

FS SERIES #11: INNOVATIONS IN FINANCIAL SERVICES DELIVERY – BRANCHLESS BANKING

PRIMER, DIAGNOSTIC CHECKLIST, AND MODEL SCOPES OF WORK

JUNE 2010

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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ACRONYMS

AML/CFT	anti-money laundering/combating the financing of terrorism		
ATM	automated teller machine		
BC	business correspondent		
BDO	Banca de las Oportunidades		
CBB	Central Bank of Brazil		
CGAP	Consultative Group to Assist the Poor		
CSP	customer service point		
DFID	UK Department for International Development		
G2P	government-to-person		
GSM	global system for mobile communications		
GSMA	Groupe Speciale Mobile Association		
HIFIVE	Haiti Integrated Finance for Value Chains and Enterprises		
ICT	information and communications technologies		
IFC	International Finance Corporation		
IGP	Implementation Grant Program		
IT	information technology		
KYC	Know Your Customer		
MALSWITCH	Malawi Switch Centre		
MFI	microfinance institution		
MIDAS	Mas Inversión para el Desarrollo Alternativo Sostenible		
m-banking	mobile phone banking		
m-money	mobile money		
MNO	mobile network operator		
NBC	non-bank correspondent		
OIBM	Opportunity International Bank of Malawi		
POS	point of sale		
SBI	State Bank of India		
SMS	short messaging system		
telco	telecommunications company		
USSD	unstructured supplementary service data		

FOREWORD

In 2006, mobile financial services worldwide were in an early phase: Pioneers in places such as Zambia, the Philippines, and South Africa had launched, but not yet come to scale. At that time, we first wrote explicitly about how donors could assist the process.

Four years later, much has changed. Successful mobile payment services such as M-PESA in Kenya (which was supported by a donor in its early development) are no longer pioneers — they have reached great scale, demonstrating the potential for rapid take-up and commercial success. But these success stories are not yet widespread. So, it is timely that Chemonics/FS Share has again assessed the lessons of emerging good practice for donors in this fast-changing area, providing case studies of different types of engagements. This primer provides a useful, concise introduction for program officers seeking to promote the spread of mobile financial services, unlocking their potential to expand access to financial services with transformational effect.

David Porteous Director, Bankable Frontier Associates LLC

INTRODUCTION

The United States Agency for International Development (USAID) Bureau for Economic Growth Agriculture and Trade (EGAT) created the Financial Sector Knowledge Sharing Project (FS Share) to collaborate with USAID missions to develop effective and efficient financialsector programs that increase access to financial services and develop well-functioning markets worldwide. USAID awarded Chemonics International Inc. the FS Share delivery order under the Financial Sector Blanket Purchase Agreement. FS Share has a three-year period of performance, July 2008 through July 2011.

Through the FS Share Task Order, USAID EGAT and Chemonics proactively collaborate with missions to identify financial-sector priorities and develop strategies and programs for growing the financial sector. FS Share identifies financial-sector best practices and aggregates them through model scopes of work, primers, diagnostic tools, best-practice case studies, and other tools. These deliverables are disseminated to USAID missions for use in financial-sector programs. FS Share can assist with implementation and connect mission staff to external resources on best practices. In response to mission demand, FS Share delivers presentations and other knowledge-sharing endeavors.

Objective of This FS Series

The objective of this FS Series is to provide U.S. government program designers with a basic technical understanding of branchless banking as a sustainable approach to increase access to financial services that promote financial inclusion. The FS Series includes a primer, a diagnostic checklist, and two model scopes of work. The primer introduces, defines, and provides an overview and case studies of branchless banking. Please note that this FS Series remains in draft form until the Colombia MIDAS (Section C2) case study has been completed.

This FS Series was developed by Nhu-An Tran, a consultant for Chemonics, and reviewed by David Porteous of Bankable Frontier Associates and the FS Share project management team.

FS Share Rapid Response Hotline

For assistance identifying resources and addressing questions about designing programming that incorporates branchless banking, contact FS Share Project Manager Roberto Toso at (202) 955-7488 or rtoso@chemonics.com, or Deputy Project Manager Melissa Scudo at (202) 775-6976 or mscudo@chemonics.com. To access the FS Share task order and EGAT assistance on any mission, financial-sector program, scope of work, or procurement questions, contact:

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EXECUTIVE SUMMARY

This primer's objective is to to provide U.S. government program designers with a basic technical understanding of branchless banking as a sustainable approach to increase access to financial services. The primer is designed as a practical tool to enable program designers to integrate best practices and lessons learned into effective economic growth programming.

The Consultative Group to Assist the Poor (CGAP), an independent microfinance consortium inside the World Bank, defines branchless banking as "the delivery of financial services outside conventional bank branches using information and communications technologies [ICT] and nonbank retail agents" (CGAP, 2006). The underlying proposition behind the current trends in branchless banking is that by piggy-backing on existing facilities (e.g., a pharmacy) and devices owned by customers (e.g., mobile phones) or retailers (e.g., a point-of-sale, or POS, device), banks could provide simple transactional services without having a physical presence.

Technology has been an important driver in facilitating branchless banking because it enables banks to link with customers through a card-based, mobile phone-based, or other ICT-based device. Automated teller machines (ATMs) and traditional branch structures have not become obsolete or unnecessary distribution channels, but remain a key element in banks' expansion strategies. The main challenge remains how to establish and maintain a viable agent network.

The primer and case studies cover business models and partnerships, including Bradesco Bank's use of the postal network to increase its outreach to the rural poor in Brazil; USAID/Colombia's work with Banca de las Oportunidades to support partner banks' development of agent networks; Eko India's role as a business correspondent (BC) and payment platform provider for the State Bank of India (SBI); and Opportunity International Bank of Malawi's (OIBM) implementation of a multi-channel delivery strategy to reach rural clients. The success and challenges facing these models provide useful lessons learned.

Section A provides a definition of branchless banking, discusses its role in a country's development, its relevance to USAID programming, and the key players in this emerging development space.

Section B provides an overview of the different actors and components of the branchless banking "ecosystem," and discusses the technical prerequisites and necessary conditions for a branchless approach to banking.

Section C discusses lessons learned from current initiatives in branchless banking and the key challenges and issues that still need to be addressed. The main factors analyzed are the enabling environment; agent networks and channel management; products and services; banking the unbanked; ICT infrastructure; and managing public-private partnerships.

Section D contains case studies of branchless banking models that provide useful lessons for program designers. They include innovative programs and models in Brazil, Colombia, India, and Malawi. Except for Brazil, each program has received some type of donor support in the form of a grant and/or technical assistance.

Annexes are an important part of the primer; the goal is to equip programmers with relevant tools and resources for working in this space. Annex A contains a diagnostic checklist to help programmers evaluate preconditions and options to consider when designing branchless banking interventions. The two model scopes of work in Annex B provide templates for program officers who are considering short-term or longer-term technical assistance. Annex C contains a list of useful resources, and Annex D contains a glossary of related terminology.

Implications for USAID

Though most of the current branchless banking initiatives have been led by the private sector, donors have an important role to play as facilitators and catalysts. Donors, like governments, have development objectives they wish to achieve in the area of financial services. However, their role should focus on providing support in a way that would incentivize the private sector to come up with solutions that can have development impact and be commercially viable.

Some key principles for donors to follow are: 1) encourage positive and productive government policy; 2) promote open and competitive markets; 3) facilitate collaboration and knowledge-sharing; 4) incentivize private-sector innovation; and 5) empower and protect consumers.

PRIMER

This primer is based on an extensive review and analysis of existing literature, field visits, and personal interviews with experts and providers in the private sector. It can be read concurrently with *FS Series #9: Enabling Mobile Money Interventions*, which provides a detailed analysis of mobile-phone banking and mobile money (m-money) transfers as two branchless banking vehicles to expand access to financial services.

A. Overview of Branchless Banking

It is estimated that four billion people are unbanked, with only one-fourth of households in lowand middle-income countries having access to any formal types of savings account (CGAP, 2009). One of the main reasons for the low level of financial inclusion is the high cost of collecting small deposits and making small payments that are associated with this segment of the market. Furthermore, because unbanked populations tend to be highly dispersed in rural areas, it is not commercially viable for most formal financial institutions to build a physical branch network to serve them. Though the term "branchless banking" is not new, some of the current business models and approaches being used in emerging markets reflect a process of "disruptive innovation" in the financial services world.

A1. What Is Branchless Banking?

In the United States and other developed economies, branchless banking is usually associated with the use of ATMs and the Internet as alternative channels for accessing financial services. In emerging economies, which are characterized by limited telecommunications infrastructure and difficult-to-reach rural areas, banks and other players have adopted innovative alternative approaches to branch-based banking to extend convenient, secure, and affordable products and services to under-served clients.

Branchless banking models can be additive or transformational (UK Department for International Development [DFID], 2006). Additive models add to the range of choices or enhance the convenience of mainstream financial institutions' existing customers. Branchless banking becomes transformational when it aims to extend services to previously unbanked or underserved customers.

Technology has been an important driver in facilitating branchless banking because it enables banks to link with customers through a card-based, mobile phone-based, or other ICT-based device in real-time at affordable prices. Depending on the telecommunications infrastructure, each transaction is electronically recorded, authenticated, and settled within minutes, or at most within a day. ATMs and traditional branch structures have not become obsolete or unnecessary distribution channels; they remain a key element in a bank's expansion strategy. In fact, branches can often be used as launching points for new technologies that could reach the "last mile." The main challenge, however, remains how to establish and maintain a viable agent network. This is the core issue in the discussion about branchless banking today.

A2. How Does Branchless Banking Fit in with USAID Economic Growth and Poverty Reduction Goals?

The use of branchless banking and/or ICT-driven approaches to financial access can intersect with a range of USAID programs.

Financial sector development programs. Access to financial services (e.g., savings, credit, insurance, payments) is an important tool for households to build assets, smooth consumption, and protect against unexpected emergencies. Finance also enables enterprises to invest and expand their business operations. Without access to finance, poor and low-income households are more likely to fall further into the poverty or debt trap. Branchless banking has the potential to bring more people into the formal financial sector and give them the financial tools to manage their assets and improve their socio-economic welfare.

Rural and agricultural finance programs. More

The USAID Haiti Integrated Finance for Value Chains and Enterprises (HIFIVE) Project

HIFIVE is a financial sector project aimed at promoting access to finance for key rural and agricultural value chains. The project includes a HIFIVE Catalyst Fund, a \$22.5-million grant fund that will help support partners to:

- Develop and launch ICT solutions, including mobile banking and branchless banking solutions, and remittance-related products.
- Provide funding for local capacity-building activities in the financial service and technology sectors.
- Encourage diverse risk management solutions that will reduce economic vulnerability in Haiti and promote the diversification of credit products.
- Provide funding to promote the diversification of financial products and services to serve micro, small, and medium enterprises operating in value chains and in rural zones.

than half of the world's poor live in rural areas, and many of these households engage in some form of agricultural-based economic activity. Rural households continue to be underserved by financial institutions. Financial products and delivery mechanisms designed to service urban, commercial populations are often ill-suited to rural areas, where cash needs and income flows are more seasonal. Furthermore, it is more costly for dispersed populations with limited access to public transport to access financial services. The use of branchless banking can close the gap through the use of village-based shops and/or farmer shops as cash-in/cash-out points; loan officers could be equipped with portable devices such as personal digital assistants to capture client loan data and process transactions; or vans equipped with ATMs could make regular trips to community markets, bringing banking services to the clients' doorstep. (See case study in Section C4.)

Post-conflict/disaster relief/economic recovery programs. The banking infrastructure is often severely damaged and barely functional in post-conflict/disaster environments. The restoration of banking services, particularly to facilitate money transfers and payments, is crucial to kick-starting commerce and injecting liquidity into the economy. Even at the humanitarian relief stage, the ability to transfer money from a country's capital into affected areas can help stimulate community development and enable salary payment for cash-for-work projects. Because the telecommunications infrastructure is often more resilient and can be restored more quickly than the banking network, the ability to use mobile phones for financial transactions could potentially accelerate economic recovery. The main challenge is setting up a sufficiently wide network of cash-in/cash-out points.

Social safety net and social welfare programs. Governments in many developing countries distribute social welfare payments to very poor households and/or conditional cash transfers to

encourage school attendance. These payments are made to at least 170 million households worldwide, more than the estimated 99 million that are active microfinance borrowers (CGAP, 2009). Yet, less than 25 percent of these payments are paid into bank accounts. The Brazilian and Mexican governments have partnered with banks to offer electronic payments into basic savings accounts or a debit card that allows recipients to access their money from their banks' ATMs and network of agents. Such electronic delivery provides a more secure channel for transferring funds, reduces the government's administrative costs, and minimizes the potential for fraud. Recipients benefit because they can receive payments more quickly and withdraw only the amount they need, rather than draw down the entire payment, helping them build their assets.

A3. Who Is Involved in Branchless Banking?

A3a. Public Entities

Financial inclusion has become an important policy goal for many governments. At the 2009 G-20 Summit in Pittsburgh, leaders committed to improving access to financial services for the poor by supporting new modes of financial service delivery. They worked with CGAP, the International Finance Corporation (IFC), and other international organizations to launch a Financial Inclusion Experts Group to "identify lessons learned on innovative approaches to providing financial services to these groups, promote successful regulatory and policy approaches and elaborate standards on financial access, financial literacy, and consumer protection" (G-20 Summit, 2009).

Government promotion of branchless banking has been significant in determining the scale of outreach. In countries where branchless banking models have proliferated (e.g., Kenya, the Philippines, and Brazil) bank regulators and policymakers have shown a commitment and openness for new business models and new players such as telecommunications companies (telcos) to enter the financial services market.

Donors have also played an important role. Though donor interventions in branchless banking have not been mapped recently, several organizations can be considered its leading supporters.

The Gates Foundation. Through its Financial Services for the Poor program, the Gates Foundation has provided grants focusing on distribution channels (specifically agent networks), m-money, and savings banks/microfinance institutions (MFIs). One of its most important grants was \$23.8 million to CGAP over four years to find and promote new technologies, including agent technologies that will allow the microfinance industry to reach new clients and efficiently deliver services. Another important grant went to Groupe Speciale Mobile Association (GSMA) - \$12.4 million over three years - to help develop sustainable m-money solutions and support the Mobile Money for the Unbanked fund.

The IFC. The IFC has made equity investments in several third-party technology providers, including FINO in India and Paynet in Vietnam. These providers tend to partner with banks, governments, and telcos to provide an interoperable payment platform and other outsourcing services. The IFC has also partnered with the Gates Foundation to support Mercy Corps' Maximizing Financial Access and Innovation at Scale project, which aims to promote branchless banking in Indonesia and the Philippines.

DFID. DFID has supported branchless and mobile phone banking (m-banking) since 2003, when it gave a grant to Vodafone through its subsidiary Safaricom to pilot and launch a mobile banking solution in Kenya called M-PESA. DFID has also collaborated with CGAP and GSMA to conduct diagnostic reviews of the regulatory environment for m-banking and other forms of branchless banking in seven countries. In March 2010, DFID announced a GBP 8-million (approximately \$12 million) grant to the CGAP Technology Program to further promote mobile banking.

A3b. USAID and Branchless Banking

USAID has supported branchless banking primarily through its microfinance or rural finance programs using different types of mechanisms:

- *Technical assistance contracts*. The Philippines Microenterprise Access to Banking Services project was one of the early pioneers of m-banking. The Colombia Mas Inversión para el Desarrollo Alternativo Sostenible (MIDAS) project partnered with Banca de las Oportunidades to expand the agent network into rural areas. (See case study in Section C2.) In Russia, USAID funded the Russian Microfinance Center to develop branchless banking technologies using the global system for mobile communications (GSM) and electronic banking capacities.
- *Innovation grants*. USAID's Implementation Grant Program provided innovation grants to Opportunity International and FINCA International to implement ICT-based solutions to expand access to finance in rural areas of Malawi and Mexico, respectively. The Haiti MSME project provided small grants to Developpement Internationale Desjardins to implement biometric identification for inter-caisses transactions, and a grant to Alo Communications to facilitate a technology solution for low-cost domestic funds transfer for clients of Fonkoze, the largest MFI servicing Haiti's rural poor.
- *Global Development Alliance (public-private partnerships).* USAID partnered with Visa and FINCA to pilot card-based payments for their clients in Central America. It also partnered with Hewlett-Packard to pilot a Remote Transaction System using POS with MFIs in Uganda.

A3c. The Private Sector

Most current branchless banking initiatives have been led by the private sector — specifically mobile network operators (MNOs), financial institutions, and third-party providers. There have been three approaches:

In **bank-based models**, customers have direct contractual relationships with regulated financial institutions through transaction accounts, savings accounts, loans, or combinations thereof. However, the customer may deal exclusively with the staff of one or more retail agents hired to conduct transactions on the bank's behalf. An example of this model is Brazil's Bradesco and the Banco Postal. (See case study in Section C1.)

In **non-bank-based models**, customers have no direct contractual relationship with a regulated financial institution. Instead, they exchange cash at a retail agent in return for an electronic record of value, or m-money). This virtual account is stored on the server of a non-bank entity, such as an MNO or an issuer of stored-value cards (CGAP, 2008). Kenya's M-PESA is an example of a non-bank-based model.

There are also **hybrid models** where an MNO or third-party provider partners with a commercial bank to enable clients to perform financial transactions. WIZZIT in South Africa and its partnership with the Bank of Athens and Eko India are examples of this model. (See case study in Section C3.)

A3d. The Branchless Banking "Ecosystem"

There are six key elements and/or actors necessary for a successful rollout of branchless banking. As these players interact, compete, and/or collaborate, they create a branchless banking "ecosystem;" each plays an equally important and interdependent role in maintaining the strength and viability of the ecosystem.



Exhibit 1. The Branchless Banking Ecosystem

As Exhibit 1 illustrates, the **central bank** plays the crucial underlying function of the ecosystem by establishing an enabling regulatory environment that balances the rights of consumers and the stability of the financial system with openness to financial innovation.

Next, **financial institutions** connect individuals to the formal financial system and intermediate savings. Banks are also the focal point of central bank regulation because of their role as the ultimate bearer of financial and credit risk.

Switch providers connect banks. They allow one bank's customers to use another bank's ATM and POS devices. Effectively, the switch leverages the banking community's technology investments by expanding a bank's reach, significantly increasing clients' financial access.

Telcos provide connectivity to Internet, landline, and mobile networks that enable financial transactions outside of the traditional bank branch. Where the regulatory framework allows, telcos and MNOs can create "mobile wallets," an e-currency that mobile phone subscribers can use to make payments and purchases at affiliated agent locations. These wallets can either be stand-alone or linked to users' bank accounts.

Third-party providers allow banks to outsource functions, processes, and systems for which they do not have capacity or know-how, such as management information systems, ATM and POS management, card management, customer relationship management, and agent network management. By providing a robust and interoperable platform to a wide range of banks, third-party providers can achieve economies of scale faster than if banks were to establish their own infrastructure. With technology changing rapidly, third-party providers can also help financial institutions negotiate and select the vendors and devices that suit their specifications and are compatible with their back-end systems.

Agents/service points, the direct link to customers, are the cash-in/cash-out points and provide transactional services such as payments, deposits, and transfers. In some countries, agents also manage opening accounts, and marketing bank products and services.

Paynet's PesaPoint in Kenya

Paynet is an information technology (IT) provider focusing on e-solutions for the banking sector. In 2005, it created PesaPoint Limited to provide all banked Kenyans easy access to their funds wherever and whenever they wanted and to encourage more Kenyans to bank by providing relevant and convenient ATM locations.

PesaPoint's strategy is to maximize the use of one infrastructure for multiple financial institutions, which will provide economy of scale, particularly in rural and marginal areas.

Paynet Kenya has developed the world's first software that allows cardless transactions at ATMs. Through this innovation, M-PESA customers can withdraw money from PesaPoint ATMs without a card and do not have to have a bank account.

The company is partnered with 30 banks and has a network of almost 200 ATMs in 42 towns and all eight provinces of Kenya.

Source: Paynet and PesaPoint Web sites, www.paynet.co.ke

B. Current Practices in Branchless Banking and Lessons Learned

B1. Enabling Environment

Given the number of non-bank players that are entering the branchless banking space, regulators and policymakers are concerned with how and how much to regulate. CGAP, in collaboration with DFID, completed seven country case studies on branchless banking regulation and formulated general recommendations for relevant government decision-makers. It has also conducted country diagnostics in selected emerging markets to document the current regulatory landscape for branchless banking.¹

¹ Go to www.cgap.org/p/site/c/tech/ to access the country-level branchless banking regulation studies and the branchless banking diagnostic template.

B1a. Successful Approaches

Adopt an incremental and iterative approach to regulation. It is important to recognize that branchless banking is evolving and dynamic. For example, regulators in Brazil and the Philippines have adopted a flexible but carefully monitored framework to allow for innovation within safe, sound, and prudent standards. As the models developed, additional provisions and revisions were introduced to reflect the evolution of the market.

Understand the necessary prerequisites for successful branchless banking. According to CGAP, two preconditions are necessary: 1) authorized use of agents as cash-in/cash out points and customer interface and 2) a risk-based approach for anti-money laundering and combating financing of terrorism (AML/CFT) that reflects the characteristics of low-income clients (e.g., minimal documentation, small-value transactions). Likewise, relaxed requirements for Know-Your-Customer (KYC) compliance could also enable more account openings and bring more unbanked into the formal financial system.

Integrate consumer protection into branchless banking regulation. Regulators will have concerns when agents are introduced as an additional layer in the banking supply chain, such as which party is ultimately liable for the transaction, the transparency of pricing and fees as more parties get involved, and the existence of a grievance and redress channel for users when something goes wrong. Because branchless banking is aimed at serving the poor and unbanked, regulators are especially keen to put in measures to protect clients' rights and safeguard their savings. Brazil and India hold the banks liable for their agents' conduct, and many countries have an ombudsman or unit inside the central bank to address customer complaints.

B1b. Remaining Issues and Challenges

In most countries, branchless banking remains a bank-based approach, even if some of the processes are being outsourced to third-party providers. Except for Kenya and the Philippines (and other regimes in which non-bank money issuance is allowed), where the telco-based models were developed in collaboration with and monitored closely by the regulatory authorities, MNOs for the most part have not been allowed to create mobile wallets or issue m-money without linking with a regulated financial institution.

There are also restrictions regarding who can appoint agents. Many countries' regulators favor deposit-taking financial institutions because a primary motivator is to encourage the unbanked to sign up for an account and these institutions are already connected to a payment system. However, this approach potentially leaves out MFIs that do not take deposits but are supervised under an existing microfinance regulatory framework.² Given that MFIs' business models are driven by scale and operating efficiency, regulators should consider their ability to use agents and technology to expand service offerings into rural areas. Though MFIs could act as agents for banks, most have found the revenue stream does not justify the effort. They also fear that banks would poach their best clients.

² NGOs, self-help groups, or community-based groups are not included in this category of MFIs.

B2. Agent Networks and Channel Management

For banks, using agents and setting up an agent network are new business processes that require adjustments to operations. Because agents are another delivery channel, they should fit within a bank's overall distribution strategy, alongside its other channels (e.g., branches and ATMs). Some banks outsource the entire agent operations to a third-party provider; some use an "integrator" to handle certain aspects such as recruitment and oversight, while other banks create a new internal unit or subsidiary dedicated to manage the agent network.

B2a. Successful Approaches

Build on existing networks where possible. Banks typically choose retail shops, pharmacies, and other community stores where clients are regular visitors. MNOs naturally rely on their airtime sellers to build agent networks. Working with established chains and franchises enables institutions to scale up their agent network rapidly. For example, Brazil's Bradesco purchased the rights to use the national post office network as a banking agent network; Equity Bank in Kenya uses the Nakumatt chain of retail stores as its anchor banking agents; and WIZZIT in South Africa uses the Dunn's chain of about 400 clothing stores to open accounts.

Establish a remuneration and incentive structure. Most branchless banking models pay agents based on commission, with a fixed rate for opening accounts and a variable rate (usually a percentage of the transaction value) for withdrawals, payments, and transfers. To date, banks and MNOs have set the remuneration rates, though agents may have more bargaining power to negotiate as competition increases. The current remuneration structure is meant to incentivize agents to promote new accounts and increase the volume of transactions. But commission is not the only incentive agents may have. Recent CGAP studies show that in Kenya, agents earn a 5-percent commission for airtime, compared with 1.1 percent for M-PESA transactions. However, M-PESA transactions yield a profit three times greater than airtime (CGAP, 2010). In Brazil, agents indicated that increased foot traffic, not remuneration, is their prime motivator.

Minimize agents' start-up costs and cash-management burden. To date, banks or network managers have absorbed most of the costs for start-up, including installing a POS device, training, and system integrations. Banks also pay for communications costs and, in certain cases, secure vehicles for transporting cash. The direct costs agents incur are therefore limited to the use of the store space, staff time for processing transactions, and having sufficient cash in the till and the bank. (Most banks will provide an interest-free overdraft to minimize additional cost to the agent.) Depending on transaction volume and the daily cash limit the bank (or the regulator) sets, agents would need to go to the bank every day to deposit or withdraw additional funds, incurring transportation costs and loss of potential revenue while away from the store. OIBM in Malawi uses its mobile ATM to bring the bank closer to agents to minimize their travel time, and some banks in Brazil rely on integrators or third-party providers to handle the liquidity management.

B2b. Remaining Issues and Challenges

An agent's commercial viability remains a challenge. One argument is that agents should not be seen merely as a passive transactional channel but have a more active role in customer

acquisition, product marketing, and referrals. The agent would then be able to increase usage and drive up volume. Debate continues about how much responsibility agents should have, how much financial training they would need, and whether clients would want their local shop owners to be their "financial advisor."

Another question is whether agents should have an exclusive relationship with one bank or should be able to partner with several banks. From a client perspective, non-exclusivity means more competition, more choices, and potentially better pricing. From an agent's perspective, it means more relationships to manage and more complex liquidity management, but also the ability to negotiate a better remuneration rate. From a bank's perspective, it means creating strong brand and customer loyalty becomes more difficult.

B3. Products and Services

Branchless banking products and services need to be viewed as new products because they are targeted to a different clientele from those being served through traditional bank branches. As a result, market research is needed to understand the needs and preferences of this client segment.

B3a. Successful Approaches

Offer a "no-frills" savings account as a passport to other financial services. In South Africa, the country's largest banks designed the Mzansi account, which is linked to a debit card, as an affordable and appropriate option for the unbanked. Since the product's launch in 2004, more than six million accounts have been opened, mostly by people who had never had a bank account (Bankable Frontier Associates, 2009). In India, Eko and the SBI have created a simple savings account with no opening fee or minimum balance.

Understand the different needs of rural and urban populations. Seasonality tends to affect income streams in rural areas more than urban areas. Urban populations tend to be more mobile and are engaged in diverse levels of trade and commerce. Financial institutions need to be aware of these differences and tailor their product offerings accordingly. In Malawi, OIBM developed a savings account (*Mthandizi*, or "Helper") for its rural clientele that includes a funeral benefit and life insurance coverage.

Marketing and branding. Though agents are the primary customer interface, customers must be assured that the agent is offering products from a reliable and trusted brand. Banks need to put their "face" on their products and raise awareness of their brand through a promotional campaign tailored to low-income and poor populations. Folk play performances in village centers are one effective way of reaching out to populations with low literacy.

B3b. Remaining Issues and Challenges

Though many branchless banking models have experienced an impressive level of account openings, the flurry of activity has not been sustained, and many of those accounts are inactive. It is estimated that 40 percent of Mzansi accounts have become inactive, and an even higher proportion of registered users of Filipino m-money may be inactive (CGAP, 2009). In India, where the BC legislation was passed in 2006, less than 25 percent of no-frills accounts are

operational (CGAP and ACCESS, 2009). A few institutions are starting to offer loans, but the level of cross-selling has not been significant. It is unclear whether cross-selling would work among rural and poor populations; for example, efforts to bank remittance recipients and cross-sell other products have had mixed success. Better understanding is needed of how low-income people manage their assets and the modalities they use.

B4. Banking the Unbanked

The discussion of branchless banking has centered on using innovative models to reach the unbanked. Results have been mixed, and the talk of the transformative potential of branchless banking has outpaced realities on the ground.

B4a. Successful Approaches

Leverage government-to-person (G2P) payments. Brazil, India, Mexico, and South Africa are the early pioneers in using electronic payments to deliver government payments into a simple or basic savings account that the government requires financial institutions to offer. Electronic delivery establishes a point of contact between the social welfare recipient and the financial institution, a relationship that neither party would have initiated on its own. Because G2P payments are made regularly to many people, banks' marginal costs for offering the simple account is greatly reduced.

Simplify KYC requirements. To open a new account, all banks must comply with KYC (and AML/CFT) rules, which require them to conduct due diligence to verify customers' identities and proof of residence. Many countries do not issue official identification cards, making it difficult for poor people to show proof of address because they may live in informal settlements or may not posses land titles or utility bills that show where they live. The process of opening an account and bringing more unbanked into the system can be simplified if reasonable accommodations can be made for who can conduct KYC and the types of documentation required. In the Philippines, policymakers allowed agents of the Smart (bank-led) and Globe (non-bank led) telcos to conduct KYC compliance. They also allow many different types of identity documents to be accepted for verification purposes.

Incorporate financial education into financial inclusion initiatives. The unbanked, usually the rural poor, often exclude themselves from the financial system because, for example, they are far from a bank branch, mistrust or are unfamiliar with banks, or simply lack knowledge about financial services. Branchless banking and other technology could ease the problem of distance, and mistrust and lack of knowledge require financial education and literacy. In 2009, Ghana's National Forum on Microfinance adopted the National Strategy for Financial Literacy and Consumer Protection in the Microfinance Sector, one of the first national strategies on financial literacy in Africa. The strategy addresses key dimensions of financial education: knowing, understanding, and behavioral change. Its three main activities are Financial Literacy Week, road shows in rural areas, and developing educational material on loans, saving, (micro) insurance, and investment.

B4b. Remaining Issues and Challenges

Most branchless banking clients are the under-served, not the unbanked. Though branchless banking has made financial transactions more convenient and less costly, many of the millions of recently opened accounts are dormant. Recent research and discussion on the financial behavior of the poor show that the most valued features of financial services are convenience, reliability, flexibility, and structure.³ More work is needed to create a better value proposition for clients to encourage more adoption and usage.

B5. ICT Infrastructure

Any use of branchless banking will depend on having access to IT and telecommunications infrastructure. IT includes software, hardware, and services such as outsourcing. Branchless banking also requires accessible, reliable, and affordable telecommunications to reach out to rural areas.

B5a. Successful Approaches

Use a mix of technologies. No one technology can provide a complete branchless banking solution. It takes a mix of devices and channels that depend on terrain, connectivity, and cost. The most common technologies used in branchless banking have been ATMs, POS devices, and mobile phones. Third-party providers often determine which devices to use in bank-led models. The most important considerations are usually how well the device can talk to the financial institution's back end and cost.

Device	Advantages	Disadvantages
ATMs	 Can be installed anywhere (subject to security climate and electricity), do not need to be staffed Can be used offline if needed Can be used by customers of multiple banks (assuming shared infrastructure) 	 Expensive to purchase and maintain Need high transaction volume to break even on purchase price Not all ATMs can accept deposits Security risk in transporting cash to empty and refill
POS	 Printing of receipts Clients can use bank cards on POS and ATMs Can be used offline if needed Transactions recorded on POS, not on client cards 	 Cost from \$400-800 POS technology has not changed much; mobile phones constantly get better and faster at transmitting data
Mobile phones	 Most agents and clients own a phone, so there is no additional cost for installation and connectivity User-friendly interface Requires less energy than ATMs and POS Data-enabled phones are becoming cheaper 	 No paper receipt, just short messaging system (SMS) record May not be appropriate for higher volume (depending on configuration), transaction turnaround/confirmation slower than POS Needs reliable connectivity Can easily be stolen

Table 1. The Pros and Cons of Popular Technologies

³ Also visit www.microsave.org to read postings from the virtual discussion of the book held on June 8-10, 2010.

Opt for shared infrastructure. When making ICT-related decisions, the financial provider should look at the **total cost of ownership** for an in-house implementation, as opposed to outsourcing to a third-party provider. Mobile channels and ATM channels provide opportunities for shared infrastructure. In many countries, banks make commercial arrangements to interconnect payment switches, install interoperable ATMs and POS devices, and issue interoperable cards. This type of sharing enables an institution to exponentially increase the number of access points it provides to its customers. Third-party providers also provide an interoperable platform where multiple banks and MNOs can outsource their ATM and payment operations. These providers can purchase equipment at lower unit costs because of economies of scale, and the banks could minimize the risk of purchasing technically obsolete equipment.

B5b. Remaining Issues and Challenges

Many developing countries still do not have a modern national payment system that could provide interconnectivity and interoperability among financial institutions. As a result, financial institutions, MNOs, and third-party providers are building multiple parallel structures. The challenge for policymakers would be to provide better conditions for new entrants such as nonbank payment service providers to use the existing payments infrastructure on equal terms with bank participants, to include mandated interoperability and interconnection, and to enforce limitations on interbank fees. Ultimately, the goal should be to increase competition and reduce the costs of electronic payments.

More customer data is being collected as electronic transactions become more prevalent. The information is stored in databases at banks (if it is a proprietary m-banking system) or payments network providers (if it is an interoperable industry solution). This information can be a powerful tool for creating a credit bureau or credit scoring system. On the other hand, the databases create security, privacy, and confidentiality issues.

B6. Partnership Management

Public policy and private-sector interests converge in branchless banking. Donors and governments see financial inclusion as an important development policy goal that could be achieved through the innovative delivery of financial services; banks, telcos and other private-sector players view the poor unbanked segment as a large untapped market that could be profitable with the right business model and technology.

B6a. Successful Approaches

Use a public tender process to engage private-sector participation. Governments in Brazil and India have invited bids from banks and payment providers to extend banking services to underserved populations and locations. In India, FINO and A Little World won bids with SBI to deliver National Rural Employment Guarantee Act payments using agents and branchless banking technologies. In Brazil, Bradesco won a public bid to use postal system outlets as agents for its growing distribution network, with the condition that locations with no access to financial services would be prioritized. In Kenya, Equity Bank bid on a tender put out by the Financial Sector Deepening Trust to deliver grant payments to recipients in the country's poorest region. Given the volume of government payments and the steady revenue stream they represent, private banks and payment providers are increasingly becoming interested in getting "a piece of the pie." A public tender process enables the government and/or donor entity to obtain the best deal while letting the private sector take the lead in expanding the banking infrastructure.

Use government funding to leverage private capital. Government guarantees and/or loans can be useful catalysts for a new venture to attract private capital. In Peru, third-party provider Globokas received a loan from the Overseas Private Investment Corporation that helped launch its platform for agent banking with MFIs and banks.

B6b. Remaining Issues and Challenges

Public-private partnerships work best when there is a win-win proposition for all parties. The public interest goal of a competitive and inclusive financial services market should be matched by the ability of the private sector, bank, and non-bank players to innovate. The challenge is to balance these interests so public entities do not interfere with private-sector initiatives and private firms are given the right incentives to provide accessible, appropriate, and affordable services to customers, regardless of where they are located.

Governments and the private sector can also collaborate on data-gathering and knowledgesharing. While there is more data available on agent networks, pricing, and usage, further research and documentation are needed to fully understand customer behavior and preferences.

C. Case Studies

This section presents four case studies to give a better understanding of the models and approaches being used in branchless banking.

C1. Case 1: Brazil's Bradesco and Banco Postal

C1a. Background & Environment

From the 1970s to the 1990s, Brazil relied on its public banks to provide outreach to the poor. However, private banks did a better job of providing accounts to the poor. MFIs in Brazil have a limited presence and have not been able to achieve significant scale. It is estimated that about 30 percent of the adult population has bank accounts (40 million account holders out of a total population of 192 million) (CGAP, 2010).

Bank outsourcing and correspondents have been common in Brazil since the 1970s. In 1999, the Central Bank of Brazil (CBB) revised the framework for bank agents, permitting them to open accounts and accept withdrawals, deposits, and bill payments.⁴ That same year, Caixa Econômica Federal, a state-owned bank, partnered with more than 9,000 lottery outlets in what became the first large-scale retail agent scheme in the country.

⁴ CBB Resolution 2,640.

As of January 2010, there were more than 150,000⁵ registered agents throughout the country delivering financial services on behalf of entities licensed and supervised by the CBB. Most significantly, there is at least one agent or branch office in each of the country's 5,564 municipalities (CGAP).

C1b. Bradesco and Banco Postal Business Model

Bradesco is the largest private bank in Brazil, with approximately R\$4.9 billion (\$2.8 billion) in total assets as of September 2009. The bank also has the most correspondents, holding a 34-percent market share (compared with 21.5 percent for Caixa). In 2001, Bradesco won a public bid from the Brazilian Post Office that gave it exclusive access to 5,300 of the country's 10,500 post offices (World Bank, 2006). The bank also manages a network of 40,000 ATMs.

Bradesco uses different models to manage its distribution channels. Its more than 18,000 Bradesco Espresso correspondents are managed by Bradesco branches and/or "integrators." For its partnership with the post office, Bradesco established Banco Postal as a wholly owned subsidiary that serves remote areas with limited banking infrastructure and urban areas with high unbanked levels. Account holders at Banco Postal are also Bradesco clients, with access to the same services as regular Bradesco customers. However, Banco Postal has extended hours and is more accessible for the poor.

Each post office with a Banco Postal is linked to a Bradesco branch via satellite so transactions can be conducted in real-time using Bradesco's network. Bradesco trains Banco Postal staff to provide customers information about the bank's products. Services include submitting applications for new accounts, withdrawals and deposits, bank statements and balances, sending loan and credit card applications, and bill and tax payments.

C1c. Results

Outreach. As of October 2009, 6,055 Banco Postal branches were operating in 5,160 of 5,564 municipalities (almost 93 percent). The bank reported 10 million customers had opened checking accounts and a further four million had used bank services, including 1.7 million who had received social security payments. Sevnty-three percent of clients earn less than R\$400 (approximately \$225) per month; almost 60 percent earn less than R\$200 (approximately \$110) per month.

Usage. The monthly transaction volume was R\$65.4 million (approximately \$36.8 million) in 2009. More than 600,000 microcredit loans totaling R\$350 million (approximately \$197 million) have been granted. According to research conducted by CGAP and Fundação Getulio Vargas, bill payment is more prevalent among semi-urban (71 percent of transactions) and urban locations (88 percent of transactions) than in rural areas (40 percent). Conversely, deposits and withdrawals comprise a higher percentage of transactions (38 percent) in rural areas than in urban areas (8 percent) (CGAP, 2010).

⁵ Of the 150,000 registered agents, only about 40,000 are allowed to provide a full range of financial services.

Commercial viability. Banco Postal has lower transaction volume but higher profit margin (63 percent) due to the different revenue arrangement with Bradesco. Given its many outlets, Banco Postal negotiated a higher commission rate than other Bradesco correspondents, at \$0.91 per transaction compared with \$0.28 and \$0.22 for small shops and stand-alone agents, respectively. Non-Banco Postal agents earn an average profit margin of 10.6 percent. However, CGAP/Fundação Getulio Vargas research showed that increased foot traffic, not remuneration, was the primary motivation for non-Banco Postal agents. Nearly 75 percent of agents surveyed reported an increase in non-agent business; rural outlets had a 100 percent increase.

C1d. Key Findings and Lessons Learned

Enabling environment. A major reason why agents were successful in Brazil was because payment of utility bills was considered a banking service and could not be done at non-bank outlets. This created a natural captive transactions market for new correspondents opening in towns without prior bank presence. Another factor was the government's commitment to automate its system for making social safety net payments by routing them through cards and bank accounts. This allowed participating financial institutions to leverage G2P payments as a way to bank recipients of these social transfers. Though Caixa has most of the G2P market, 1.7 million clients received social security payments at Bradesco's Banco Postal outlets in 2009.

• *Lesson learned*. Strong government support for financial inclusion and an enabling regulatory framework that allows non-bank agents to make financial transactions have incentivized private banks to extend their delivery channel to the unbanked.

Partnership management. Bradesco's winning bid gave the bank access to nearly half of the country's post office outlets. However, the government stipulated that the bank had to reach certain municipalities (i.e., ones without access to banking services) within a specific period. Because the post office had a well-developed technological platform and its own satellite communications network capable of reaching distant regions, Bradesco only had to set up a line between the bank and the post office headquarters in Brasilia. Incremental investment on either side was minimal, and Bradesco was able to set up operations relatively quickly. Because it had many outlets, Banco Postal could also negotiate higher remuneration for its agents than those working at Bradesco Espresso.

• *Lesson learned*. The Bradesco Banco Postal public-private partnership was a win-win situation for all parties. Bradesco had exclusive access to a well-established network, and the post office gained a new and important revenue source. The government also met its public policy goal of reaching unbanked municipalities.

Agent/channel management — liquidity and security. Security is a major concern for agents; 41 percent reported being a victim of theft and 93 percent reported being an agent increased their risk of being robbed. As a precautionary measure, Bradesco lowered the amount of cash agents could have on hand. However, this meant that agents at high-volume service points would need to go to a Bradesco branch more often to deposit their money. Agents in rural areas had higher cash limits, but often had to travel for hours to get to the nearest branch — a high opportunity cost when margins were already squeezed. Exceeding the cash limit could also result in an

agent's POS being "frozen" for two days, which could reduce his/her monthly profit by 79 percent.

• *Lesson learned*. Because cash remains important, providers must consider the cost of transporting cash safely between service points and the financial institution as another factor that will affect the viability of their agent network.

Agent/channel management — outsourcing and use of integrators. Bradesco has more than 18,000 Bradesco Espresso outlets at which the bank outsources some of its agent management to 15 "integrators." These integrators are responsible for tasks ranging from agent recruitment and training to technical support, customer care, and cash management.

Though using integrators has allowed many Brazilian banks to rapidly expand their agent networks, the speed of expansion was not necessarily matched by increased controls or monitoring on the part of the bank. Consequently, CBB has identified breaches of some consumer protection rules in the agent business. These include agents charging extra fees and not disclosing fees, not disclosing their agent status, advancing cash to clients and guaranteeing loans, selling client's information to third parties, and committing fraud (e.g., keeping clients' funds and not making bill payments). In all of the cases identified to date, the banks have assumed responsibility for the misdoings of their agents. Although CBB does not consider these to be widespread problems, it has stiffened requirements on banks' internal controls with regard to agent operations and has issued additional consumer protection rules, such as requiring agents to have signage with the phone numbers of bank ombudsmen (CGAP, 2010).

• *Lesson learned*. Outsourcing of agent network operations can help banks focus on their core business of designing and delivering financial services. Ultimately, however, the banks are liable for any fraud or incidents its agents commit, and the risk to their reputations can be high if the problems become more rampant. Banks should not be discouraged from outsourcing, and regulators should not impose restrictions on outsourcing. The important issue is to put in place codes of conduct and mechanisms for minimizing such fraud and abuse in the future.

Products and services. In 2004, the CBB permitted the simplified account, which is primarily offered by retail agents to clients who do not have a bank account. These accounts have a maximum balance of R\$1,000 (approximately \$500), R\$3,000 (approximately \$1,500) if the depositor has a microcredit account. Banks cannot charge for the first 12 transactions each month, and there is no maintenance fee. The accounts are also subject to relatively relaxed customer due diligence procedures compared with regular checking accounts. However, according to private and government banks, these accounts are unprofitable because of the complex transactional limitations imposed by the regulation (which require banks to adopt systems and processes), the absence of fees, and the limitations of the microcredit business (only microloans can be channeled through simplified accounts).

Banco Postal offers a regular current account (with a debit card but no check book) rather than a simplified savings account. The account has a monthly fee of R\$3.80 (approximately \$2) and provides up to 14 free transactions per month (four statement enquiries, four withdrawals, four account balances, and two transfers). Bradesco also offers lending services; in 2009, its Banco

Postal outlets disbursed R\$350 million (approximately \$200 million) in microcredit to 600,000 enterprises.

• *Lesson learned.* Though bill payment remains the most common transaction processed by agents in Brazil, Bradesco is making an effort to offer a savings account that provides clientele more flexibility and different kinds of loan products.

Banking the unbanked. Low-income clients tend to feel more comfortable visiting a post office than a traditional bank branch. In Brazil, post offices are ubiquitous, familiar, and easily accessible; when Banco Postal was launched, the brand was already associated with a well-known institution. In 2009, 90 percent of new Bradesco account openings were done through Banco Postal, evidence that this model was successful.

• *Lesson learned.* When selecting agents, banks should consider places unbanked clients visit regularly and with which they have an established relationship. The size, location, and ambiance (e.g., cleanliness, friendliness of staff) of the agent premises are also important factors.

C1e. Potential for Replication and the Role of USAID

The postal systems in many developing countries have extensive branch networks, including locations in small towns and villages. The Bradesco experience shows that using the postal system as banking outlets can be effective in scaling up financial access to rural areas. However, many postal systems are inefficient, possess antiquated management information systems and telecommunications systems, and have issues with staff morale. Some reform and restructuring would be needed to turn such postal networks into a viable agent networks. The Bradesco and Banco Postal model has been unique, one that other countries seek to replicate. The World Bank in India is working on such a reform project, and there is an opportunity for USAID and other donors to support similar efforts in other countries.

C2. Case 2: USAID MIDAS and the Banca de las Oportunidades Program in Colombia

This case study remains in draft form and is pending additional information on partner banks, bank support from MIDAS, MIDAS's work with Banca de las Oportunidades, banks' platforms, commercial viability, specific transactions, the process for monitoring agent transactions, and lessons learned before this FS Series can be finalized.

C2a. Background & Environment

In 2007, there were 16 million bank accounts in Colombia out of a population of 45.6 million people; in short, less than 26% of the population has access to financial services (CGAP, 2008). While banks dominate the financial landscape, numbering 18 with a total of 5,151 branches, they primarily serve only urban zones.

In 2006, the Superintendencia Financiera de Colombia issued Decree 2233, creating non-bank correspondents (NBCs). As of December 2009, there were 5,801 NBCs, more than the total number of bank branches nationwide. Of these, 1,613 are in rural municipalities with less than

100,000 inhabitants, and 4,188 are in municipalities with over 100,000 inhabitants. This leaves only 66 municipalities (out of 1,102) without access to financial services (USAID, 2009).⁶

Before 2009, correspondents could perform almost every bank activity except account opening. In 2009, Decree 1121 was passed which a) allowed NBCs to implement KYC regulations and procedures so customers do not need to visit the branch to open accounts, and b) allowed NBCs to send information regarding transactions in SMS as well as via printed documents (IDLO, 2010). At this time, the main challenge to the expansion of branchless banking is that these services are limited to banks. Thus, there is both a limited number of providers and minimum competition among them.

C2b. USAID's MIDAS Project

MIDAS (Mas Inversión para el Desarrollo Alternativa Sostenible) is a \$166-million alternative livelihoods development project established in 2005, with the mission to provide assistance to disadvantaged families. One of the project's components focuses on developing branchless banking regulatory infrastructure and implementing it in rural areas through collaborations with government, banks, and MFIs. Specifically, it worked with Colombia's Presidential Agency for Social Action and International Cooperation (Acción Social) to establish NBCs as a method for expanding access to payment and financial services for low-income populations.

Technical approach/business model. MIDAS, with the government and partner banks, developed a model for expanding the NBC network into rural areas. Public subsidies and project funds were used to incentivize partner banks to open NBCs in underserved areas, with the main target being rural unbanked households. Banca de las Oportunidades (BDO), a public institution, agreed to cover losses incurred by financial institutions related to NBC operations over a two-year period. MIDAS also issued a call for proposals for the allocation of incentives for opening 128 NBC centers at Banco Agrario. In addition, MIDAS incentivized the opening of NBCs in marginal neighborhoods (USAID, 2009). The banks used a range of different technologies (e.g., cards, mobile phones, POS devices, and ATMs) in supporting the NBC expansion effort.

C2c. Results

Outreach. As of September 2009, BDO reported 5,601 NBCs, covering 864 out of 1,102 municipalities in the country. Of all municipalities, only 57 were left without financial presence or availability of financial services of any kind. The number of access points per 100,000 inhabitants has more than doubled between July 2006 and September 2009 (from 11 to 23.9).

Usage. Large banks are leading expansion of the card and POS-based agent network, but as of December 2008, relatively few banks used agents to open accounts and disburse loans. Over 70% of agent transactions remain bill payments and balance verification. Only two of the 11 partner banks reported offering savings accounts opening services, and three banks reported loan disbursements as a service being transacted at NBCs.

⁶ Updated with information from the MIDAS annual report and information from the Superintendencia Financiera de Colombia, provided by Francisco Gonzalez, Program Officer, USAID/Colombia.

	July 2006	September 2009
Number of NBCs	0	5,801
Number of financial institutions with NBCs	0	11
Total municipalities in Colombia	1,100	1,102
Number of municipalities with NBCs	0	864
% of municipalities with NBCs	0	78
Number of municipalities without financial presence	307	57
% of municipalities without financial presence	28	5
% of municipalities with financial presence	72	95
Number of NBCs in rural municipalities	0	1,613
% of NBCs in rural municipalities	0	28
Number of NBCs in urban municipalities	0	4,188
% of NBCs in urban municipalities	0	72
Points of service for each 100,000 inhabitants	11	23.9
Number of transactions per month	0	1,394,500
Amount of transactions per month	0	\$127,946,612
Average amount of transactions	0	\$91
Number of savings accounts opened ³	0	24,018
Number of loans requested	0	13,419

Table 2. MIDAS Numbers and Statistics

Source: Banca de las Oportunidades Program, Financial Superintendency

C2d. Key Findings and Lessons Learned

Enabling environment. The MIDAS program worked closely with the government to use marketbased mechanisms. The government initially planned to establish and fund a massive government development bank but the project was able to convince the government of the importance of market-based modalities for jump starting low-end financial service provision in rural areas.

The MIDAS program also focused on a regulatory framework to ensure regulations allowed branchless banking. For example, MIDAS helped develop circular regarding electronic bank accounts aimed at fostering access to financial services. MIDAS also helped establish the regulatory environment for NBCs to operate and for the agents to conduct interviews to open new accounts. At the same time, the framework maintains the basic responsibility of formal financial institutions of maintaining the transactional and portfolio integrity of operations carried out through branchless banking activities.

Partnership management. MIDAS partnered with 13 financial institutions including major banks, financial NGOs, and cooperatives. The program also partnered with insurance groups, Banca de las Oportunidades, and Bancoldex. MIDAS developed an institution-specific plan for implementing a branchless banking service outreach strategy, one that is consistent with each partner's core strategic and business planning approaches. Subsidies provided by MIDAS were primarily for in-kind training and technical support services to provide banks with the methodological and organizational tools, as well as the basic technical infrastructure, necessary for branchless banking services.

Agent/channel management. The NBCs under the MIDAS program are typically retail stores – drugstores (34% of total NBCs), supermarkets (16%), small retailers (15%), and telecom stores (13%) (USAID, 2009). Hardware requirements are minimal; it mainly requires a POS device. Agents must have a contractual agreement with the financial institution specifying the agent is an authorized dealer and is trained to conduct the transactions permitted by the Superintendencia and the financial institution.

Products and services. Publicity typically comes from agents' preexisting profiles in the community, rather than from traditional marketing channels. However, financial institutions in Colombia conduct promotional events for agents to increase their networks; activities include videos showing benefits of becoming agents, promotional events such as musical shows, actor endorsements, raffles, and prize give-aways.

Banking the unbanked. MIDAS attracted the unbanked through targeted agent selection in rural communities with unbanked populations. NBCs have allowed MIDAS to expand coverage to municipalities without previous access to financial services, as well as municipalities with high Afro-Colombian and indigenous populations. In June 2007, when the Banca de las Oportunidades program began, 307 of the 1,100 municipalities had no coverage because they were small, remote, and/or dangerous. As of September 2009, only 57 municipalities were not yet covered by financial services (USAID, 2009).

C2e. Potential for Replication and the Role of USAID

MIDAS was successful because both the government and banks involved in the program bought into the philosophy behind the service expansion strategy through the promotion of branchless banking. The implementation of an integrated technical assistance approach where a synchronized effort to work at the policy level (NBC framework), the infrastructure level (technology platform), as well as the institutional/retail level (procedures, marketing, etc.) facilitated viable downscaling of services to previously underserved client groups, as well as major geographical expansion in service coverage. Thus, a core element of program success was the holistic nature of the intervention approach.

C3. Case 3: Eko India Financial Services Private, Ltd.

C3a. Background & Environment

India has 80,000 bank branches, 110,000 cooperatives (one in every five villages), and 150,000 post offices. It is estimated that each branch serves about 15,000 people in urban areas and

32,000 people in rural areas (World Bank, 2009). Consequently, less than 60 percent of the adult population has a bank account and less than 14 percent has a loan with a bank.

Microfinance services tend to be concentrated in southern states (e.g., Andhra Pradesh and Karnataka). In 2009, the Self-Help Group-Bank Linkage Program⁷ covered 45.2 million households. Non-bank finance companies and NGOs — both MFIs — now reach 22.6 million clients, of whom 17.9 million are active borrowers (Sa Dhan, 2009).

In January 2006, the Reserve Bank of India issued new guidelines (Reserve Bank of India/2005-06/288) allowing banks to employ business facilitators and BCs to promote financial inclusion and improve outreach. The facilitators would primarily be involved in processing and opening accounts. In addition to facilitator functions, BCs should mobilize deposits and disburse credit on behalf of the bank.

C3b. The Eko Business Model

Eko India Financial Services Private Ltd. is a start-up company established in mid-2007 with the goal of bringing financial inclusion to the financially underserved middle- and low-income population in India. Because Eko is a technology provider, it is not allowed under the law to act as a BC, so the founders also established a nonprofit Section 25 company, Eko Aspire Foundation, to perform this role.

In February 2009, the CGAP Technology Program, co-funded by the Gates Foundation, provided a one-year, \$1.78-million grant to Eko to support the creation of an agent network to deliver savings and remittance services to new SBI customers. Eko is also an action research partner of MicroSave India and CGAP, and documents and analyzes learning related to the viability of agent networks in India.

The vision of Eko's founders is to build a low-cost financial services infrastructure, powered by innovation and technology, to increase the reach of financial institutions to the unbanked. In 2008, Eko was appointed as a BC of SBI, the country's largest public-sector lender. Through this partnership, Eko appointed airtime sellers, grocers, and pharmacists as sub-agents. At these Eko customer service points (CSPs), a customer can walk in and set up a bank account using his/her mobile phone.

Products and services. Eko-SBI offers the no-frills SBI Mini Savings Bank Account, which has no account opening fee or minimum balance, though CSPs encourage customers to open accounts with 100 rupees (\$2.25). Once the account is set up, customers can perform all conventional financial transactions, including deposits and withdrawals, remittances, bill payment, and insurance payments.

⁷ A self-help group is a village-based financial intermediary usually composed of 10-15 women. Members voluntarily contribute small savings over a few months, until there is enough capital to begin lending. Because saving and lending decisions are made by mutual agreement, many believe self-help groups are important vehicles for social and economic empowerment of women. Under the program, public-sector banks such as the National Bank for Agricultural and Rural Development link with self-help groups for on-lending to low-income and poor clients.

Revenue model. The 2006 Reserve Bank of India Business Correspondent Model directive did not allow BCs to charge clients a fee for any transaction at a CSP. Each quarter, Eko receives 10 rupees from SBI for each account opened, 0.5 percent of the value of each transaction, and 40 rupees for each active account. Eko has a similar arrangement with the CSPs.

Technology platform. All transactions are mobile phone-based because Eko did not want clients or the CSP to make an additional investment for a smart card or a POS device. The service works on all handsets using an unstructured supplementary service data (USSD) connection, so there is no need to download or install an application. Confirmation of transactions occurs via SMS.

C3c. Results

Outreach. Eko started with a pilot in Uttam Nagar in 2008, and has expanded to Bihar, West Delhi, and Jharkhand. It plans to expand to Mumbai and Punjab in 2011. The company selects site and bases its expansion on factors such as penetration of banking, income levels, and the level of domestic remittances (e.g., Delhi and Biharre comprise an active remittance corridor).

Eko has 50,000 clients, a modest number when compared with other BC companies such as FINO (13.5 million accounts) and A Little World/Zero Mass Foundation (2.5 million accounts), which have achieved greater scale due to their participation in the delivery of government payments through large programs such as the National Rural Employment Guarantee Scheme and the Social Securities Pensions Scheme. Eko's expansion has also been limited because it has focused on strengthening its relationship with SBI rather than exploring new partnerships with other banks and MFIs.

Usage. Eko reports that 10 percent of its users conduct one transaction every day; 85 percent are "active" (i.e., they conduct a financial transaction every 90 days). Deposits and withdrawals are the most common transactions, with some customers conducting money transfers.

Number of clients/accounts opened	50,000
Number of customer service points	500
Total transactions to date (value)	100 million rupees (\$2.3 million)
Total deposits to date (value)	10 million rupees (\$232,000)
Average daily count: deposits	1,000
Average deposit amount	800 rupees (\$18)
Average daily count: withdrawals	600
Average withdrawal amount	1,000 rupees (\$23)
Average daily volume: money transfers	20
Average transfer amount	2,000 rupees (\$46)

Table 3. Eko by the Numbers (as of April 2010)

Commercial viability. Eko is operating at a loss and uses CGAP/Gates grant money to cover its expenses. The grant ended in May 2010, and the company is actively seeking institutional

investments to finance operations and future growth. At the time of this study, no institutional investor had been found, and Eko's long-term sustainability remains unclear.

C3d. Key Findings and Lessons Learned

Enabling environment. The Reserve Bank of India's commitment to financial inclusion and its issuance of the Business Correspondent Model directive in 2006 opened the door for technological and business innovations. Significant revisions were introduced in 2009, but key constraints remained:

- 1. Only banks can appoint BCs, and only nonprofit organizations, retail shops, and individuals can be agents (non- bank finance companies cannot be agents). *Result*: Technology providers such as Eko, FINO, and A Little World have had to set up a nonprofit arm (by registering as a Section 25 company) to earn the right to participate in branchless banking activities.
- 2. Banks are outsourcing the responsibilities of selecting, managing, and monitoring BCs to Section 25 companies. *Result*: Though the bank is legally liable for BC transactions, Eko and other companies bear the bulk of the operational costs.
- 3. BCs are not allowed to charge customers a fee for transactions. *Result*: Public-sector banks view the BC model more as a corporate social responsibility activity than a viable business line, and only four private banks reported appointing BCs in 2009.
- *Lesson learned*. An enabling regulatory framework that is overly prescriptive in terms of the business model may discourage private-sector participation and negatively affect the commercial viability and sustainability of the models.

Partnership management. For SBI, the partnership with Eko enabled it to expand its footprint. However, SBI considered the partnership more as a means to comply with the Reserve Bank of India's financial inclusion goals, rather than a mutually beneficial business alliance. SBI pays Eko 10 rupees for every account opened, whereas Eko pays 30 rupees to its CSP. Though Eko feels this higher commission incentivizes CSPs to promote the product to clients, SBI has not agreed to increase its commission to Eko. Also, SBI is not covering costs such as marketing (e.g., promotion, financial education, a call center) and channel management (e.g., identification and training of agents, monitoring and fraud prevention, quality control, customer service). This has had a significant impact on Eko's long-term viability.

• *Lesson learned*. A successful partnership depends on a shared vision and objective, and should be established based on business strategy rather than convenience alone.

Agent/channel management. Originally, Eko partnered with Airtel for USSD connectivity and to leverage Airtel's network of 1.2 million outlets. Eko would train the MNO staff and provide the back-end technology and support. Eko later decided to set up its own network of sub-agents or CSPs for two reasons.⁸ First, Airtel outlets received a higher commission for its connection and

⁸ Eko is still partnering with Airtel for connectivity, and some Airtel agents remain Eko-SBI CSPs.

airtime-selling business than Eko provided, so agents had less incentive to promote the Eko-SBI product. Second, Airtel as an MNO was not legally allowed to issue a mobile wallet or put their branding on a financial product. Therefore, the agents did not have a sense of ownership for the product.

Because Eko's main concern has always been the CSPs' commercial viability, it selects outlets based on location, business experience, financial stability (i.e., diversified and multiple sources of revenue), and agents' ability to complete forms and explain the product to users. Consequently, it spent the first eight months of 2009 selecting and training outlets and putting a channel management system in place.⁹

• *Lesson learned*. Establishing an agent network that could be an active partner in acquiring clients and marketing products requires a significant commitment of resources for training, monitoring, and supervision. Though establishing a CSP network would be cheaper than setting up a brick-and-mortar branch, it should be viewed as a recurring variable cost, not a one-time fixed investment cost.

Products and services. Eko's current platform allows for a wide range of products and services. However, the majority of transactions have been deposits and withdrawals. Because the main drive behind the BC model is to create new accounts, the no-frills Mini Savings Bank Account is the only "new" product launched since Eko became SBI's BC. There has been little cross-selling and development of new products that may appeal to these new users. This is due to SBI's low involvement and Eko's focus on expanding the agent network. Consequently, CSPs are not generating significant revenues. According to a recent CGAP study, the portion of Eko-related revenue compared with total revenue for a CSP is less than 30 percent (CGAP, 2010).

• *Lesson learned*. A bank account can be a passport to other financial services only if banks and their agents are actively marketing and educating clients about their availability. Eko's CSPs will need to move beyond deposits and withdrawals to attract more clients and higher usage, thereby increasing volume and generating more revenue.

Banking the unbanked. Eko estimates that only 30 percent of customers using its service are unbanked and the majority of their current users are under-banked. Because their locations and operating hours are more accessible, convenience appears to be one of the key benefits of the Eko CSPs. Recognizing the importance of financial literacy, Eko has also developed its own materials to educate clients about the Eko-SBI product and service, and has used folk plays in urban and rural areas to raise awareness and communicate the importance of opening a bank account.

Nevertheless, more can be done in the area of marketing, specifically branding and product positioning. Eko's CSPs are typically small shops that provide a range of services (e.g., SIM cards, airtime recharge, photocopying, and DVD rentals). The shops usually have signage and advertising from other companies, so the Eko-SBI logo does not necessarily stand out or make an impact.

⁹ Eko estimates it takes about 45-60 days for an outlet to become fully operational.

• *Lesson learned*. Attracting unbanked clients requires a multi-pronged marketing approach. Advertising and financial education are important but are not enough. Understanding clients' behavior and what they seek and value in a financial product is more important.

C3e. Potential for Replication and the Role of USAID

The Gates Foundation and CGAP wanted to experiment in a market that was ripe for innovation. Thus, they were willing to support Eko-SBI because it is a small start-up company that is interested in setting up a new business model for serving the base of the pyramid. The main objectives of the grant were to understand what works, what does not work, and why.

In India, there are opportunities for USAID to collaborate with other donors on sector-level activities, such as funding MicroSave or a similar research institution to document learning, or establishing a grant fund to subsidize financial education programs for clients. USAID staff can also take a multi-sectoral approach by exploring how the BC model could apply to health programs (e.g., health insurance payments) or agricultural programs (payment for inputs such as seeds and fertilizer).

C4. Case 4: Opportunity International Bank of Malawi

C4a. Background & Environment

In Malawi, 55 percent of the adult population does not have access to any kind of financial product. Of the 45 percent who are financially included, 19 percent are formally banked, 7 percent use a financial product from a formal financial institution other than a bank (predominantly MFIs), and 19 percent make use of informal financial products and/or systems (FinMark, 2008).

Although Malawi has implemented electronic-based payment products and services, there is not specific legislation that governs the operation of such facilities. The Reserve Bank of Malawi has produced a National Payment System Vision and Framework document that serves as a blueprint for payment modernization and reform (Reserve Bank of Malawi, 2008). The system now includes the Malawi Inter-Bank Transfer and Settlement System, the Central Payment System for Government, the Electronic Cheque Clearing House, and the Malawi Switch Centre (MALSWITCH), which provides infrastructure for payment systems.

C4b. The OIBM Business Model

OIBM was established as a regulated commercial bank in 2003. By the end of 2009, it had 45,013 active loan clients and 255,000 depositors.

In 2006, USAID, through the Implementation Grant Program (IGP), gave a three-year, \$890,000 grant to OIBM to implement a scalable, technology-driven approach to provide financial services to poor families through cost-effective delivery channels (e.g., satellite branches, mobile units, ATMs, and POS devices) and a demand-driven mix of financial products. USAID's interest was to support an innovative technology-based business model for rural finance. OIBM's mix of

delivery channels also had potential to provide valuable learning about the cost-benefit of each channel.

At the time of the grant, through a partnership with Net1 and MALSWITCH, OIBM was a pioneer in the use of smart cards, which contain a digital fingerprint so clients do not have to remember a PIN number. It used the smart cards to mobilize deposits from the public. Using the smart cards, clients can access their savings accounts from OIBM's ATMs and at POS locations at BP gas stations, major supermarkets, and farm stores.

For its rural expansion, OIBM implemented a "hub-and-spoke model," with the hub being the branch, and the spokes being a mobile unit or a satellite office, and loan officers in the field. The mobile unit, essentially an "ATM on wheels" (a van, in this case) was vital to bringing banking services closer to existing clients and effective for building brand awareness among prospective clients. The van also enabled OIBM to determine areas with sufficient business volume to sustainably support a satellite branch. Usually run by about 20 staff, each of these smaller branches has the capacity to serve about 10,000 clients and offer every bank service except foreign exchange. OIBM also sent loan officers on motorcycles to deliver services and training to clients in remote areas or those unable to travel.

Other access points included POS devices at Rab Processors (agricultural supply chain), Farmer's World stores, and Chipiku stores; stand-alone ATMs in major tobacco and tea estates (those with 2,000-3,000 workers); and prefab kiosks in post offices, near major markets, or along busy commercial corridors.

C4c. Results

Outreach. Over the life of the project, OIBM has opened 14 service outlets that serve 48 locations. These include eight physical branches, including two satellite centers. Six mobile banks now serve 34 call points on six routes once or twice a week. This fleet has three large and three small vans; one of each serves the southern, northern and central areas of the country. OIBM has had significant success attracting rural deposits, with an average savings balance of \$61 at the kiosk level.

Usage. As shown in Table 4 (next page), the volume of transactions at each delivery channel has exceeded the bank's initial projections by a wide margin. OIBM's initial analysis of monthly transactions shows rural branches have the highest per-client use. Satellite and urban branches have a significantly lower number of per-client transactions. This could indicate that OIBM's strategy of basing the placement of rural branches on the vans' route and volume is effective. Placing services closer to clients also means a higher number of transactions. Previously, clients may have chosen to withdraw a large amount of cash once a month; now they can withdraw smaller amounts once a week. The data also shows that brick-and-mortar branches and ATMs will be an important part of OIBM's delivery channels until it develops a larger POS and agent network.

Indicator	Target Year 3 (2009)	Actual (September 21, 2009)	
Number of rural clients ¹⁰	225,000	203,603	
Number of active savers ¹¹	165,394	195,810	
Volume of transactions by delivery channel ¹²			
Mobile unit	90,234	240,668	
ATM	360,000	919,077	
POS	300,000	340,000	
Kiosk	175,000	383,343	
Satellite branch	270,000	716,155	
Regular full branch	670,000	1,395,354	
Break-even level of each delivery channel ¹³			
Mobile unit	101.6%	57.3%	
Satellite branch	104.9%	261.3%	
Regular full branch	109.8%	120.4%	

Table 4. IGP Program Targets vs. Actuals

Exhibit 2 (next page) also provides a small cross-section of the types of activities processed at selected OIBM outlets in 2009.¹⁴ Withdrawals and deposits seem to be the predominant activities for all channels except the vans, where more than 50 percent of transactions are funds transfers. This would indicate that the mobile banks travel along high-remittance corridors.

Commercial viability. An initial cost-benefit analysis conducted by OIBM indicated that, of all the outlets, the mobile units had the lowest return on capital. This was because the vans served the rural poor, whose income levels are subject to seasonality changes, and they were expensive to operate (e.g., fuel and security). However, the mobile units broke even faster than satellite centers because of auxiliary business such as payments systems and cash-in-transit. The vans facilitated monthly salary payments for approximately 15,000 employees who were previously being paid in cash. OIBM earns a \$1.00 fee for each payment.

C4d. Key Findings and Lessons Learned

Enabling environment. Because OIBM is a fully licensed commercial bank, it is required to follow the Central Bank outlet and security standards at all of its locations. Due to the "non-traditional" nature of its channels, OIBM needed to convince regulatory authorities that they should not be subjected to the same regulatory requirements as traditional channels. For example, when OIBM was planning a kiosk in the town of Blantyre's central market, the Central Bank was concerned about security risks. After OIBM provided details about the kiosk's safety features, the Central Bank approved the strategy. Since the site opened, the Central Bank has

¹⁰ Ninety percent of clients are from rural areas.

¹¹ Ninety percent of savings clients are from rural areas.

¹² Estimates from eMerge data.

¹³ Sustainability ratio for each delivery channel.

¹⁴ POS transactions go through MALSWITCH. OIBM has not been able to obtain transaction-level details by device. Therefore, further analysis of agent-based transactions is not possible at this time.



Exhibit 2. Transaction Activity for Select OIBM Outlets, 2009.

been encouraged by the success and safety of kiosks, and has suggested that other banks follow the same approach in other markets.

• *Lesson learned.* The ability to advocate and influence regulatory authorities is a significant factor in the success of a branchless banking strategy. OIBM also benefited from the Reserve Bank of Malawi's support for electronic banking and financial inclusion, which meant regulators were more open to alternative delivery channels if they were satisfied with security issues.

Partner/channel management — *technology implementation*. Selecting and sourcing the appropriate technology was the main challenge OIBM faced in channel management. Because there was not a third-party technology provider with whom to partner or outsource technology needs, OIBM had to do much of the research, negotiation, and implementation in-house, which created challenges and delays. It also had to vet potential partners to determine their capabilities, and staff training required time and attention from management. Furthermore, poor travel and communications infrastructures meant some costs were higher than expected. Partnering with MALSWITCH enabled OIBM to gain access to a national payment system. However, the bank also had to procure biometric cards through the MALSWITCH vendor, so it was difficult to negotiate a price that poor clients could afford. USAID and other donors helped subsidize the cost of these cards so clients would not have to pay. Eventually, other card providers came on the market and in 2008, OIBM switched to magnetic-stripe cards for a fraction of the cost (\$0.35 versus \$9) (IGP, 2009).¹⁵ Clients now get cards at no charge.

POS devices, which were also tied with MALSWITCH, posed a similar challenge because they were expensive. Moreover, telecommunications infrastructure in rural areas is not reliable, which could delay payments. As a result, some shop owners were hesitant to promote the POS system.

Source: Author analysis based on OIBM data

¹⁵ Prices for smart cards were increased from \$7 to \$9 in 2008, which prompted OIBM and other banks in Malawi to switch to magnetic-stripe cards.

OIBM initially selected devices that could work off-line, but later chose a type of General Packet Radio Service-enabled POS device and switched to a pre-paid system.

• *Lesson learned*. Installing new technology can take a long time, especially when entering unchartered territory and when market conditions and technology offerings are constantly changing. It is crucial that the financial institution have flexibility, strong staff, and management capacity to respond to these challenges.

Partner/channel management — *cost-benefit analysis of delivery channels*. As part of the grant, OIBM developed a cost-benefit tool to help its decision-makers identify the most effective and cost-effective ways of spending its resources to facilitate outreach to the poor. Though additional data points are needed to fully analyze trends, initial observations from the tool have started to inform OIBM's strategic thinking on the best way to achieve large outreach and scale. One promising approach appears to be developing many small-scale units in a region, supported by a hub branch. Another promising approach is to leverage the cost of the vans by adding services such as salary payments, which create a steady stream of fees.

The tool can also help improve operations by, for example, identifying lower-performing outlets. Management can research the reasons for the lower performance (e.g., staff training, location, product offerings) and take appropriate measures to improve outlet productivity.

• *Lesson learned*. A cost-benefit analysis tool can be very useful to measure return on investment and client transaction patterns. However, different channels will have different break-even points, and the phased rollout of technologies means it could take a few years before sufficient data can be gathered for a comprehensive analysis. Having integrated and robust management-information and accounting systems is an important prerequisite for facilitating data collection.

Products and services. OIBM's rural expansion strategy is not limited to the use of technology to deliver basic financial services. The bank also aims to develop a mix of products and services that suit the specific needs of rural clients. Besides the basic savings account, OIBM developed three other savings products: the *Kasupe* ("Oasis") account provides a tiered interest rate structure, transaction-based fees, and no minimum balance; the *Mthandizi* ("Helper") account provides funeral benefits/life insurance coverage with a \$71 minimum balance; and the Educational Savings product helps parents pay for their children's school fees.

In addition, the bank offered agricultural lending by partnering with other organizations that supply inputs to and buy crops from farmers. For example, in 2007 and 2008, OIBM targeted cooperatives and similar organizations that serve cash-crop farmers specializing in sugar, tea, coffee, and groundnuts to disburse crop loans. In 2009, OIBM also piloted a warehouse receipt product and created strategic alliances with agribusiness processors and distributors to introduce asset financing to farmers. Bridge financing is also built in to every agricultural loan to help smooth household consumption until the crops are sold.

• *Lesson learned*. Providing access to financial services is more than opening a simple savings account. Technology plays an important role in reducing costs, but having the

right mix of products is equally important to ensure a steady transaction volume. OIBM recognized that products that work in urban markets do not necessarily work in rural markets. Growing cycles drive rural activity and services, and products must be developed with this in mind. Market research must be conducted on a continual basis to understand customers' needs and requirements.

Banking the unbanked. A real constraint to continued rural expansion is the ability to provide financial education. OIBM has found that rural and illiterate clients interface with technology very well. For example, illiterate clients can recognize symbols and signs, and operate ATMs and POS devices. Advanced financial technologies (e.g., biometric smart cards and ATMs) have been adopted quickly, allowing rural clients easy access to cashless transaction systems. Although rural populations have embraced technology, clients in these communities still have difficulty transitioning from a strictly cash-based economy model. This means that cash points cannot be eliminated entirely because people still want to see the actual money at the end of the process. It also means banks will have to educate clients that m-money is the same as cash.

• *Lesson learned*. Though technology can be a great efficiency-booster and time-saver, poor rural clients still value the human "touch points." Providing convenient and easily accessible cash-in/cash-out points should remain an important component of a branchless banking model.

C4e. Potential for Replication and the Role of USAID

USAID funding for this grant predominantly covered costs for the acquisition of technological hardware and devices such as the mobile vans, POS devices, pre-fabricated units for the satellite branches, and smart cards. The main goals were to support the rollout of a multi-channel strategy to determine which delivery channel was most effective in reaching rural populations and to measure it in a systematic way.

Even if the specific technologies were not replicable, the approach to implementing a mix of distribution channels certainly can be. USAID and other donors should also encourage implementing partners to put in place a systematic process for collecting and analyzing costing and usage data so more quantifiable measures of outcome are available and can inform future investments.

D. Conclusion

There have been a variety of branchless banking business models and experiments in the past decade. Though branchless banking is still new and evolving, there is good reason to be optimistic about its potential to expand financial access to a greater number of people. New initiatives and models seem to appear every month; Brazil, India, Kenya, the Philippines, and other countries have become the laboratory for innovation. There is no one recipe for success; building and maintaining a branchless banking ecosystem will require positive and productive government support, healthy and effective competition among providers, and willingness of both parties to share and collaborate.

Implications for USAID. Donors have important roles to play in branchless banking as facilitators and catalysts for private-sector involvement. Donors, like governments, have developmental objectives they wish to achieve in the financial sector. However, they should focus on providing support in a way that incentivizes the private sector to create solutions that can have developmental impact and be commercially viable.

While there are no consensus guidelines for donor interventions in branchless banking, there are some key principles to bear in mind:

- *Encourage positive and productive government policies*. Donors should collaborate with governments to put in place an open and transparent process for developing a regulatory framework for branchless banking. The framework should reflect the interests of the central bank, financial institutions, the private sector, and consumers.
- *Promote open and competitive markets*. Donors should encourage policies and marketbased incentives that promote the entry of a diverse set of players. The goal of competition is to provide consumers with a wide range of high-quality financial service providers, products, and services at affordable prices.
- *Facilitate collaboration and knowledge-sharing.* Donors should support data-gathering, analysis, and research that can benefit all players in the branchless banking ecosystem. Governments need information to develop effective policies. The private sector also needs knowledge to inform how business models will evolve and adapt to market conditions. Also, donors need data to make investment decisions.
- *Incentivize private-sector innovation.* Donors should stimulate the development of technology and new institutional arrangements by private-sector players. Donors should also provide incentives to the private sector to serve market segments they may not enter on their own initiative (i.e., unbanked and rural populations).
- *Empower and protect consumers*. Donors should work with governments to ensure that consumer protection is an integral part of branchless banking regulations. If not properly monitored, new business models, methods of service delivery, and new technologies can increase the risk of consumer fraud and abuse. It is important that consumers are given full disclosure about the terms and conditions of products, fees, and procedures for complaint and redress.

Table 5. Areas Where USAID Could Intervene to Enable Branchless Banking

Level	Actions
Policy	 Collaborate with regulators, policymakers, and other donors to develop an enabling regulatory framework for branchless banking. Collaborate with governments and/or other funders on financial literacy and financial education initiatives.
Industry	 Support issues such as strengthening the retail payment infrastructure, inter- operability standards for branchless banking devices, and risk-management guidelines and standards for providers. Support government efforts to leverage G2P payments for financial inclusion. Support research and knowledge-sharing, especially action research and impact studies.
Retail	 Establish a grant or challenge fund to seed innovative business models and new-product development. Promote public-private partnerships through the use of Global Development Alliances, Overseas Private Investment Corporation loans, and Development Credit Authority guarantees. Act as an intermediary by bringing together potential partners in branchless banking, including MNOs, banks, MFIs, and ICT providers. Provide technical assistance to MNOs, banks, MFIs, and payment providers on market research and product development for poor and rural clients.

ANNEX A. DIAGNOSTIC CHECKLIST

This checklist serves as a reference for U.S. government program officers when considering branchless banking interventions, including preconditions and other factors likely to contribute to sustainability and scalability. The questions below provide a snapshot of the demand, supply, and enabling environment for branchless banking in a specific country. Used in conjunction with the primer and the model scopes of work in Annex B, this checklist can be used to determine if program resources should be dedicated to branchless banking and which interventions would be most appropriate given the country context and USAID objectives. This checklist may also be used in conjunction with the diagnostic checklist in *FS Series #9, Enabling Mobile Money Interventions*.

Key Questions	Yes	No	Comments
Demand			
Is there a large portion of the population without a bank account?			A low percentage (<50%) of people with accounts may indicate a lack of access. It may also be useful to look at where there is a higher concentration of the population without access, by geographical location and income segment, for example.
Is it costly and inconvenient to make financial transactions (e.g., withdrawals, deposits, payments, and transfers)?			If clients have to travel long distances and pay high fees to access services, it may present opportunities for using branchless banking to increase the number of service points.
Does a significant percentage of the population receive regular G2P payments?			Large numbers of G2P transfers can mean an opportunity to covert to electronic payments that can be paid to a smart card or bank account.
Is there a culture of using store credit to purchase goods?			Indicates that clients have an existing financial relationship outside a banking establishment that can be leveraged.
Does much of the population own or have access to a mobile phone?			High mobile penetration may indicate familiarity with SMS and other mobile-based services.
Is there a relatively large pre-paid airtime market? Is electronic top-up available (i.e., using mobile phones instead of scratch cards)?			May indicate readiness of the population to "trust" electronic money and make the transition from stored values on phones.
Is there significant migration from rural to urban areas?			A high level of mobility may indicate potential demand for remote transactions and money transfers.
Supply			
Are there any past and current efforts, public and private, in branchless banking in this country?			Look at what has been accomplished, what was not successful and why, and what successes can be built upon.
Can you identify private-sector partners (e.g., MNOs, financial institutions, or third- party providers) with which to work? Are they interested in expanding into new market segments?			Donors should provide incentives for private-sector engagement in branchless banking, and let them take the lead in identifying solutions.
Are there banks, MFIs, or other types of financial institutions located in the rural areas with a large branch/customer base?			It is important to choose established financial providers with an existing network in the rural areas from which branchless banking can be launched.

Key Questions	Yes	No	Comments
Do banks and/or MFIs currently have or are they planning to have robust core banking systems that can connect to a payment switch?			This is a prerequisite for any financial institution adopting an ICT-enabled approach because it ensures transactions can be processed accurately and in real-time.
Is there a dominant mobile operator with more than 50 percent of the market share?			Market share is important because it means a larger customer base for selling new services, a larger network of airtime resellers who can be converted into agents, stronger brand recognition, and a larger budget.
Is there a national interbank switch?			This makes it easier for electronic money transactions within and between larger banks, and between banks and remote devices (e.g., ATMs and POS devices).
Enabling Environment			
Is there regulation governing the use of non-bank agents?			If not, how does the regulator view the use of agents for the handling of deposits and withdrawals?
Are there AML/CFT regulations?			A flexible regime for AML/CFT, including KYC, is critical for transformational branchless banking.
Is there regulation governing the use of electronic money?			A key question is whether non-banks are permitted to issue electronic money and, if so, under what conditions and subject to what regulation.
Is there consumer protection regulation that governs bank and non-bank financial service providers?			Pricing and processes for customer redress must be transparent when banking transactions are performed outside of a traditional bank branch. Electronic payments also raise issues regarding data security, privacy, and confidentiality of customer information.
Is there regulation governing the operation of payment systems?			Inclusive payment system regulation and effective payment system oversight are needed to achieve scale.
Is there regulation governing competition relevant to the banking and telecommunications sectors?			Policies governing competition among providers will affect key issues such as fair access to bearer channels by competing providers.
USAID Programmatic Considerations			
Is there any existing USAID program in which branchless banking interventions could be integrated?			If so, ensure proper design with some flexibility and use appropriate mechanisms from the beginning.
Are the timeline and resources realistic to achieve the objectives of branchless banking initiatives?			Branchless banking efforts usually take time to implement effectively. Missions should have resources and long-term programming to support this for three or more years.

ANNEX B. MODEL SCOPES OF WORK

Scope of Work I – Short Term Technical Assistance Financial Sector Evaluation and Branchless Banking Feasibility Study

1. Background and Rationale

[Insert text about USAID/[Country] mission's objectives and current programming].

Branchless banking is defined as "the delivery of financial services outside conventional bank branches using information and communications technologies and non-bank retail agents" (CGAP, 2006). The underlying proposition behind the current trends in branchless banking is that by piggy-backing on existing facilities (e.g., a pharmacy) and devices owned by customers (e.g., mobile phones) or retailers (e.g., POS devices) banks could provide simple transactional services without having a physical presence. Branchless banking has potential to lower the cost of delivering financial services and expand the formal financial system to previously unreached areas and populations.

USAID/[Country] is interested to explore whether current market conditions in [Country] are suitable for a branchless banking approach (i.e., use of non-bank agents) and what are the appropriate entry points for the mission. The mission seeks a short-term consultant (or team of consultants) with experience in financial-sector development and ICT to assist in this process.

2. Objective

The objective of this consultancy is to conduct an evaluation of [Country]'s financial sector and determine the feasibility of supporting branchless banking models for expansion of financial access to under-served and unbanked populations.

The consultant will 1) provide the mission with an assessment of the feasibility of implementing a branchless banking approach to financial services provision in [Country]; 2) recommend potential business models, technology, partners, and other elements required for successful solutions; 3) identify mechanisms and/or programs through which the branchless banking activity can be implemented; and 4) describe next steps toward development and implementation.

3. Tasks and Activities

- 1. Background research and preparation (3 days)
 - a) Review background documentation regarding current USAID strategic objectives and programs in [Country] to identify programs whose activities might intersect with branchless banking.

- b) Research literature on branchless banking models, the state of financial-sector development and financial inclusion in [Country], and relevant regulations, including those governing financial services, telecommunications, remittances, and payments.
- c) In consultation with the mission, develop a tentative work plan and schedule of meetings/interviews to be conducted in-country.
- 2. In-country assessment (20 days)
 - a) Market/demand
 - i. Identify current constraints for access to finance (e.g., distance, cost, available products and services, inadequate payment systems).
 - ii. Identify the different formal and informal channels that rural and poor populations are using to access financial services.
 - iii. Identify available recent and reliable national survey sources containing quantitative and qualitative data on financial services demand.
 - b) Supply
 - i. Meet with providers of financial services (e.g., commercial banks, MFIs, cooperatives, non-bank financial institutions), looking specifically at their strategic orientation and position in the market, branch network and customer base, products and services, and core banking system. Identify potential constraints for offering branchless banking on operational and regulatory levels.
 - ii. Meet with key players in the telecommunications sector to understand the outlook for telecoms. Discuss mobile penetration, reliability of Internet and mobile connectivity, the competitive landscape, channel security, and regulatory constraints for non-bank players to conduct financial transactions.
 - iii. Identify and visit networks and retail chains that could serve as agents for branchless banking.
 - c) ICT infrastructure
 - i. Identify and meet with payment platform providers. Assess platforms in terms of connectivity, reliability, security, and accessibility (distribution network and cost). Platforms could include formal switches/Automatic Clearing House, ATMs, and alternative platforms such as stored-value and debit cards. Analysis should include ownership structure, customer base, and pricing structure.
 - ii. Identify and meet with ICT providers working in the country, including card issuers, device providers, and third-party providers that provide outsourcing services. Analysis should include customer base, strategic orientation, and pricing structure.

- d) Enabling environment
 - i. Meet with regulatory authorities, including banking regulators, telecommunications regulators, the Ministry of Finance, and other relevant policymakers regarding the regulatory framework for branchless banking.
 - ii. Meet with government ministries in charge of social welfare and cash transfer programs to assess the potential for leveraging G2P payments to achieve financial inclusion.
- iii. Meet with relevant donors working in branchless banking to identify gaps and/or potential areas of collaboration.
- 3. Preparation of deliverables (7 days)

The final feasibility report should include, at minimum:

- a) Analysis of the financial sector —whom it serves, key players in the market, major constraints, opportunities for branchless banking
- b) Summary of current initiatives in branchless banking, if any, and implications for USAID
- c) Analysis of regulatory environment for branchless banking, including issues that must be clarified, amended, or approved to facilitate the development of branchless banking. These issues include non-bank agents, AML/CFT and KYC regulations, m-money, consumer protection, and payment systems regulation.
- d) Positive or negative evaluation for launching a branchless banking activity, and recommendation on which existing mission program(s) to leverage for implementation
- e) Identification and analysis of potential partner commercial banks, MFIs, MNOs, ICT providers, and other third-party providers for a potential pilot activity. The consultant should propose criteria for partner selection such as:
 - i. interest in serving the mission's targeted market segment/geographic areas
- ii. current strategy and market position
- iii. institutional capacity
- iv. feasibility of business model and technology used
- f) One-page program description for a pilot program
- g) Proposed next steps and action plan for implementation of pilot program

4. Deliverables

1. Work plan for completing the scope of work, including timeline

- 2. Debriefing PowerPoint presentation to mission summarizing key findings and recommendations
- 3. Feasibility assessment report and relevant appendices

5. Period of Performance and Level of Effort

This consultancy will be carried out between [date] and [date]. A total of 30 days level of effort will be provided.

Scope of Work II – Long-Term Technical Assistance Implementing a Pilot Branchless Banking Program in [XX]

1. Background and Rationale

[Insert text about USAID/[Country] mission's objectives and current programming].

Branchless banking is defined as "the delivery of financial services outside conventional bank branches using information and communications technologies and nonbank retail agents" (CGAP, 2006). The underlying proposition behind the current trends in branchless banking is that by piggy-backing on existing facilities (e.g., a pharmacy) and devices owned by customers (e.g., mobile phones) or by retailers (e.g., POS devices) banks could provide simple transactional services without having a physical presence. Branchless banking has potential to lower the cost of delivering financial services and expand the formal financial system to previously unreached areas and populations.

In [date], USAID/[Country] hired a consultant to conduct a feasibility study for branchless banking. The study made a positive assessment for branchless banking to contribute to the expansion of financial services to the mission-targeted areas of [xx] and [xx]. The study also outlined potential models and approaches, including organizations with whom the mission and its implementing partner, [xx], could partner to carry out the activity. The mission now seeks a long-term consultant to assist in the implementation of a pilot activity based on the recommendations laid out in the study.

2. Objective

The purpose of this consultancy is to implement a pilot branchless banking program in [xx] area, document the success and challenges faced during the pilot phase, and make recommendations regarding a broader rollout of the activity to areas targeted by the mission. The pilot program will take place over a period of 18 months, with the final six months dedicated to evaluating, knowledge-sharing, and preparing for the next steps.

3. Tasks and Activities

The consultant, in collaboration with the [xx] program, will serve as the lead branchless banking advisor and manage all aspects of implementation, including partnership management, market research and product development, marketing and promotion, reporting and knowledge-sharing, and monitoring and evaluation. The following outlines the consultant's general activities.

The consultant will be expected to submit a more detailed annual work plan at the beginning of the pilot program. This will include a more comprehensive listing of activities, personnel and teaming requirements, estimated budget, and a timeline for completion.

- 1. Partnership management
 - a) *Selection of partners*. The consultant will review the recommendation from the feasibility study and conduct a ground-truthing exercise to evaluate and confirm the partners' interest and capacity before selecting partner organizations.
 - b) *Negotiation of partnership agreements*. The consultant will take the lead in drafting and negotiating an agreement or memorandum of understanding with the partner institutions. The memorandum will lay out the roles and responsibilities of each party, expected results and outcomes from the pilot program, reporting and knowledge-sharing requirements, and any cost-sharing arrangement.
 - c) *Coordination and consultation with regulatory authorities*. The consultant will act as the facilitator and intermediary between the Central Bank (and other relevant policymakers) and partner institutions to ensure the smooth implementation of the pilot program. Leveraging USAID's existing government relationships, the consultant will serve as the conduit between the regulators and branchless banking partners to discuss proposed regulations under consideration and ensure that these regulations have positive effects on the development of branchless banking in the country.
- 2. Market research and product development
 - a) *Client-level market research*. The consultant will conduct a market study to verify and deepen understanding about demand for financial services among targeted recipients. Topics covered will include:
 - i. which segments are more eager to discover and use branchless banking services
 - ii. which services are considered more useful and/or easy to introduce first
 - iii. factors that influence adoption of services
 - iv. main barriers for using/adopting these services (compared with other services)
 - v. value proposition and operational mix to optimize service penetration
 - b) The consultant's specific tasks include:
 - i. selection and oversight of market research team
 - ii. technical support on design of survey instruments, sampling selection, and methodologies used (quantitative and qualitative)
 - iii. analysis and presentation of findings
 - c) *Product development*. The consultant will work with partner financial institutions and/or MNOs to develop a product that is specifically designed for delivery through branchless banking channels. The product will incorporate the results of the client market study,

with relevant adjustments made to be compatible with the financial institution's back-end systems and processes, and in compliance with any regulatory restrictions.

- d) *Marketing and promotion*. The consultant will advise partner institutions on the design and rollout of a marketing campaign that is tailored for the pilot's targeted markets. A mix of media and channels should be used to ensure a comprehensive campaign. If possible, community leaders should be used to help with the marketing because they are known and trusted by the potential clients.
- e) *Customer financial education*. The consultant will work with partner institutions to design financial education materials that could be used by agents and financial institution staff to raise awareness among previously unbanked customers on the value and benefits of financial services. The materials should use layman's terms to explain the features and cost of the product being sold, and include detailed instructions on how to use the technology at the service point.
- 3. Capacity-building
 - a) *Training*. The consultant will assess partner organizations' training needs and organize training on a demand-led basis. The consultant can conduct the training or hire an external expert (local or international, depending on budget). Courses may include marketing branchless banking services to low-income clients, building viable agent networks, and designing appropriate incentive structures.

In addition to classroom-based training, the consultant will arrange periodic seminars and conferences, bringing in international experts to share their experiences in branchless banking. Depending on what resources are available, the consultant can organize study tours for regulators, financial institutions, and MNOs to visit branchless banking models in other countries.

- b) *Technical assistance*. The consultant will collaboratively develop and implement a technical assistance plan for partner organizations. Areas of technical assistance can include product development for low-income clients, liquidity management for agents, internal controls and monitoring of agent networks, and regulatory compliance.
- 4. Reporting and knowledge-sharing
 - a) *Reporting*. The consultant will submit a quarterly progress report that will detail the status of implementation. The quarterly report will also include monitoring and evaluation indicators (see Section E) and a financial report. The consultant will also submit a detailed annual work plan outlining the expected activities for the coming year and a proposed budget.
 - b) *Knowledge-sharing*. The consultant will be expected to capture the lessons learned from the pilot program at each phase of implementation. As a guiding framework, the consultant will develop a set of learning topics for the pilot program, around which

knowledge-sharing documents can be developed. The consultant will work in consultation with the mission and partner institutions to identify these topics. The drafting of the documents will be done in collaboration with the partner institutions.

- 5. Monitoring and evaluation
 - a) *Performance indicators*. The consultant will develop a framework and appropriate quantitative and qualitative indicators for monitoring and evaluating the progress of the pilot implementation. These indicators will be reported on a semi-annual basis and submitted as an appendix to the consultant's quarterly progress report.

Indicators should cover, at minimum:

- i. *Outreach*: number of new accounts opened; number of service points; number of bank partners; number of municipalities covered
- ii. *Usage*: number of transactions per agent per month; value of transactions; number of transactions by type of service (e.g., withdrawals, deposits, payments); average value of transaction by service
- *Financial*: total consolidated revenue per month; average revenue per agent, per month; average expenses per agent, per month; average net profit per agent, per month; portion of revenue earned from financial transactions compared with other sources
- iv. *Technology*: number of terminals in use; number of transaction errors reported each month; number of occurrences of system downtime
- b) *Program evaluation*. The consultant will conduct a mid-term evaluation after the first year of the project to assess whether the pilot program has achieved the expected results, what worked and what did not, and suggested adjustments for the remaining six months of the pilot. The consultant will also conduct an end-of-project evaluation that summarizes key accomplishments, challenges, suggested improvements, and recommendations for next steps.

4. Deliverables

- 1. Annual work plan and budget
- 2. Monitoring and evaluation framework
- 3. Quarterly progress report, which includes performance indicators from the monitoring and evaluation framework
- 4. Knowledge-sharing products on topics agreed to in consultation with the mission
- 5. Mid-term evaluation
- 6. End-of-project evaluation

5. Period of Performance and Level of Effort

The consultancy will be for a period of two years from [date] to [date], with possible extension to a third year if deemed necessary. A total of 200 days level of effort will be provided.

ANNEX C. BIBLIOGRAPHY

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ANNEX D: GLOSSARY

Anti-money laundering/combating the financing of terrorism (AML/CFT): The legal controls that require financial institutions and other regulated entities to prevent or report money laundering activities. AML and checks relating to CFT increasingly use specialized transaction monitoring software, particularly name-analysis software and trend monitoring software.

Application service provider (ASP)/third-party provider: A business that provides computerbased services to customers over a network. Software offered using an ASP model is also sometimes called on-demand software or software as a service. The need for ASPs has evolved from the increasing costs of specialized software that have far exceeded the price range of smalland medium-sized businesses. As well, the growing complexities of software have led to huge distribution costs. Through ASPs, the complexities and costs of such software can be cut.

Automated teller machine (ATM): A computerized telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without a cashier, human clerk, or bank teller. Using an ATM, customers can access their bank accounts to make cash withdrawals (or credit card cash advances), check their account balances, and purchase mobile phone prepaid credit.

Authentication: The process required to access secure data or enter a secure area. The requestor for access or entry authenticates himself by proving his identity with a password or a personal identity number (PIN), an ID card, or unique biometric data such as a fingerprint (Wikipedia).

Biometric technology: A form of identity-access management and access control. It is the security technology of fingerprint readers, sometimes used in POS devices to identify the user.

Branchless banking: The delivery of financial services outside conventional bank branches using information and communications technologies and non-bank retail agents (e.g., over card-based networks or with mobile phones).

Code division multiple access (CDMA): A channel access method used by radio communication technologies. A basic concept in data communication is allowing several transmitters to send information simultaneously over a single communication channel. This allows several users to share a bandwidth of frequencies, a concept called multiplexing. CDMA employs spread-spectrum technology and a special coding scheme (in which each transmitter is assigned a code) to allow more than one user to be multiplexed over the same physical channel.

Core banking system: A financial institution's internal management or "back office" system. It is the software used to manage clients' accounts, a bank's or institution's general finances, and prepare basic or sophisticated financial reports for internal or external use.

Data repository: A data repository stores enough customer information to facilitate the processing of financial transactions. The data repository would also house sufficient information to authenticate the customer in each transaction. Housing transactional and consumer data also

facilitates customer care and the reconciliation of certain financial transactions that use the application development environment to fulfill services. For example, selling airtime would require reconciliation between processed transactions and the airtime loaded by the network operator.

Fiber-optic communication: A method of transmitting information by sending light through an optical fiber. The light forms an electromagnetic carrier wave modulated to carry information. Because of its advantages over electrical transmission, optical fiber has largely replaced copper wire communications in core networks in the developed world.

Interbank switch: A system that enables all banks' debit cards to be used on other bank's ATMs and POS terminals.

General packet radio service (GPRS): A mobile data service available to users of GSM mobile phones. GPRSs can be used for services such as a wireless access point (WAP), SMS, multimedia messaging services, and Internet communication services (e.g., e-mail and access to the Web). GPRS data transfer is typically charged per megabyte of traffic transferred. On the other hand, data communication via traditional circuit switching is billed per minute of connection time, independent of whether the user is actually using the capacity or is idle.

Global system for mobile communications (GSM): The most popular standard for mobile phones in the world. Its promoter, the GSM Association, estimates that 82 percent of the global mobile market uses the standard. (It is used by more than 3 billion people in more than 212 countries and territories.) Its ubiquity makes international roaming very common between mobile phone operators, enabling subscribers to use their phones in many parts of the world. GSM differs from its predecessors in that both signaling and speech channels are digital.

Interconnectivity: The ability of two or more computers to easily locate and communicate with each other over an infrastructure that provides the speed and clarity to accomplish a proposed task. In branchless banking, the interconnectivity of payment switches, ATMs, POS devices, and mobile networks allows users to conduct transactions seamlessly and affordably across financial institutions, vendors, and mobile service providers (see *Interoperability*).

Interoperability: The ability of a computer system to run applications from different vendors and to interact with other computers across local or wide-area networks, regardless of their physical architecture and operating systems. Interoperability is made possible by hardware and software components that conform to open standards, such as those used for the Internet.

Know Your Customer (KYC): The due diligence and bank regulation that financial institutions perform to identify their clients and ascertain information pertinent to doing financial business with them. Beyond verifying names, KYC monitors customers' transactions against their recorded profile, account(s) history, and with peers.

Mobile money (**m-money**): The electronic alternative to cash. It is monetary value stored electronically on receipt of funds and accepted by payees other than the issuer.

Magnetic-stripe card: A POS technology option for agents. Card readers on POS terminals read information stored on magnetic-stripe cards. In offline mode, card readers may be able to write on the stripe. Magnetic-stripe cards can be virtual (i.e., embedded in a mobile phone).

Mobile financial services (MFS): A range of financial services offered by mobile phone. M-payments and m-banking are forms of MFS.

Mobile payments (m-payments): MMT and person-to-business payments that are made with a mobile phone. Mobile proximity payments involve a mobile phone being used to make payments at a POS terminal. In these cases, the mobile phone may communicate with the POS through wireless technologies, such as Near Field Communication.

Mobile banking (**m-banking**): The connection between a mobile phone and a personal or business bank account. Mobile banking allows customers to use their mobile phones as another channel for banking services, such as deposits, withdrawals, account transfers, bill payments, and balance inquiries. Most mobile banking applications are additive — they provide a new delivery channel to bank customers. Transformative models integrate unbanked populations into the formal financial sector.

Mobile wallet (**m-wallet**): An electronic wallet that is accessed only or mainly with a mobile phone. GSMA provides the following more specific definition: M-wallet "is a data repository that houses consumer data sufficient to facilitate a financial transaction from a mobile handset, and the applicable intelligence to translate an instruction from a consumer through a mobile handset/bearer/application into a message that a financial institution can use to debit or credit bank accounts or payment instruments."

Non-bank agents: Retail, lottery, and postal outlets that work on behalf of a financial institution and let clients deposit, withdraw, and transfer funds, pay their bills or an insurance plan, submit balance inquiries, or receive government benefits or a direct deposit from their employer. Transactions are processed with a mobile phone, POS card readers, barcode scanners, and sometimes personal computers that connect with the bank's server via a dial-up or other data connection. A clerk at the outlet — not a bank teller — collects and disburses cash. In some cases, depending on local regulation, a clerk can open bank accounts for new clients and fill in credit applications.

Personal digital assistant (PDA): A handheld computer also known as a small or palmtop computer. Some PDAs have audio capabilities, enabling them to be used as mobile phones, (smart phones), Web browsers, or portable media players. PDAs can access the Internet, intranets, or extranets via Wi-Fi, or wireless wide-area networks. Many PDAs use touch-screen technology.

Point-of-sale (POS) device: An electronic retail payment device (e.g., a mobile phone or other handheld device) that reads a customer's bank name and account number when a bank or credit card is swiped or a number is entered. It contacts the bank and, if funds are available in the customer's account, facilitates the transfer of the customer-approved amount to the seller's account. It can also print receipts.

Subscriber identity module (SIM): Part of a removable smart card integrated circuit card, or SIM card, for mobile telephony devices, including mobile phones and computers. SIM cards securely store the service-subscriber key used to identify a subscriber. Users can change phones by simply removing the SIM card from one mobile phone and inserting it into another mobile phone or broadband telephony device.

SIM application toolkit (STK): A standard of the GSM system that enables the SIM to initiate actions that can be used for value-added services. STK comprises a set of commands programmed into the SIM card that define how the SIM should interact directly with the outside world and initiates commands independently of the handset and the network. This enables the SIM to build up an interactive exchange between a network application and the user, and access or control access to the network. The SIM also gives commands to the handset, such as a display menu, and asks for user input. STK has been used by many mobile operators worldwide for many applications, often where a menu-based approach is required, such as m-banking.

Short messaging system (SMS): A communication service component of GSM that standardized communications protocols to allow the exchange of short text messages between mobile phone devices. SMS text messaging is the most widely used data application in the world; it is commonly used as a synonym for all types of short text messaging and the user activity itself.

Smart cards: Cards with an embedded chip that can securely store and update information on available bank balances and recent transactions. Some POS devices are able to authorize transactions between agent cards and client cards. It is an offline technology solution that requires only sporadic connectivity.

Two-factor security: Security that mitigates risks that may exist when a client-bank interaction occurs through a third party (e.g., requiring a card and PIN identification).

Voice-over-Internet protocol (VoIP, IPA): A protocol optimized for the transmission of voice through the Internet or other packet-switched networks. VoIP is often used abstractly to refer to the actual transmission of voice, rather than the protocol implementing it. This latter concept is also called IP telephony, Internet telephony, voice over broadband, broadband telephony, and broadband phone.

Unstructured Supplementary Service Data (USSD): A standard for transmitting information over GSM signaling channels. It is generally associated with real-time or instant messaging-type phone services and is mostly used as a method to query the available balance and other similar information in pre-paid GSM services. The function is triggered when sending USSD is network-dependent and depends on the specific services the operator is offering.

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