

# Branchless Banking 2010: Who's Served? At What Price? What's Next?

Excitement around branchless banking is rapidly turning into action by the private sector. Of the 79 live mobile money deployments tracked by the GSM Association (GSMA),<sup>1</sup> two-thirds have launched in 2009 and 2010. Nokia and Paypal are investing in mobile payment platforms available to any client regardless of his or her mobile network or bank, a development that could shake up markets.<sup>2</sup> And early branchless banking leaders are launching out in new directions. Brazilian banks are increasingly eager to use agents equipped with point-of-sale (POS) devices to originate loans. In Kenya, Safaricom has teamed up with Equity Bank, the country's largest bank, to offer M-Kesho, a service that uses M-PESA's mobile payments platform to offer a full range of Equity's bank products.

Will these sizeable investments pay off? Many in the private sector believe reaching large numbers of mass market clients is a precondition to large-scale profits, but at the same time, they are uncertain about how quickly branchless banking will gain traction with the unbanked, low-income clients who make up the mass market.<sup>3</sup> In other words, the prospects of branchless banking are still unclear.

This Focus Note evaluates the evidence from 18 branchless banking providers with a collective total of more than 50 million customers (see Table 1) to answer three questions:

- Does branchless banking reach large numbers of low-income and unbanked clients?

- Are prices for branchless banking lower than prices for traditional banking for the kinds of transactions low-income and unbanked people want to do?
- What other services do these customers want from branchless banking?

The answers to these questions have implications for the business case, customers, and those who hope that branchless banking can boost financial inclusion.

The data offer some answers. On the question of scale, branchless banking *can* reach large numbers of the unbanked relatively quickly. CGAP looked at the outreach of eight providers globally for which good data were available by drawing on 13 studies that surveyed 16,708 branchless banking clients.<sup>4</sup> The eight providers average 3.73 million active registered users, of which 37 percent or 1.39 million were previously unbanked.<sup>5</sup> Five of the providers reach more previously unbanked clients than the largest microfinance institution (MFI) in the provider's country—on average, 79 percent more. These five branchless banking providers grew quickly, surpassing the largest MFI in number of customers within three years. This is not to suggest branchless banking is replacing or eclipsing MFIs. The services branchless banking typically provides (payments) are complimentary to MFI microloans: both meet a widespread need for which clients are willing to pay.

On the question of prices, branchless banking is cheaper than traditional banking, but the price

1 GSMA is the global trade association for the mobile communications industry. Its Mobile Money Deployment Tracker is viewable at <http://www.wirelessintelligence.com/mobile-money>.

2 Nokia is the world's largest handset manufacturer. PayPal is a global e-commerce payment processor.

3 In this paper, "branchless banking" is defined as the delivery of financial services outside conventional bank branches using information and communications technologies and nonbank retail agents, for example, over card-based networks or with mobile phones. An individual who is "unbanked" does not have access to affordable, convenient, secure financial services. According to *Financial Access 2009* (CGAP 2009), there are 2.7 billion unbanked adults worldwide. By "low-income," we mean something broader than the poverty line of US\$1.25 per day commonly used by the World Bank. We mean the majority of consumers in developing countries who are economically active and may earn up to US\$10 per day. The "mass market" in most developing countries is comprised of low-income, unbanked people, who make up the majority of the population.

4 Five of these studies were conducted by CGAP; eight were conducted by others. See Annex 1 for details.

5 There is often a large gap between the number of registered users and active users. We focus on active clients to avoid overstating outreach. We used providers' own definitions of "active", which range from conducting one transaction per month to conducting a transaction once every three months.

**Table 1: Branchless Banking Services Analyzed**

Country	Branchless Banking Service	Outreach	Pricing
Afghanistan	M-Paisa		X
Brazil	Banco Postal	X	
	Bradesco		X
	Caixa Economica		X
Cambodia	WING Money	X	X
Cote d'Ivoire	MTN Mobile Money		X
	Orange Money		X
India	Eko		X
	FINO	X	
Kenya	M-PESA	X	X
	Zap		X
Pakistan	Easypaisa		X
The Philippines	GCash	X	X
	Smart Money	X	X
South Africa	WIZZIT	X	X
	MTN Mobile Money		X
Tanzania	M-PESA	X	X
	Zap		X

advantage may not be as wide as one might anticipate. On average, branchless banking is 19 percent cheaper than comparable products offered by banks via traditional channels. Branchless banking is particularly cheap (50 percent cheaper) if clients use it for medium-term savings and bill payment. These findings are based on analysis of the prices of 16 branchless banking services and 10 traditional banks.<sup>6</sup>

Finally, there is clear evidence that low-income clients demand more from branchless banking providers, particularly products and services that go beyond payments. In mature markets like Brazil and Kenya where branchless banking has reached millions of clients, providers and third parties are responding to client demand and linking new products like loans and insurance to the basic electronic wallet or prepaid card. However, in these cases it took years for branchless banking to develop products beyond payments. To speed this development in other markets, a process is needed to rapidly and cheaply

test new products that meet the needs of low-income clients before going full scale to market. We propose several ways to do this in the final section of this paper.

## The Reach of Branchless Banking

Branchless banking does reach substantial numbers of unbanked consumers, as evidenced by data from eight branchless banking pioneers. Expectations about branchless banking have been colored by the experiences of Kenya and Brazil. In Kenya, nearly half (45 percent) of the adult population is registered for M-PESA, double the number of those with a bank account (23 percent) (FSD Kenya 2009). In Brazil, banks operate 71,000 deposit-handling agents in every municipality of the country (Jayo 2010). According to CGAP research from 2007 (Siedek), at least 75 percent of Brazilians use branchless banking agents, compared to 43 percent who have a bank account.

<sup>6</sup> Annex 2 describes CGAP's methodology. A PowerPoint and CGAP Web article are also online at <http://www.cgap.org/p/site/c/template.rc/1.26.13493/>

### Box 1: Summary—Outreach of Branchless Banking Providers

1. In eight branchless banking pioneers, 37% (on average 1.39 million) of active clients were previously unbanked.
2. In five of the eight cases, the branchless banking provider reaches more previously unbanked people than the largest MFI in the same country: on average 79% more.
3. The same five providers grew rapidly, needing on average three years to acquire more unbanked clients than the largest MFI in the same market.

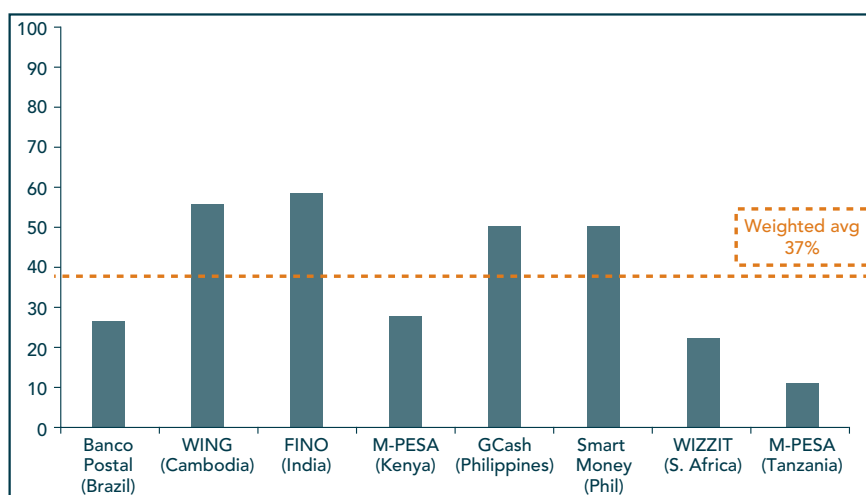
However, these experiences are outliers. Beyond Brazil and Kenya, no other developing country can claim such widespread usage of branchless banking. We have known this for some time. In 2008, CGAP estimated less than 10 percent of all branchless banking clients are poor, *and* new to banking, *and* are using these channels for activities other than paying bills, purchasing airtime, or withdrawing government cash benefits (Ivatury and Mas). The estimate was conservative enough to be true, but very little data were available to fine tune it.

The situation is beginning to change. CGAP pulled together results of field research with 16,708 branchless banking clients (see the annex for details) from eight of the earliest branchless banking pioneers: Banco Postal (Brazil), FINO (India), GCash (the Philippines), M-PESA (Kenya), M-PESA (Tanzania), Smart Money (the Philippines), WING (Cambodia), and WIZZIT (South Africa).

Together, these eight institutions have more than 50 million registered users, 29.9 million of which are active. If we calculate a weighted average for these institutions, 37 percent of their active clients were previously unbanked (see Figure 1). Clients who did not previously have a bank account represent half or more of active clients in four of the eight services that were studied: FINO, GCash, Smart Money, and WING.<sup>7</sup>

Reach to the unbanked is more limited in the other four institutions. For M-PESA in Kenya, 72 percent of clients lived in households with at least one account with a formal financial institution, indicating significant overlap between the user base of M-PESA and banks (Jack and Suri 2009). This was true in 2008 at the

**Figure 1: Percentage of active branchless banking clients who were previously unbanked**



Source: Bosch and Anson (2008), Bowen and Goldstein (2010), Consulta (2010), FSD Tanzania (2009), Jack and Suri (2009), Leishman (2009), Morawczynski et al. (2010), Morawczynski and Pickens (2009), Pickens (2009), and CGAP interviews with senior managers of Banco Postal, FINO, and WING. See Annex 1 for additional detail.

7 Calculations for FINO are conservative, based on discussions with FINO staff and CGAP analysis.

time the research was conducted, though the pace of client acquisition means that this has probably changed by now.<sup>8</sup> In Tanzania, the 2009 FinScope study showed approximately 11 percent of registered M-PESA clients had no other access to formal or semi-formal finance.<sup>9</sup> Data on Banco Postal suggest one-quarter of accounts are held by the previously unbanked (Bosch and Anson 2008). Three-quarters of WIZZIT clients had another bank account at the time they signed up for mobile money (Consulta 2010); this has not changed greatly from four years earlier (Ivatury and Pickens 2006).

Somewhat less data are available about income levels of clients: we can speak about the poverty level of clients of five branchless banking services.<sup>10</sup> Low-income people represent a clear majority of clients in only one instance—Brazil. M-PESA is not one of the providers with a majority of low-income clients, at least at the time data were gathered in mid-2008. According to Jack and Suri (2009), the average Kenyan M-PESA user reports household assets equal to US\$13,350, or 21 percent higher than that of nonclients. They also report annual individual expenditures of US\$4,252—67 percent higher than those of nonclients. This translates to a daily expenditure of US\$11.64 per person, showing that while these clients are not wealthy, they are definitely better off than many in Kenya. Low-income consumers make up just one-quarter of the active clients of three other branchless banking services—WIZZIT, GCash, and Smart Money (Pickens 2009 and Consulta 2010).

To summarize, in cases for which data are available, branchless banking does reach large numbers of the unbanked and low-income clients, but they are still the minority. Does this mean branchless banking has a poor track record on financial inclusion?

No. First, branchless banking services may simply need more time to attain their full reach to unbanked

and low-income clients. Branchless banking has been widely deployed in Brazil for a decade. But the providers we analyzed in India, Kenya, the Philippines, and South Africa have operated on average for 4.5 years. WING, a start-up, has operated for less than two years. We may be trying to reach conclusions about branchless banking before it hits its stride.

Second, concentrating on the unbanked misses branchless banking's substantial benefit to the underbanked—those who nominally have access, but find the quality of service falls short, either in cost, convenience, security, or functionality. Many of the world's banked are underbanked. To take one example, 92 percent of Kenyan bank clients use at least one informal financial instrument (FSD Kenya 2009). In other words, nearly all Kenyan bank clients find they must still resort to unregulated, informal means of meeting their needs. The quality of service can be even worse in accounts that banks are required to provide to low-income consumers: for example, no-frills accounts in India (Ramji 2009) or Mzansi in South Africa (BFA 2009).

Third, the data show that branchless banking providers can expand their outreach to the previously unbanked at least as fast as MFIs have. Three of the branchless banking services have yet to overtake the largest MFI in their market in terms of outreach numbers (GCash, WING, and WIZZIT). In five of the eight institutions we looked at—Banco Postal (Brazil), FINO (India), M-PESA (Kenya), M-PESA (Tanzania), and Smart Money (the Philippines)—branchless banking has on average 79 percent more active, previously unbanked clients than the largest MFI in the same country has among its microcredit clients (see Table 2). They also grew faster than the MFIs. On average, the five branchless banking providers needed three years to amass a base of active, previously unbanked clients that surpasses that of the

8 Vodafone says it believes the profile of M-PESA clients has changed and at least 50 percent of clients are unbanked. Since mid-2008, M-PESA has added more than 2 million clients; most of them are reportedly from low-income segments of the population. M-PESA is almost certainly reaching further down the income ladder in 2010 than before, though how far is still unclear and is ripe for rigorous research.

9 Communication with Ian Robinson and Annette Salter, FSD Tanzania, based on FinScope 2009, a nationwide representative survey.

10 Data on the income level of users are available for five services: branchless banking for Brazilian clients GCash and Smart Money (the Philippines), M-PESA (Kenya), and WIZZIT (South Africa). Different studies used different yardsticks to measure income. One team of researchers (Jack and Suri) attempted a detailed counting of client income sources and assets but did not provide a yardstick with which to contextualize the findings (e.g., comparing their findings to those in the Kenya Integrated Budget Household Survey). In the Philippines and South Africa surveys, income was compared to the national poverty line. The Brazil survey applied income and several psychosocial indicators to five consumer segments from A (affluent) to E (poorest).

**Table 2: Active, unbanked clients of eight branchless banking pioneers and largest MFI in same country**

Country	Branchless banking provider	Branchless banking: active, previously unbanked clients	Largest MFI in the same market	MFI: active microloan clients
Brazil	Banco Postal	1,461,850	Banco do Nordeste	528,792
Cambodia	WING	56,000	Amret Microfinance	226,262
India	FINO	6,050,667	SKS	5,300,000
Kenya	Safaricom	1,866,896	Equity Bank	700,000
Philippines	Globe	247,500	CARD	987,435
Philippines	Smart	1,320,000	CARD	987,435
South Africa	WIZZIT	27,375	Capitec Bank	638,616
Tanzania	Vodacom	108,820	PRIDE Tanzania	106,082

Source: Bosch and Anson (2008), Bowen and Goldstein (2010), Consulta (2010), FSD Tanzania (2009), Jack and Suri (2009), Leishman (2009), Morawczynski et al. (2010), Morawczynski and Pickens (2009), Pickens (2009), MIX for active microcredit borrowers, and CGAP interviews with senior managers of Banco Postal, FINO, and WING. See Annex 1 for additional detail.

largest MFI, which has been in operation an average of 15 years.

Branchless banking and microlending are quite different services: payment services (e.g., money transfer, bill payment) dominate the branchless banking space, and the market for payment services may well be larger than for credit. Anecdotally speaking, it is also possible some microlenders have approached market saturation, simply because the number of entrepreneurial individuals willing to take on the risk of a loan is probably a fraction of the total number of unbanked in a country. Further, the countries in our sample do not include those with the world's most successful MFIs (Bangladesh, for example). Additional research is needed to track how other branchless banking services perform in more markets. Microcredit and micropayments are complimentary, and no doubt there is room for growth of both branchless banking providers and traditional MFIs.

## Branchless Banking Prices

Branchless banking services in 10 countries are 19 percent cheaper than comparable bank services and half the price of informal options.<sup>11</sup> So far in this paper, we saw that branchless banking is able to reach large numbers of unbanked, low-income clients

in some countries. This section explores the prices branchless banking providers charge in relation with each other and with traditional bank products.

In 2008, CGAP predicted that branchless banking could offer basic banking services to clients at a cost of at least 50 percent less than what it would cost to serve them through traditional channels (Ivatury and Mas 2008). Bank branches require considerable investment in infrastructure, equipment, human resources, and security. By contrast, branchless banking leverages existing infrastructure (agent shops) and equipment (in many cases, mobile

### Box 2: Summary—Branchless Banking Prices

1. The average monthly price to use a bundle of branchless banking services is US\$3.90.
2. Branchless banking is 19% cheaper than comparable bank services overall and 38% cheaper at lower values at which poor people are likely to transact. The lower the transaction value, the cheaper branchless banking is in comparison.
3. Branchless banking is half the price of informal options for money transfer.
4. Client usage is influenced not only by absolute prices but also by the way prices are structured.

<sup>11</sup> The methodology used for the price comparison analysis is explained in Annex 2. The full results of CGAP's pricing work are available at "Study Finds Branchless Banking Cheaper than Banks," <http://www.cgap.org/p/site/c/template.rc/1.26.13493/>. In addition, a spreadsheet with details on each provider's pricing and a tool to compare prices of other services with those of 16 pioneers are available at <http://technology.cgap.org/2010/06/16/cgap-releases-pricing-tool-for-mobile-banking-for-the-unbanked>.

phones). CGAP expected that this would result in lower prices for customers. Has this happened?

To answer this question, CGAP compared prices charged by 16 branchless banking providers across 10 countries and by 10 traditional banks in five countries (see Table 3; details of the methodology can be found in the annex).<sup>12</sup> We found that branchless banking *is* cheaper than traditional banking, but the price advantage may not be as big as one might anticipate.

CGAP chose banks that specifically target the mass market and picked the lowest cost product with functionality similar to branchless banking products to include in the analysis. Eight different use cases, or ways that clients use a service, were examined: (i) sending money transfers, (ii) receiving money transfers, (iii) short-term safekeeping, (iv) medium-term savings for an asset, (v) bill payments, (vi) high-frequency transactional account (as a proxy for financial inclusion),<sup>13</sup> and two real life transaction bundles (vii) the average M-PESA user

and (viii) average Kenyan bank client.<sup>14</sup> Prices were adjusted for differences in purchasing power among countries to reflect that the value of US\$1 varies widely between the poorest country in the sample (Afghanistan, US\$800 GDP per capita) and the richest (Brazil, US\$10,200 GDP per capita).<sup>15</sup>

The average monthly cost (across all eight use cases) of using a branchless banking service is US\$3.90. There is a large cost range among branchless banking providers, from just US\$1.00 a month for Zap in Kenya to US\$8.20 a month for easypaisa in Pakistan (see Figure 2).

As a group, the costs of using branchless banking providers are 19 percent cheaper than those of banks. The average monthly price across all eight use cases is US\$4.80 when using traditional banks compared with US\$3.90 when using branchless banking providers. Once again, these overall averages belie a broad variation among use cases. Branchless banking is particularly cheap (50% cheaper) if clients use it for medium-term savings and bill payment. In one

**Table 3: Branchless banking providers and banks included in CGAP's pricing analysis**

Country	Branchless banking provider	Bank
Afghanistan	M-Paisa	
Brazil	Bradesco Expresso/Banco Postal Caixa Eletrônico	Bradesco Expresso/Banco Postal Caixa Eletrônico
Cambodia	WING Money	
Côte d'Ivoire	MTN Mobile Money Orange Money	Ecobank United Bank of Africa
India	EKO	ICICI State Bank of India
Kenya	M-PESA Zap	Equity Bank K-Rep Bank
Pakistan	easypaisa	
Philippines	GCash Smart Money	
South Africa	MTN Mobile Money WIZZIT	ABSA Mzansi Standard Mzansi
Tanzania	M-PESA Zap	

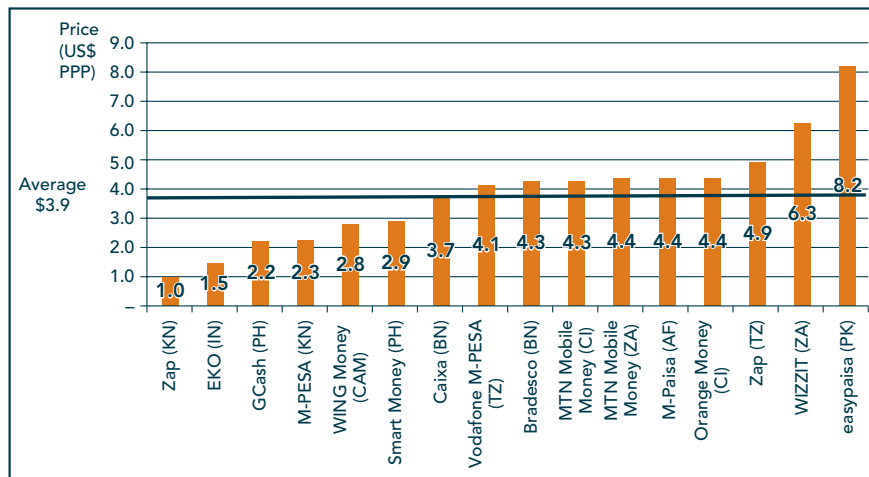
<sup>12</sup> Prices are accurate as of 15 April 2010. Prices in branchless banking change frequently.

<sup>13</sup> The high-use scenario is designed to reflect a monthly bundle of transactions if a client did most of his or her financial transactions via the branchless banking service. It includes two each of deposits, transfers, withdrawals, airtime-top ups, bill payments, and balance enquiries.

<sup>14</sup> Data on M-PESA users from a 2008 survey of 3,000 households by FSD Kenya and MIT. Data on Kenya bank clients from Central Bank of Kenya (2007). All branchless banking services provide the same functionality except Bradesco and Caixa Economica, neither of which provide airtime top-up, and Eko, which did not offer bill pay or airtime top-up at the time of research.

<sup>15</sup> World Bank (2005). This study is conducted only once every five years, with the 2005 numbers being the most recent available. GDP numbers are from the Central Intelligence Agency (2008).

**Figure 2: Monthly branchless banking price across 16 providers (average across eight use cases)**

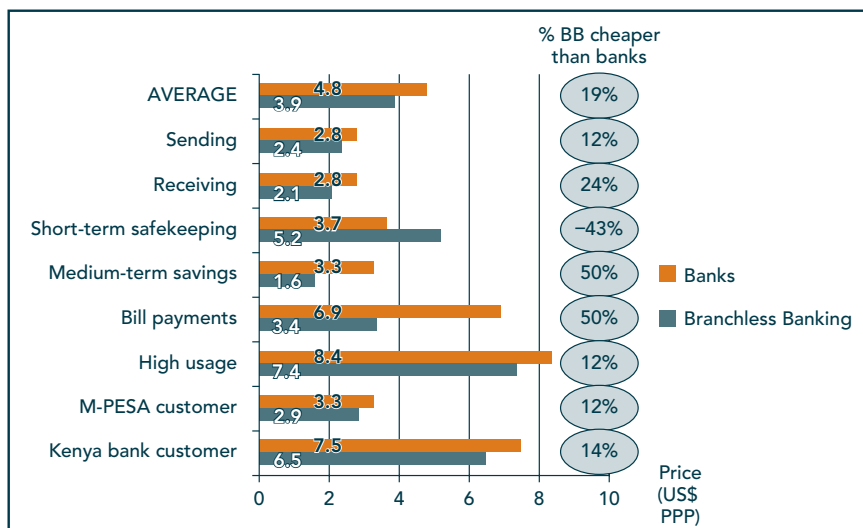


case (short-term safekeeping), using banks is cheaper (43%) than using branchless banking pioneers (see Figure 3).

But why isn't the gap wider? There are several reasons. First, the new study specifically examined banks that actively target low-income clients and selected the cheapest comparable accounts for these clients. Most banks in developing countries target a more affluent clientele. Second, it is possible that establishing a successful branchless banking service could be more expensive than CGAP estimated. Some branchless banking providers are spending several million dollars in marketing costs alone in the first few years, and many are finding that agent commissions must be

higher than originally expected for them to remain motivated. Third, pricing tactics come into play; some branchless banking providers have indicated that they want to leave room to come down on prices as more competitors enter the market. Fourth, CGAP's study counted only one component of overall cost: the fees charged by the provider. When clients make a special trip to conduct financial transactions, branchless banking with its wider network of service points could be saving clients considerable time and money in transport costs. In one rural community in the Amazon in Brazil, clients traveled 12 hours by boat to the nearest bank branch or paid someone US\$5–US\$10 to make the trip prior to the arrival of banking agents in the community. Now, there

**Figure 3: Prices for banks and branchless banking across eight use cases**



are five agents in the community, and clients save significant time and money.<sup>16</sup> Safaricom in Kenya says 47 percent of M-PESA clients save an average of three hours in transport time and US\$3 in transport costs per transaction.<sup>17</sup>

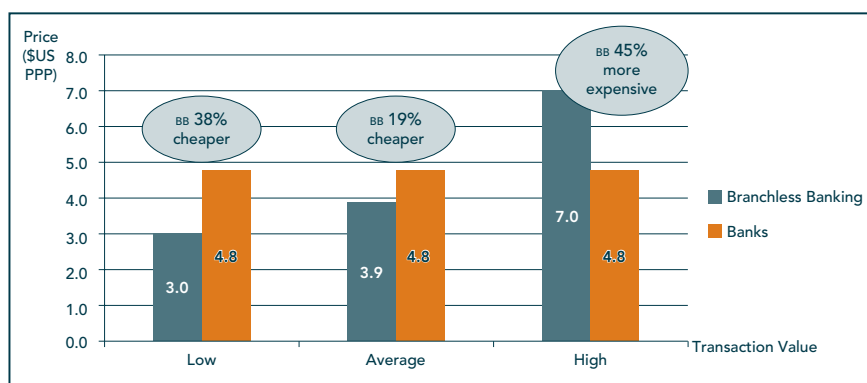
Banks charge fixed fees whether a person transacts with \$1 or \$100, while branchless banking providers charge tiered or percentage-based fees for many transactions. So, the lower the transaction value, the cheaper branchless banking will be compared with banks. At a low average deposit amount of US\$23,<sup>18</sup> using branchless banking providers is 38 percent cheaper than using banks. This means that using branchless banking will be significantly cheaper than using bank alternatives for low-income, previously unbanked clients who are likely to transact at this lower end. However, the same logic holds true on the other end of the spectrum. Branchless banking providers are 45 percent more expensive than banks at high amounts (see Figure 4).

Most potential branchless banking clients who are currently unbanked manage their finances via a

patchwork of informal options like borrowing and lending among family and friends, savings groups, and savings in cash and kind. It is difficult to put a price on many of these informal options with the exception of money transfers. In Cambodia, India, and Tanzania, people use couriers, money changers, post office money fax services, and bus companies to send money across the country.<sup>19</sup> On average, these services cost 6.7 percent of the value of the transfer, while sending the same amount via a branchless banking service costs just 3.1 percent (i.e., branchless banking is 54 percent cheaper). Furthermore, informal methods may take several days (compared with branchless banking instantaneous transfers), and the risk of losing money is much higher than with branchless banking.

Ultimately, a client will weigh the price of a service against how much value he or she derives from it to make a final purchase decision. The annual cost of US\$47.44 as an average of all eight use cases is 0.60 percent of an economically active, low-income household's GDP in the 10 countries.<sup>20</sup> This varies from just 0.2 percent in Brazil to 1.3 percent in

**Figure 4: Average branchless banking and bank prices across low, average, and high values**



16 For more information on the case of Autazes in Brazil, see "Banking Agents Fuel Economic Growth in the Amazon Basin," <http://www.cgap.org/p/site/c/template.rc/1.26.13408/>.

17 Safaricom's Pauline Vaughan, presentation at "Branchless Banking: What's the Score So Far?" organized by CGAP, Nairobi, 17 May 2010.

18 CGAP analyzed the eight use cases across low (US\$23), average (US\$69), and high (US\$207) average deposit amounts. The average deposit amount of US\$69 comes from actual deposit averages of five services (Bradesco (Banco Postal), EKO, M-PESA KN, MTN ZA, and Smart Money). This is the key number (along with airtime top-up value) from which other transaction values are derived. The low deposit value is the average value divided by three, and the high value is the average value multiplied by three.

19 Cambodia—WING Money internal research 2009; India—Microsave (2010); Tanzania—M-PESA internal research and Post Office Money Fax Web site (<http://www.tanpost.com/mfxrates.html>).

20 GDP purchasing power parity (PPP) adjusted per capita data are from World Bank (2009) (2008 values). Although GDP is not a measure of personal income, it is often used as such as it is measured frequently, widely, and consistently. We then looked at the share of income for the 2<sup>nd</sup> 20<sup>th</sup> percentile in each country (i.e., not the poorest 20 percent in the country, but those in the 20<sup>th</sup> to 40<sup>th</sup> percentile for income who would tend to be economically active poor people in a developing country). We then multiplied this number by the number of people in each household (average 5.3) to come up with household GDP for the 2<sup>nd</sup> 20<sup>th</sup> percentile in each country.



Afghanistan. Households spend more than this on airtime (0.65 percent<sup>21</sup>). Of course, the best test of whether clients consider the price worth the value received from the service is actual client usage. The rapid uptake of M-PESA in Kenya suggests that this service is worth the price for a large segment of the population. There is still substantial work to do to better understand client sensitivity to price and other dimensions of quality. The next section begins to address this and suggests several ways for providers, donors, academics, and others to better understand client priorities and design better products.

## The next frontier: Meeting client needs for products beyond payments

Clients want products that go beyond payments. The conundrum is how to design and test effective new services. In this section we review the evidence of demand among low-income, unbanked consumers for a wider range of products, look at some of the limitations to the typical product development methods, and suggest some new directions for providers.

Most branchless banking services help clients move money over *distance*: a money transfer to a family member in the countryside, a bill payment to the utility company, a social benefit from the government. Clients also want products that move money over *time*. People periodically need access to sums of money that exceed the stock of cash they typically keep on hand—for school fees, for example, or a health emergency. Savings build up a usefully large lump sum, to borrow Stuart Rutherford’s term, at a future point. A loan is the same process in reverse: the lump sum today, with a stream of repayments into the future (Rutherford 2001).

New research shows the poor not only have these needs, but they are very active managers of their money in pursuit of satisfying these needs. Financial diaries used by Collins, Morduch, Rutherford, and Ruthven (2009) show low-income families in Bangladesh, India, and South Africa used an average

of eight different financial instruments primarily to move money over time, and quite intensively: the average household moved more than US\$1,000 through the instruments over the course of a year.

Even where branchless banking services have not been designed or marketed as ways to save and manage funds across time, clients are adapting them to these ends. This is particularly true with savings.

In Kenya, 75 percent of clients say they store funds in their M-PESA wallet. Twenty-one percent say M-PESA is their most important saving instrument; 90 percent say it is one of the three most important. The most popular suggestion for what clients would like to see added to M-PESA is the ability to earn interest (Pulver 2009). In Kibera, a slum of 1 million people in Nairobi, one-fifth of unbanked clients use M-PESA to save up to a week’s worth of wages in their electronic wallet, either in preparation for sending it home to the countryside, as a safer alternative to carrying cash, or for emergencies (Morawczynski and Pickens 2009). Data from the Philippines and Brazil suggest that this isn’t peculiar to Kenya.

In the Philippines, without any marketing and with a weak network of agents in many areas, one in 10 unbanked mobile money clients already stores an average of US\$31 in his or her mobile wallet. Clients report that this amounts to one-quarter of their household savings. When asked what additional services they would be likely to try beyond mobile money, more than half (54 percent) of existing mobile money clients said savings (Pickens 2009). In Brazil, deposits and withdrawals to and from bank accounts make up a much larger proportion of transactions in rural locations (38 percent) than in urban ones (8 percent) (CGAP and FGV 2010).

If the data increasingly show branchless banking clients want more than just payments, we are still a long way from understanding how those products should be configured to intersect with the latent demand to yield profitable new product opportunities. There is some evidence that the market is already trialing new products, at least in

<sup>21</sup> This number is based on a monthly average of US\$4.3 (average from M-PESA in Kenya, Smart Money in the Philippines, and WIZZIT in South Africa).

**Table 4: New Products Riding the M-PESA “Rails”**

Provider	Service
Credit Direct Kenya Limited	Cash advance over mobile
Equity Bank	M-Kesho savings account
Equity Bank	Personal accident insurance
Equity Bank	Loan over mobile
Kilimo Salama	Weather insurance
National Jua Kali Association	Mbale pension plan

Kenya. We do not mean simply connecting M-PESA wallets to existing accounts, which is interesting from a point of view of interoperability, but is not the creation of a new product.<sup>22</sup> At least four Kenyan providers are offering entirely new products that go beyond payments and are exclusively delivered via mobile money (see Table 4).

- Credit Direct Kenya Limited is piloting a loan product using ATM transaction data from Kentswitch. M-PESA and Zap clients can apply and receive a cash advance of up to US\$30 over their handset in approximately 10 seconds.
- In May 2010, Equity Bank and Safaricom announced a product partnership around M-Kesho (“Kesho” is Swahili for “future”). M-Kesho is an interest-bearing savings account at Equity Bank that can be opened at M-PESA agents. Value can be moved to and from M-Kesho accounts and M-PESA wallets, and from M-Kesho to other Equity Bank accounts. In effect, Safaricom’s 14,000 M-PESA agents have become agents for Equity Bank account holders. Equity is also offering a personal accident insurance policy to M-Kesho holders and, once six months of transaction data are available, an instant loan product based around a credit scoring model.
- Kilimo Salama (Swahili for “safe farming”) is a partnership among the Syngenta Foundation for Sustainable Agriculture, UAP Insurance, and Safaricom. The project offers 11,000 farmers insurance policies to shield them from significant financial losses when drought or excess rain threatens crop yields. A network of solar-powered, mini-stations collects weather data, and affected farmers receive payment via M-PESA.

- The Mbale pension product has 18,000 informal sector workers who had opened a pension account in the plan’s first three months. Clients can deposit as frequently as they like in amounts as small as US\$0.25 via M-PESA and Zap (with Zap offering heavily discounted transaction fees to make small pension payments economical for Mbale clients).

It is far from inevitable that these kinds of experiments will be successful, in Kenya or elsewhere. First, the very qualities that endowed mobile network operators (MNOs) with a head start in branchless banking may work against their capacity to field a more complex suite of products. The common mobile money product of a liquid, electronic wallet with various money transfer options is quite simple, very much akin to the pre-existing airtime wallet and infrastructure MNOs have to debit and credit client balances when they make calls. MNOs know little about credit, savings, and insurance. They also lack regulatory room to do more. Mobile money has often fallen between the regulatory cracks, and MNOs in several countries are offering mobile payments without being regulated as banks. Simply put, MNOs, which have often led the first wave of innovation in branchless banking in some countries, are not well-positioned on their own to lead a new wave if it entails offering a broader range of products. Finally, some MNOs will find mobile payments do everything they want them to do: increase loyalty among voice clients and decrease the cost of distributing airtime. In other words, they may have no motivation to do more.

But even those institutions with appetite and permission to do so may face barriers. First, it is

<sup>22</sup> Several banks (including Kenya Commercial Bank and Family Bank) allow clients to transfer funds between their savings accounts and M-PESA, or initiate a request for a salary loan that previously had to be done in person at a bank branch. In addition, MFIs (including the two largest in Kenya, Kenya Women’s Finance Trust and Faulu Kenya) are using M-PESA to collect loan repayments and deposits.

not easy to identify actionable opportunity for an entirely new product. One way is to find the interesting outliers among current clients—those doing something so radically different that they lead to ideas for new products, rather than suggest simple tweaks to existing ones. Market research studies often yield averages or descriptions of the “typical client.” Providers should instruct researchers to also look for the atypical.

The insight for Bank of America’s innovative Keep the Change campaign—which rounds debit purchases up to the nearest dollar and moves the excess into a separate savings account, as a way to help clients save—was stumbled upon when researchers from IDEO<sup>23</sup> encountered a client who carried a plastic bag full of change that she would laboriously tote with her until she manually counted the coins and took them to the bank (Brown 2009). IDEO and Bank of America posited, correctly, that there may be more clients like her willing to go to extra lengths to save but who had largely been hidden from view until researchers went looking for the unusual. Keep the Change has led to US\$3.1 billion in new deposits in 12 million new accounts, with 90 percent client retention after one year.

A small but growing number of researchers are employing new research methods to uncover insights like these. The kinds of financial diaries done by Collins, Morduch, Rutherford, and Ruthven (2009) could be deployed in a relatively quick and cheap basis to understand how low-income households manage their money.<sup>24</sup> Ethnographers and anthropologists are beginning to probe the financial services space. For example, the Institute for Money, Technology and Financial Inclusion at the University of California (Irvine) released a preliminary study with 11 principles for designing financial services that use technology to get to low-income clients (IMTFI 2010).

At day’s end, using existing payment products appears less risky to industry than pioneering entirely new ones, if only because there are now some data illustrating the revenue potential of mobile payments.

Safaricom, for example, announced M-PESA earned US\$94.4 million for the company in the last fiscal year (Safaricom 2010) and has become the single biggest driver of new profits (Pickens 2010). In short, there are powerful reasons why the private sector may not experiment in any substantial way with branchless banking products that go beyond payments. Branchless banking could head down the same path that microfinance did in the 1970s and 1980s when most MFIs did only credit: primarily dominated by one type of product, even as the evidence shows consumers want more.

Those interested in the financial inclusion potential of branchless banking can invest in helping private sector players probe their client bases and identify opportunities for new products, perhaps by backing more of the kind of financial diaries and ethnographic analysis that has already yielded useful insights, but with more of a focus on delivering actionable product ideas to the industry. Lowering the cost threshold of experimentation is also needed. Most private sector players will see a risky proposition if the only way to test new products is to go to market full scale, with all the cost of internal product design cycles, training staff, and marketing to clients. Donors and investors could craft a “product incubator” that combines new research approaches with financial support for rapid iterations of one or even several product configurations, to take some of the guesswork out of how to design new products that will gain traction with many low-income, unbanked clients.

## Conclusion

Branchless banking has great potential to reach vast numbers of low-income, unbanked people at affordable prices with a wide range of products to meet their complex financial needs. Yet early experience suggests that although the potential is indeed strong, it is by no means guaranteed that branchless banking will deeply penetrate low-income, unbanked segments with appropriately designed products. Indeed, in most countries, the challenge is still getting branchless banking started at all. But branchless banking in its early

<sup>23</sup> IDEO is a design and innovation consultancy headquartered in Palo Alto, California, United States.

<sup>24</sup> Although the financial diaries work in Collins, Morduch, Rutherford, and Ruthven (2009) took place over 18 months, financial diaries can be conducted over shorter periods, with some loss of precision but cost and time savings.

stages in some countries is already reaching a large portion of low-income, unbanked clients. If branchless banking providers multiply and continue to expand, they are likely to deliver financial inclusion to many more low-income people. Further, branchless banking prices to consumers are already marginally lower than comparable services and will likely fall as branchless banking matures. Innovative products that move beyond payments are just starting to take off in Kenya, where M-PESA has operated for nearly five years.

So there is cause for optimism, but there is also a lot of work to be done to ensure this fledgling

industry lives up to its potential to transform financial services for low-income, unbanked people. Stakeholders such as social and commercial investors must challenge the industry to ensure it pushes the access frontier and creates innovative products that are available even in hard-to-reach locations. Industry providers should experiment with different models to figure out what works for this client segment in their particular country. Perhaps most important, the industry as a whole must improve its understanding of low-income clients' needs and wants to design products and services that truly meet these needs.

## Annex 1: Sources and Methodology for Outreach Analysis

Gauging the reach of branchless banking to low-income, unbanked clients is not easy. Many providers know little about their clients beyond the requirements of national know-your-client (KYC) regulations: name, address, date of birth, and perhaps a national identification number. When firms do have additional data, often the data are derived from studies designed to be inexpensive rather than rigorous and representative of the client base. The gap could be filled by academics, but few have turned their gaze on branchless banking until recently. In short, data on branchless banking clients are still relatively rare and hard to access. For the analysis presented in the first section of this paper, we drew on the results of surveys that queried 16,708 branchless banking clients. Some of the surveys were conducted by CGAP, others by CGAP's partners, and still others by third parties. Table A1-1 provides details.

For the comparison of the outreach of branchless banking providers to MFIs, we included only the eight institutions for which we had reliable figures to conduct the necessary calculations. For Figure

1 and Table 2, we first multiplied each branchless banking service's (1) registered user base by (2) the percentage of active clients, and then multiplied that figure by (3) the percentage of unbanked clients. Our method could undercount active, previously unbanked clients of some branchless banking providers. Unbanked individuals with no other access to formal financial services could be more active than other clients. We also used data that were mostly collected in 2008 and 2009. Since most branchless banking providers are growing quickly, the total number of active, previously unbanked clients may be higher today for some of the branchless banking providers.

To calculate the number of active, previously unbanked microcredit borrowers reported in Table 2, we drew the number of active borrowers from Microfinance Information eXchange (MIX) or from the MFI's own reports to stakeholders if these were more recent. This was the case for Banco do Nordeste as reported by ACCION (see <http://www.accion.org/Page.aspx?pid=675>) and CARD (see <http://>

**Table A1-1. Sources**

Country	Service	Sources (by date)	Type of data
Brazil	Banco Postal	1. Interview with Banco Postal senior managers, June 2010	Company data on clients
		2. Bosch and Ansón (2008)	Data provided by Banco Postal, the banking association (FEBREBAN), and government sociodemographic data
		3. Siedek (2007)	Survey of 750 clients
Cambodia	WING	1. Brad Jones, ANZ Bank quoted in The Philippine Star (2010)	Survey of 500 clients
		2. Interview with WING senior managers, April 2010	
		3. Leishman (2009)	Company data on clients
India	FINO	1. Morawczynski, Hutchful, Rangaswamy, and Cutrell (2010)	Interviews with 133 FINO clients
		2. Interview with FINO managers, March 2010	Company data on clients
Kenya	M-PESA	1. Bowen and Goldstein (2010)	Survey of 2000 Kenyans
		2. Interview with Vodafone senior managers, February 2010	Company data on clients
		3. Jack and Suri (2009)	Survey of 3000 Kenyan households
		4. Pulver (2009)	
		5. Morawczynski and Pickens (2009)	Interviews, focus groups and financial diaries with 350 Kenyans
Philippines	GCash	1. Pickens (2009)	Survey of 1042 unbanked consumers in the Philippines
Philippines	Smart Money	1. Pickens (2009)	
South Africa	WIZZIT	1. Consulta (2010)	Survey of 738 WIZZIT clients
		2. Ivatury and Pickens (2006)	Survey of 515 low-income South Africans
Tanzania	M-PESA	1. FSD Tanzania (2009)	Survey of 7,680 Tanzanians

[www.cardbankph.com/index\\_mriataglace.php](http://www.cardbankph.com/index_mriataglace.php)). We assumed that all microcredit borrowers were previously unbanked. Some microcredit borrowers undoubtedly have other accounts. However, reliable data are not available to estimate what percentage of microcredit borrowers had other accounts prior to taking their current microloan. As a result, we

probably overstate the total number of active, previously unbanked microcredit clients of the MFIs included in Table 2. This is not entirely bad: it decreases the odds that we overstated the gap between branchless banking providers and MFIs in their outreach to previously unbanked clients.

## Annex 2: Methodology of Pricing Analysis

The full explanation of methodology and results of CGAP's pricing work are available as a PowerPoint and CGAP Web article: "Study Finds Branchless Banking Cheaper than Banks" (<http://www.cgap.org/p/site/c/template.rc/1.26.13493/>).

In addition, a spreadsheet with details on each provider's pricing and a tool to compare prices of other services with those of 16 pioneers are available at <http://technology.cgap.org/2010/06/16/cgap-releases-pricing-tool-for-mobile-banking-for-the-unbanked/>.

To ensure a relevant comparison between branchless banking and formal bank prices, CGAP chose branchless banking and formal bank providers across a wide range of countries. CGAP chose banks that specifically target the mass market and picked the lowest cost product with functionality similar to branchless banking products. In most cases this was a savings account (with intrabank transfers), but in some cases (e.g., bill payments) this was a checking account.

Eight use cases were selected representing a variety of ways customers are actually using services today as well as one hypothetical scenario (medium-term savings). Each use case represents a bundle of transactions that a customer makes in a given month. Two use cases (typical M-PESA user and

typical Kenyan bank customer) are based on actual customer usage patterns. Data on M-PESA users come from the 2008 survey of 3,000 households by FSD Kenya and MIT. Data on Kenya bank clients are from the "Technical Report: Bank Pricing Study," prepared for Central Bank of Kenya, September 2007. Transactions included in each use case are in Table A2-1.

Each institution provides all the types of transactions in Table A2-1 except EKO, which does not provide bill pay and so was not included in use cases 5 and 8, and several of the banks (Bradesco, Caixa Economica, Ecobank, ICICI, and UBA) that do not provide airtime top-up.

To come up with the average transaction amounts in each use case, we started with the average deposit amount from five providers (Bradesco [Banco Postal], EKO, M-PESA KN, MTN ZA, and Smart Money). In these five institutions, the average deposit value is US\$68.6. The average airtime top-up of US\$4.3 was derived from the averages of airtime top-up for M-PESA Kenya and Smart Money. These two numbers drive all the other transaction values in each use case.

For example, starting with a deposit amount of US\$68.6 Table A2-2 shows how the other transaction values for the sending use case are derived.

**Table A2-1: Bundle of Transactions in Each Use Case**

Use Case	Transactions
1. Sending Money Transfer	1 Deposit, 1 Transfer, 1 Airtime Top-up, 1 Balance Inquiry
2. Receiving Money Transfer	1 Withdrawal, 1 Airtime Top-up, 1 Balance Inquiry
3. Short-term Safekeeping	2 Deposits, 2 Withdrawal, 1 Airtime Top-up, 1 Balance Inquiry
4. Medium-term Savings	4 Deposits, 0.2 Withdrawal, 1 Balance Inquiry
5. Bill Payments	1 Deposit, 3 Bill Payments, 1 Airtime Top-up, 1 Balance Inquiry
6. High-Frequency Transactional Account	2 Deposits, 2 Transfers, 2 Withdrawals, 2 Bill Payments, 2 Airtime Top-up, 1 Balance Inquiry
7. Typical M-PESA User	1.2 Deposits, 0.6 Transfers, 0.8 Withdrawals, 0.6 Airtime Top-up, 1 Balance Inquiry
8. Typical Kenyan Bank Customer	1.2 Deposit, 1 Transfer, 3.1 Withdrawals, 0.4 Bills, 1 Balance Inquiry

**Table A2-2. Average Transaction amounts for Sending Use Case**

Transaction	Amount (US\$)
1 Deposit	68.6
1 Airtime top-up	4.3
Fees (for cash-in, airtime top-up, transfer)	2.4
Amount remaining for transfer	61.9

**Table A2-3. Low, Medium and High Transaction amounts for Sending Use Case**

Transaction	Low (US\$)	Medium (US\$)	High (US\$)
1 Deposit	22.6	68.6	206
1 Airtime top-up	1.4	4.3	12.8
Fees (for cash-in, airtime top-up, transfer)	1.8	2.4	4.2
Amount remaining for transfer	19.4	61.9	188.8

The values in Table A2-2 represent the medium transaction values. Most results of the analysis are based on the medium values. In some cases, the analysis included low values (one-third of the medium value) and high values (three times the medium value). For example, the transaction values for the sending use case across low, medium, and high values are shown in Table A2-3.

In some cases, our high values exceeded the maximum allowable for the branchless banking service. In these cases, we used the fees associated with the maximum values.



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The authors of this Focus Note are Claudia McKay and Mark Pickens, both of CGAP. The Technology Program at CGAP works to expand financial services for the poor using mobile phones

and other technologies and is co-funded by the Bill & Melinda Gates Foundation, CGAP, and the UK Department for International Development (DFID).

The suggested citation for this Focus Note is as follows:

McKay, Claudia, and Mark Pickens. 2010. "Branchless Banking 2010: Who's Served? At What Price? What's Next?" Washington, D.C.: CGAP, September.

