirements.

Marketing, selling, and customer service

So far we have dealt with the more transactional elements of retail banking: undertaking transactions. We have seen how one might build a scalable distribution model for these services that allows banks to leverage a network of third-party retail outlets without requiring a trusted, end-to-end contractual framework or a supervisory infrastructure. We next turn to activities relating to selling and account opening and maintenance, and explore whether these functions might be adequately handled by third-party retail outlets.

Marketing and selling

In principle, this can be outsourced to retail outlets, but in practice it may be best to preclude retail outlets from engaging in any type of marketing or selling activity on behalf of banks. First, the independence and integrity of cash retail outlets might be undermined if they receive commissions from certain banks and not from others for their marketing activities. Second, there are more complex consumer protection issues associated with selling financial products, and retail outlets may not have the necessary training or awareness of the issues. Retail outlets may be allowed to distribute marketing literature from banks, as long as they do not offer any purchase advice to their customers. The prime responsibility for sales and marketing would therefore remain with the issuing bank. The bank might handle this through a combination of advertising, staffing of dedicated sales and service offices, direct mailings, and outbound contact center-based and SMS-based campaigns. These offices will not need to handle customers' cash.

Banks offer other products and services beyond transactional accounts, including financial or investment advice and cross-selling of other savings, credit, and insurance products. These activities need to be han-

²¹ One factor of pricing that needs to be considered is the relationship between merchant discounts on POS purchases and cash withdrawal fees. A merchant typically pays a card-handling commission on electronic purchases. Hence, merchants would have a perverse incentive to require their customers to use their card to get cash and pay for goods with cash, thereby accruing a fee rather than incurring a merchant discount.

dled by appropriately informed staff and with due care of responsibility. These therefore remain core banking activities that the bank will need to deliver through appropriate channels. Third-party (noncontractually bound) retail outlets should not be involved in selling or delivering these services.

Account registration

In principle, fulfilling the sale is a mechanical activity, but in practice it may be very closely linked to marketing. Retail outlets might be allowed to conduct registration procedures for banks, as long as they withhold any form of financial or purchase advice. On the other hand, banks might be able to adopt a direct registration procedure through the mobile phone (e.g., by sending an SMS or calling the bank's contact center), thereby bypassing the need for a physical branch.

Conducting customer due diligence

Customer due diligence (or know your customer [KYC]) requirements are probably the hardest aspect of marketing, selling, and customer service, because they require both trust (ensuring *bona fide* checking of required customer data) and customer contact (e.g., matching face and signature against an identity card). KYC requirements should be commensurate with the risk posed by clients and products. In this case, the product is a basic transactional account for the poor. If the product is subject to appropriate transactional limits, the money laundering risk normally will be low. Regulators will therefore be justified to allow banks to apply less stringent due diligence measures in relation to these products.

Ultimately, the issuing bank is responsible for KYC verification, and hence it is the bank that needs to be comfortable that KYC procedures are being adequately followed. For instance, WIZZIT in South Africa uses a solution that leverages agents but does not

relinquish the bank's responsibility: agents use their mobile phones to photograph client identity documents; the photos are then sent to the bank for checking.

Alternatively, it may be possible to work with the appropriate financial authorities to create a category of agents (who may or may not also be cash retail outlets) who can perform KYC measures within communities, in delegation from all banks and under the supervision of the authorities. This category of agents might include municipal offices, notaries, medical offices, and the like. Thus, banks would work with a network of "trusted" agents for certain activities (e.g., KYC measures) and a different network of "untrusted" retail outlets for other activities (e.g., cash transactions).

Customer service

Another key function of bank branches typically has been answering customer queries. Employees of third-party retail outlets should not have access to any customer data (including account balances and transaction histories), because issuing banks would have no means of ensuring proper use by retail outlets with which they do not have any direct confidentiality undertakings. Customer service must remain the primary responsibility of banks, because only they have access to the necessary customer data. In the absence of a branch network, banks would have to develop an appropriate contact center (and also Web) infrastructure to handle this requirement. Nevertheless, although retail outlets should not be allowed to answer any questions that relate to financial aspects, they still might serve a very powerful community role in consumer awareness and education about branchless channels.

So, what is left of the bank branch? Essentially the branch becomes a core marketing and sales office. Frontline marketing and sales teams bring in the business; the retail outlet network and the bank's own back office deliver the services.

The power of regulatory unbundling

Bank clients need protection from the very moment they initiate a banking transaction (e.g., a deposit, withdrawal, or payment). But the previous discussion suggested that the emphasis should shift from regulation of customer interfaces through specific banking regulation to broader consumer protection rules. Banking regulation should focus on where the real trust issues are, and if trust “gaps” can be reduced or eliminated with the smart use of technology and new business processes, bank regulation should recede accordingly.

This section starts by examining how telecom regulators have exploited the availability of new technologies, market trends, and business practices to gradually reduce the scope of regulation. By focusing on specific network assets or service elements that give rise to the regulatory problem, they have been able to allow competition to flourish in other service components in ways that would have been hard to envision only 10 years ago. We then examine the applicability of this model to banking.

Deregulation, the telecom way

Although trust and system stability are at the heart of the need for bank regulation, in the case of telecoms, regulation has traditionally been premised on natural monopoly arguments. Thirty years ago, telecom operators were seen as single operating blocks that needed to be regulated in their entirety. Technological advances and the sheer increase in demand for telecom services have transformed the cost economics and weakened the natural monopoly characteristics of many elements of telecom networks and services. Regulators have responded by reducing the *quantity* of regulation, not so much by loosening the *quality* of regulation but rather by restricting the *scope* of regulation within the telecom network. The process was roughly as follows:²²

- First to go was the “customer premises equipment”—the phone at the end of your line, in your home. Why couldn’t that be supplied competitively? There was a huge debate at the time as to the risks that would be brought on to the network if that little bit of the network was “exposed.” Now we all accept that, with proper equipment type approvals, the problem can be easily handled. The market response was immediate: fax machines, a bit of innovation that operators were eyeing suspiciously because of its potential to cannibalize their voice cash cow, took off. The ability to plug in a fax machine was indeed at one point the regulatory frontline!
- Second came the directory inquiry service and the yellow pages. Why couldn’t that be supplied competitively? That too got deregulated.
- Then it was the core networks’ turn. With rising call volumes, the infrastructure requirement on core switching and transmission networks ballooned and outgrew the natural monopoly argument. Competitive provision of core switching and transmission (but still using the harder-to-replicate incumbent’s access network all the way to the home) became possible with equal access rules.²³
- In smaller metropolitan networks, it was deemed that cabling could be provided competitively as long as the incumbent shared the ducts through which cables ran with other players. The ducts were identified as the bottleneck (because city authorities didn’t want to open up the streets every time a new competitor came in), so regulating access to ducts allowed for deregulation of the cables running through them.
- The next frontier was the access network itself—the precious “last mile.” Through local loop unbundling, regulators sought to enable competitive provision of broadband Internet services (using xDSL technologies) on a bit of infrastructure that was still regulated—the copper pair itself. Here, the cable was regulated so that services running on the cable could be deregulated.

²² This is a stylized sequence, and not all countries followed the same trajectory. The process gained impetus in the United States, with the break-up of AT&T, and then in the United Kingdom, with the privatization of BT and the creation of OFTEL, an independent telecoms regulator.

²³ This is done through either call-by-call prefix-based selection or carrier preselection.

The regulatory principle running through has been: find potentially competitive bits in the network and service chain, and regulate the interfaces between these bits and the rest of the network (i.e., “insulate” the noncompetitive bits). This process can be seen as encroaching on the (incumbent) telecom operator’s business: its network is “unbundled,” and private players can choose to supply certain elements of that chain. But this is really about allowing the most efficient players to play in each segment, without losing sight of bottleneck assets that gave rise to regulatory issues. As new technologies emerge, they tend to allow for a narrowing of the regulatory scope.

Implications for bank regulation

Can this notion be applied to banking? Can we not think of banks as monolithic blocks whose market conduct needs to be regulated end-to-end? In unbundling banks, and specifically in relation to transactional and savings products, it is useful to consider two levels: the bank head office and the branch. This paper has concerned itself with the range of branch activities, with a view to understanding how customer trust issues can be mitigated or handled other than through heavy-handed end-to-end banking regulations. Is there an alternative retailing structure that delivers these service elements at lower cost, *without* in any way compromising the public trust on the safety of deposits and the stability of the payments system?

We think it can be done. The scope of bank regulation can be safely reduced in regard to bank retail operations, provided that real-time transactional mechanisms exist between the bank and its distribution network. To be sure, there is still a broad set of core banking functions, typically conducted by the head office, that would need to continue to be under close regulatory purview, including the following:

- maintaining the accounting on customer balances based on all transactions made
- investing balances in a way that protects the value of customer monies
- maintaining the connection with the national payments systems so that transfers can be made to and from accounts in other banks
- conducting certain customer care activities (through contact centers or the Web)
- conducting a series of regulatorily mandated monitoring and reporting tasks, including on suspicious transactions

These service elements go to the core of customer trust: if I deposit money, will I be able to reclaim it subsequently? Will it have preserved its value? This paper argues for a renewed emphasis on bank regulation focused on preservation of value on customer accounts, while loosening regulations on customer interfaces. As described above, branch regulations can be safely relaxed with an adequate combination of consumer protection rules and consumer education programs. If that can be taken out of the regulatory equation, that will allow regulators and bank supervisors to focus their activities where they are needed most—in the preservation of deposited value.

It could be argued that this is contrary to what is happening today in many countries. Some regulators, mindful of the access problem, are approaching the market in tiers, providing lighter regulatory and supervisory environments for smaller, more grassroots financial institutions with deeper reach into communities. Other regulators, seeing the success of some telco-led mobile payment projects, are opening the possibility of nonbanks (telcos) to issue stored-value instruments in an unregulated or more lightly regulated fashion. In both cases, these players are the subject of lower regulatory scrutiny in an implicit exchange for “help” on the access front. Lower regulatory standards may

be justified on the reduced risk of low-value deposit taking on the integrity of the national payments system. However, this leaves depositors with a lower level of regulatory protection.

But if we are able to substantially refocus regulations on retail outlets, then there will be less reason to allow different levels of regulatory protection on deposits by type of institution. Nonbanks might find a role to play in the service delivery chain, but the core trust service (issuing deposit accounts) should remain fully in the hands of authorized institutions.

Policy makers are often torn between the dual objectives of universal access and system stability. Branchless Banking v2.0 offers a way to break the access/stability trade-off. We now have two instruments to address the two objectives: access can be promoted by extending the shared network (through development of the retail payments system, business promotion, or financial incentives on shared retail outlets), while stability can be promoted by maintaining very high supervisory standards on issuers.

Policy enablement: A summary of implications

The vision for bank branch deregulation developed in this note allows banks to build scalable delivery networks analogous to that of many retailers, without in any way undermining the trustworthiness of their products. The policy environment that would enable this to happen could be summed up by the following principles:

(a) **Channel.** Banks are allowed to collect deposits and distribute cash to their customers through third-party retail outlets. Any business can become a cash retail outlet for one or more (issuing) banks, as long as it holds an account at a licensed bank (the acquiring bank). Retail outlets must be equipped with adequate POS equipment (a card reader or a mobile phone), authorized by

its acquiring bank, and able to maintain a real-time communications link with the bank (mobile will suffice).

(b) **Transaction process.** Customers should transact through a cash retail outlet only if they are able to electronically confirm the transaction with their own bank, through the retail outlet's POS device or their own mobile phone. Customers should hand over cash to retail outlets only when instructed to do so by the POS device. The retail outlet would need to be trained or sensitized on the issue of and process for reporting suspicious transactions.

(c) **Consumer protection—retail outlets.** Retail outlets must post their fee schedules prominently within their premises. Retail outlets cannot offer customers any form of financial advice, guarantees of service, or advances in anticipation of funds from the bank. Retail outlets cannot actively sell the services of or otherwise promote any particular bank, nor can they cross-sell other savings, credit, or insurance services to customers. Retail outlets cannot obtain any commissions from banks for marketing or sales activities, but can distribute literature supplied by banks.

(d) **Consumer protection—retail payments.** Payments law must provide clarity on who bears the risk of unauthorized transactions, the procedures to be followed in cases of claims of error, when transactions are considered final, and when they can be reversed. It should also promote transparency on the costs associated with the use of payments systems and on the rules imposed by private payments networks on participants.

(e) **Interoperability—retail payments.** Policy should support the sharing of retail outlets across banks, through a shared payments network and database linking mobile phones to accounts. Payments system regulation should specify prudential standards for settlement, access to the systems, and the operational processes applied.

(f) **Customer due diligence.** Regulators should be flexible in allowing banks to apply less stringent due diligence measures in relation to these products, based on the risks involved. It may be possible to create a category of trusted agents who can perform KYC procedures within communities, in delegation from all banks and under the supervision of the authorities.

In addition to this regulatory framework, governments could stimulate the banking industry to go down the path of Branchless Banking v2.0 with nonregulatory measures, such as the following:

(g) **Product.** Encourage all licensed banks to offer a basic transactional on-demand savings product, without checking or overdraft facilities and limited to a certain account size (based on the level of customer due diligence undertaken). This account should be free of all stamp duties, and incentives should be created so that banks do not charge account opening or recurring fees. This will help banks market and sell to the target segments they would be able to reach cost-effectively through the transactional branchless channel.

(h) **Core transactional retail network.** Governments may be able to play a catalytic role in creating a shared transactional retail network by contributing their own retail networks, such as the postal network. The postal network may be given to a bank acquirer to manage on condition that the network be available to transact on behalf of clients of all licensed banks that want to participate in an interoperable system. This would help create favorable network economics, which would encourage banks to participate in the shared retail system early on.

(i) **Retail outlet blacklisting.** To prevent negative customer experiences with the shared retail transactional channel, there needs to be an adequate process for blacklisting outlets that generate significant customer issues. Bank acquirers need to be obligated to report incidents and substantiated customer claims to a

retail outlet supervision body, with due regard for data privacy. This task could be left to the payments network provider. Alternatively, the government could set up an independent agency, or it could use existing trusted institutions, such as credit bureaus, to centralize such information.

(j) **Transactional guarantees.** Participants in the system envisioned here still would be subject to bank settlement risks, and these may loom too high for some banks, at least early on in the development of the system. Such perceptions of risk might induce banks to charge onerous fees to their clients for use of the system, or to opt out entirely. The government could fund a settlement risk guarantee mechanism covering all banks participating in the interoperable retail system. Over time, one would expect this risk to be commercially insured.

This paper tells a story of how, with the appropriate mix of technology, market infrastructure, and consumer protection, we can help poor people save and transact. These provide basic tools for people to manage their well being more effectively, by investing in their future, protecting against risks, and managing their time. It is worth reiterating that the ideas expressed in this paper constitute a vision that has as yet been tested in any market. Policy makers who want to explore this path should proceed cautiously. Yet, there are in principle rich policy benefits from this approach:

- *Increased access to financial services* by the people at the “bottom of the pyramid,” with direct and indirect effects on growth and equality. This is premised on greater access to savings products, which in turn can be used to build more complete transaction histories with which customers can have better access to credit products.
- *A (small) increase in national savings*, driven by the introduction of convenient forms of saving.^{24, 25}

²⁴ Randomized control trials associated with the introduction of a door-to-door savings collection service showed that, among those who took up the service, savings increased by 25% over a 15-month period. Unfortunately, this increase in savings was not sustained over a longer period. See Ashraf, Karlan, and Yin (2005).

²⁵ The aggregate impact on savings, however, will be relatively small. Based on Honohan's (2006) summary of savings data from a number of countries, a typical country might have less than 5% of total national household savings stem from the bottom half of the population by income. In turn, households typically account for 60–70% of national savings. Therefore, the total net increase in savings from this scheme could not be expected to be more than 3% under the most optimistic deployment scenario.

- *A reduction in supervision burden* by regulatory authorities, by eliminating the need to regulate branch banking.
- *A more secure financial infrastructure* because more people will be part of the formal financial system, using less cash and moving more toward traceable and verifiable transaction patterns.

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