TSYS® People-Centered Payments

White Paper

Branchless Banking

Africa, the Middle East & Pakistan

By Malek Mroueh

Branchless banking allows banks to better serve a variety of mass consumer segments, whether they are those with limited access to bank branches or those with low account balances. According to a 2012 study by Gallup, Inc. and the World Bank, an estimated 2.7 billion people in emerging markets — almost 40 percent of the world's population — are without access to even basic financial services, meaning they remain "unbanked" and don't use formal or semi-formal financial services.[1] The lives of these unbanked could be improved through access to the most basic array of banking services, such as deposits, savings, installment loans, simplified and secure remittances and bill payment.

"The financial services that may be delivered through the mobile channel are, in essence, no different to those delivered through conventional banking channels and agent channels emerging in a number of developing markets."[2] This quote, from the report "*Regulatory Issues Around Mobile Banking*," authored by Paul Makin refers to the rapid rise of mobile phones in emerging markets, including Africa, the Middle East and Pakistan. As mobile adoption continues, it presents a huge opportunity to improve access to financial services and products by building upon its widespread presence, low cost of deployment and easy-to-use technology. However, reaching new customer segments in these underserved markets requires not just a purely mobile banking (m-banking) solution, as is prevalent in the developed world, but rather a broader "branchless banking" solution that can encompass the needs of the mass unbanked. While there are many definitions of branchless banking, for this report it is defined as a mechanism that allows customers to deposit, withdraw and transact their funds in a secure and efficient manner through non-branch customer channels — such as mobile phones, terminals or agents.

Spectrum of Branchless Banking Services

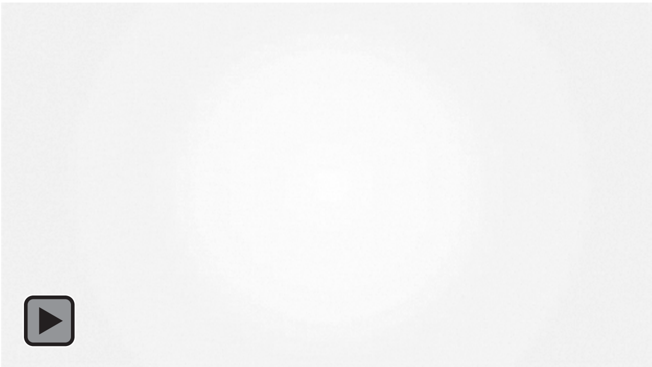
Basic

- *Load or withdraw funds via agents or self-service machines*
- *Send or receive funds*
- *Balance enquiry*
- *Telephone banking via interactive voice response (IVR)*
- *Airtime top-up*
- *Utility payments, typically for pay-as-you-go meters*

Advanced

- *Cardless cash dispense at ATMs*
- *Transaction history*
- *Savings accounts*
- *Credit facilities and installment loans*
- *Insurance products*
- *Transfers to bank accounts*
- *International remittance*
- *Loyalty schemes*
- *Discount coupons*

Branchless banking has two key benefits: It provides convenience to those who are fully banked by offering greater access to account information and bank services. At the same time, it allows for greater inclusion of more consumer segments by leveraging technology that brings financial services to underserved populations. Traditionally, financial institutions (FIs) have not actively marketed to this latter group because they were considered lower-margin customers who could overwhelm customer contact points, such as ATMs and branches, at the expense of losing more profitable, affluent clientele. The branchless model, where applied properly, has the potential to close the gap and mitigate those concerns.



Videographic: The Connected Unbanked in MEA and Pakistan

While the benefits of branchless banking are relatively universal to the global community, implementation has differed by region. This report will focus on the regions of the Middle East, Africa and Pakistan.

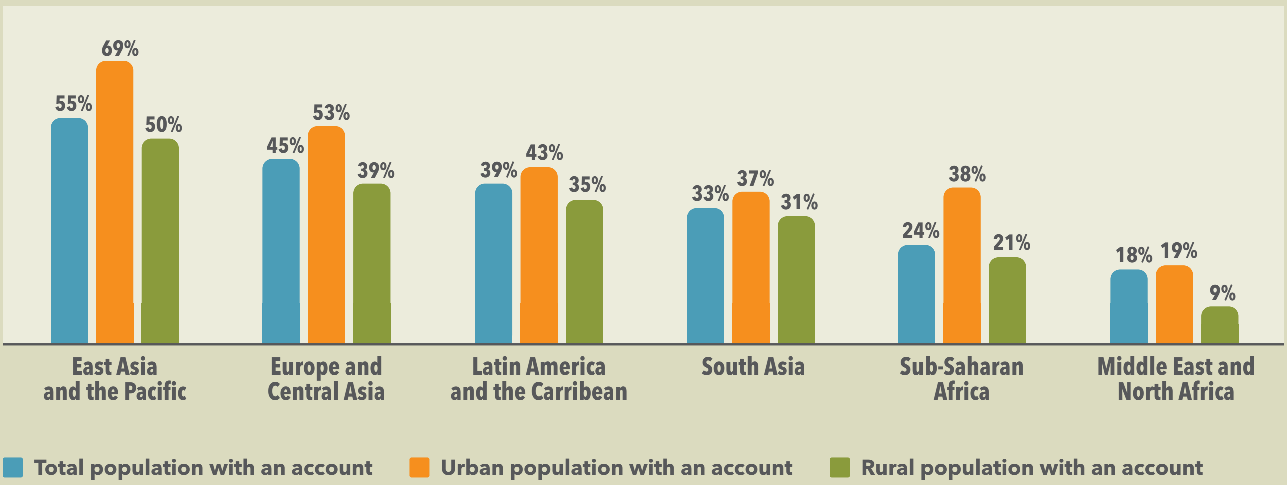
The Market Opportunity for Financial Institutions

According to the Gallup and the World Bank study, "Worldwide, nearly two-thirds of adults who do not have an account cite the lack of having enough money as the main reason they do not have one, but approximately 30 percent of adults also blame the cost of opening and maintaining an account or the banks being too far away."[1] At the same time, at least one billion people across Africa, Latin America and Asia who are without bank accounts do have mobile

Branchless-Banking Channels Available Today

- *Telephone banking / IVR*
- *ATMs*
- *Agents*
- *Mobile*
  - *SMS / USSD*
  - *Mobile applications*
  - *Mobile Internet*
- *Kiosks*
- *Internet*
- *Person-to-person payments*
- *Point of sale / Near-field communication*

Graph 1: Percentage of Populations with Account at a Formal Financial Institution[1]



phones, a group referred to in this report as the *connected unbanked*. This phenomenon — characterized by low bank account penetration and high growth of mobile phone adoption — is not new, but one occurring more frequently, especially in emerging markets, including Africa, the Middle East and Pakistan.

The United Nations Department of Economic and Social Affairs estimates that in Africa, "there are 300 million reachable adults with no current access to formal financial services."[2] It is reported that only 20 percent of families have a bank account, whereas mobile telephony penetration has increased from less than 2 million subscribers in 1998 to more than 500 million today.[3] Recent figures show that a mere 16 million bank accounts exist in Pakistan, a country with a population of 180 million, translating to just 9 percent of the population with a bank account.[4] In rural areas, the situation is more pronounced with "only 2,500 banking branches servicing 105 million people — an average of 42,000 Pakistanis per branch." In contrast, the mobile market enjoys 65 percent penetration — a figure projected to grow to 95 percent by the end of 2013.[4]

Given the high penetration of mobile phones and their increasing capabilities, they offer a potential way for FIs to extend their reach among the high percentage of the connected unbanked populations who face challenges with conventional banking services due to cost, registration procedures or even proximity to physical bank branches. FIs that have adopted branchless-banking models are discovering that it's a viable solution for breaking down geographical barriers, thus expanding their footprint and gaining access to more customers.

Branchless banking is also spurring the widespread adoption of electronic payments by leveraging mobile handsets and telecommunications companies (telco) infrastructure, allowing banks to decrease their bricks-and-mortar presence. Once customers begin using the most basic mobile banking (m-banking) features, it's relatively easy for them to transition into more sophisticated m-banking financial transactions. With the correct implementation of services, convenience and trust, the mobile channel of branchless banking can achieve deeper financial inclusion of the connected unbanked. As depicted in Graph 1, mobile banking can actually be broken down into layers of complexity. As you move further up the financial inclusion axis, the mobile channel provides increasingly sophisticated capabilities.

Aside from the immediate benefits to those new customers in connected unbanked populations who can now perform banking transactions simply and conveniently, the branchless model also provides FIs new income streams, allowing them to offer micro financing and low-cost and secure fund disbursement services to government and aid agencies. The electronic nature of mobile transactions allows for improved security and convenience over physical cash-based transactions. As best articulated in an *Economist.com* article, "For the most part, mobile-phone money is a substitute both for paper-based banks and for, say, sending cash via a bus driver. It enables people who cannot get to a branch or ATM to use financial services."[5] However, these funds are clearly only useful if they can be used for tender. Until ubiquitous acceptance of person-to-person payment through mobile occurs, human "agents"

Branchless Banking Stakeholder Benefits

Consumers/Small Business

- *Increased security/reduced risk from not holding cash*
- *Decreased remittance costs*
- *Increased convenience*
- *Improved efficiency*
- *Ease of making/receiving payments*
- *Reduced need to travel*

Government

- *Improved management of cash circulation*
- *Increased transparency and oversight with traceability*
- *Decreased seepage rates due to fraud*

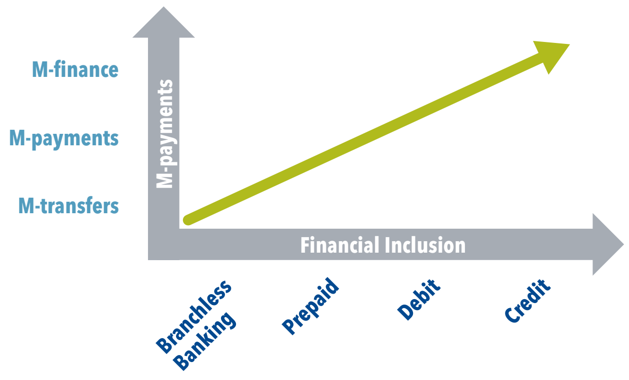
FIs

- *New markets and customer segments*
- *New customer service channel*
- *Wider reach with minimal overhead expenditure on physical footprint*

Telcos

- *Spike in network traffic*
- *Drive to increase revenue*

Graph 2: The Evolution of the Connected Unbanked



It is estimated that 2.7 billion people in emerging markets are without access to financial services. In fact, at least one billion people across Africa, Latin America and Asia have mobile phones but no bank accounts.[1]

are a critical component of any branchless banking model. We discuss more about the key function they provide in the section below.

Elements of a Successful Branchless-Banking Model

There are four elements that are instrumental to the effective delivery of branchless banking to consumers. First are cashing 'agents' who act as key customer contact points by providing cashing-in and cashing-out services, serving as a conduit between banks and their branchless-banking customers. As noted above, while agents are essential in the early stages of branchless banking, they will become less so over the longer term as electronic payments (epayments) displace cash as the major form of payment, thus eliminating the need to withdraw and exchange cash. The full migration to an epayments model, however, relies heavily on customers' trust in the system. Trust underpins the success of any financial services model, and that is no less true in the branchless-banking model. In Kenya, where a customer base is too small to warrant building physical branches, Equity Bank literally mobilized branches by deploying bank managers within armoured trucks affixed with a satellite dish on top. However, the bank may have expected too much, too soon. As stated by John Staley, the head of Equity's Mobile Banking and Payment Innovations division, "It took 25 years to build the grassroots relationships that brought success in Kenya." He also believes that the branch model will be replaced by agents, who act as cheaper cash-in and cash-out points for customers.[6] Another bank moving toward a mobile branch fortified with the necessary technology is the Central Bank of Nigeria (CBN), whose initiative is part of its strategic plan to shift toward a cashless policy. According to Mr. Steve Obiago, Head Informative Technology Operations, "It could be moved anywhere, and customers would be able to use it at any location."[7] As part of the bank's plan to reach the unbanked, CBN plans to support and expand this initiative with the acquisition of 250 mobile units.

The second key element is that FIs need to be prepared to deliver services to the target audience within the mass market. FIs must accept that the branchless-banking customer base is different from that of the traditional customer, while recognizing that it is an increasingly important segment to serve. Thus, it's critical for banks that venture into branchless banking to understand that it is a significantly different model with lower margins and returns, yet a viable approach with great potential nonetheless.

Third is the need for regulatory controls within government to dictate the legislative and regulatory framework around virtual money, including Know Your Customer (KYC), Anti-Money Maundering (AML) and other due diligence provisions. Fourth and finally, banks must identify and deploy technologies that help them seamlessly deliver branchless-banking services and platforms to customers, support back-office infrastructure, connect disparate organizations and their systems and record electronic transactions. Technology is necessary in uniting the mobile devices and banking apps with the telecommunications infrastructure and the bank's branchless-banking platform of choice.

When properly aligned, the branchless-banking model provides numerous benefits to multiple stakeholders across the financial ecosystem — consumers, small businesses, government (including welfare agencies), FIs and telecommunications firms.

Consumers/Small Business

For unbanked consumers in emerging markets, who are often low-income and living and working outside of the reach of the established bank-branch infrastructure, the benefits of branchless-banking over traditional cash-and-barter transactions include increased security, decreased remittance costs, increased convenience and improved efficiency supported by faster transactions. Branchless banking not only provides these customer segments with access to basic banking services, but with ones that are often faster, better and cheaper, especially when fair-market competition exists. Similarly, small businesses' typical transaction values are often too small for participation in the formal banking system. Branchless banking offers an alternative that is affordable, safe and efficient. In fact, consumers and small businesses would gain cost and time efficiencies when making or receiving payments — a potentially huge advantage. One could assume a business would find it advantageous to eliminate the need to travel by making and receiving remote payments. In one such case, a "Tanzanian small businesses managed to double their sales (with the same working capital) by increasing the velocity of their money through paying providers with mobile money."[8]

Government

For government, branchless banking is a fundamental driver of epayments, which are not necessarily limited to mobile. Epayments offer many benefits, from the improved management of cash circulation to increased transparency and traceability and improved oversight to help comply with regulations. Another benefit is epayments' ability to ease the distribution of funds for governments and NGOs, translating to lower seepage rates due to fraud. A branchless-banking system can help draw people out of the gray and informal transaction markets and into the formal banking sector. As discussed earlier, branchless banking is the first step into financial inclusion and, therefore, should adhere to the same government legislation of the banking sector at large, allowing the government to have a unified policy. Another benefit: Branchless banking allows governments to distribute social welfare and other government benefit programs safely, conveniently and securely while reducing graft and ensuring the aid reaches the intended recipients.

FIs

For FIs, the benefits of branchless banking are threefold. First, tapping into new markets and customer segments provides FIs and their partners with new revenue streams and the ability to present cross-sell and upsell opportunities to a more robust audience. Second, it presents a new channel for maintaining relationships and providing richer customer service for the currently banked customer segments. Third, it reduces the need to invest in significant physical infrastructure associated with branches, enabling FIs to extend their reach with minimal overhead expense.

Telcos

For telecommunications firms, providing the mobile network, branchless banking provides a welcome increase in network traffic that will ultimately drive higher revenues. However, given the interest telcos have expressed in developing their own m-payment services, their adoption of branchless banking may create competition with banks as both push for "ownership" of customers. Some markets, such as Kenya's, have only recently placed regulatory controls on telcos running m-payment services. The Kenyan Payments Act of 2011 mandates requirements on telcos, but it is less stringent than the regulations under which the formal banking system operates. Others, such as Pakistan, have created regulations that ensure that only banks can lead branchless banking programmes. Furthermore, some countries, such as the UK and imminently in the United Arab Emirates, require e-money operators to get banking licenses that provide for greater oversight, while allowing non-bank entities such as telcos and exchange houses

How an M-PESA Account Works[9]

Step 1: To initially load money into M-PESA account, users must go to an M-PESA agent to make a cash deposit.

Step 2: Electronic money is transferred to users' M-PESA accounts.

Step 3: Deposits are confirmed by Short Message Service (SMS) texts received by both the agent and the customer.

Money can then be transferred to other mobile phone users through a message initiated from a mobile phone carrying a Safaricom SIM card. The transaction is secured via a password challenge on the local SIM.

A cash withdrawal is enacted by transferring money to an agent who then hands over cash on confirmation of receipt of funds.

that offer remittance services to participate. How countries address concerns about competition and the regulation of non-bank m-payment providers will likely be determined by market conditions and the regulatory environment.

Implementation Considerations Driven by Local Market Needs

While a core set of elements enables the delivery of branchless banking, it's already evident that each market evolves slightly differently based on its consumers' distinct needs and other unique considerations. Yet it's worth noting that all branchless-banking models follow the same underlying functionality to move funds conveniently for the users. In some emerging markets, for instance, branchless-banking mostly entails facilitating peer-to-peer (P2P) payments, while in developed markets, it often allows for checking and maintaining account balances or making purchases by phone. Mobile phones, as both a technology platform and a distribution channel, play a key role in the accessibility and penetration of branchless banking. In Europe, branchless banking arises from the customer need for convenience. As such, European customers have access to rich applications for smartphones, standalone kiosks or ATMs, all of which replicate the Internet-banking functions that offer "banking without the bank." In emerging markets, on the other hand, branchless banking has generally stemmed from the need of unbanked consumers to conveniently send and receive funds. For example, a son or daughter working in an urban center may need to send funds to a parent living in a rural area. In these markets, mobile banking has so far proven to be the most cost-efficient channel given the infrastructure challenges these countries face. In somewhat more developed countries, however, the needs for branchless banking are more focused on protecting workers' payment rights by offering them better access to payment remittance services to their home countries.

Given the many benefits and uses of branchless banking, Africa, the Middle East and Pakistan are ripe markets for growth, and many different models of branchless banking are being tested. In fact, the African continent is leading the way with more than 60 mobile money systems already in place, with Kenya's M-PESA being the most notable. Perhaps less well known internationally are programmes in Pakistan, such as Easypaisa (see sidebar). What's noteworthy is how these two solutions have unfolded in order to meet their respective countries' specific needs.

Let's evaluate some models a bit more closely. Today in Pakistan, branchless banking is being used to issue accounts that distribute aid to people in areas hit by crises — such as those devastated by the 2008 earthquake. This branchless model has effectively encouraged Pakistani consumers in those areas to initiate and build a banking relationship and, thus, helped bolster financial inclusion. It has greatly helped the State Bank of Pakistan (SBP), which has been instrumental in building the country's branchless system, to generate more customers. For example, the Pakistani Financial Inclusion Programme (FIP) focused its first year on providing, "financing for micro and small enterprises," while the next four years were used to "develop and implement strategies for low-income housing finance and rural finance."[10] The FIP set out to reach 3 million microfinance users by year-end 2010. Furthermore, the FIP hopes to extend beyond microfinance and small-enterprise financing by "exploring innovative interventions in subsectors of rural financing, remittances, Islamic banking and low-income housing."[10] As SBP's underlying goal is financial inclusion, the programmes are being implemented to ensure that solutions are very inexpensive and auditable. Additionally, the models must be flexible enough to allow multiple-channel access points beyond mobile access, such as ATMs, point of sales and the Internet, to meet the needs of all customer segments. Looking ahead, the same tools that are being used to serve the under- and unbanked must be seamlessly integrated into the traditionally banked sectors. This integration will allow a banked customer, for example, to use mobile to direct payment from his bank account to a taxi driver's branchless banking account. Despite patronizing different banks, the passenger and the taxi driver could safely perform the transaction within a secure and trusted banking network in compliance with appropriate regulatory controls.

Measures of Success

Pakistan's Easypaisa

The award-winning service has experienced unprecedented success, including:

- Number of outlets surpasses number of bank branches
- 17,488 branchless banking agents completed 15.9 million transactions (in quarter that ended September 30, 2011).
- These transactions from July to September 2011 averaged PKR 3,700 (EUR 31.50) per transfer, with a total of 176,296 transactions per day, while the value of transactions totaled PKR 58.711 billion (EUR 500 million)[4]

"M-PESA is the first product in the world that allows the unbanked, with no banking details, no registration, no bank account, no credit card, to do banking."[9]

Affluent Gulf states, such as the United Arab Emirates (UAE), have rolled out a branchless-banking model whereby prepaid cards are used to pay migrant workers under programmes called Wage Protection Systems (WPS). In order to avoid sponsors engaging in abusive practices, such as paying late, the governments mandate that the payment of these workers be completed within the formal banking system and reported to the relevant authorities as paid. The branchless services allow companies to pay their workers' salaries and wages, and workers can then withdraw their money on payday at ATMs strategically located at places where they congregate — such as malls and labour residences. Typically, workers will line up to withdraw their cash and head over to a nearby money-transfer agent to send some or all of their income to relatives back home. For these WPS programmes to become profitable, the banks behind them need to consider not only the fees paid by employers in lieu of payroll services, but also things like integrated remittance services built into the program designs and implementation. This would offer an immediate, and potentially attractive, opportunity for workers to automatically send money home — perhaps using an "autopay" feature or directly from an ATM. Adding a mobile channel to the WPS environment would bring it further in line with the typical branchless-banking model, reducing lines at ATMs. It could also, perhaps, foster a savings culture and enable peer-to-peer payments.

Kenya's M-PESA & Pakistan's Easypaisa: Pioneers in Branchless Banking

Two branchless-banking models are especially noteworthy and offer a useful comparison of how branchless banking can be implemented: Kenya's M-PESA and Pakistan's Easypaisa. The following section will juxtapose the M-PESA and Easypaisa models by reviewing the highlights of each and then comparing them from a competitive and regulatory perspective.

Need Emerged From Similar Market Conditions

In both Kenya and Pakistan, branchless-banking models developed based on market conditions, including the high adoption rates of mobile phones compared with far fewer bank account holders. Both were also established on the premise of providing intra-country payments, but M-PESA's primary functionality was built under the guidance of the dominant mobile network operator (MNO) Safaricom. Kenya's government thus had to pass legislation to help protect M-PESA users' money, since Safaricom is a non-bank entity. Pakistan's Easypaisa, on the other hand, was built around an initial model of "government-to-person" (G2P) payments to help deliver funds to poverty-stricken regions. Several of Pakistan's banks and mobile networks have joined forces to create a comprehensive network of services along these lines. In both Kenya and Pakistan, branchless-banking money flows predominantly from urban to rural accounts. In Pakistan, that may be from Islamabad or provincial capitals to the rural unbanked, whereas in Kenya, it's typically from urban transplants to rural relatives. Both branchless models currently rely heavily on agents — especially ones that offer cashing-in services in urban areas and cashing-out services in rural areas — to serve their populations' needs.

Soon after M-PESA started, then-CEO of Safaricom Michael Joseph stated, "M-PESA is the first product in the world that allows the unbanked, with no banking details, no registration, no bank account, no credit card, to do banking."[9] Despite Kenya's being among Africa's leading nations in financial inclusion, only a minority of Kenya's

Branchless Banking: Four Distinct Emerging Models

Mobile Bank
Focused on micro banking & savings solutions

Money Service Provider
Non-banks offering banking services

M-Wallet
Non-banks offering integration of services

Low-Cost Branch Channels
Banks using lower-cost agents as branches

adult population, approximately 42 percent, have access to a formal bank account.[11] Furthermore, and similar to many emerging markets with a lack of defined infrastructure, banking services are limited to metropolitan areas.[12] Even so, there are fewer than 10 ATMs per 100,000 people in Kenya, compared with at least 163 per 100,000 in the U.S. Moreover, the number of mobile phone subscribers in Kenya has grown to more than 20 million today, up from 4.5 million in 2005.[13] Similar market conditions existed with Pakistan, which were detailed in The Market Opportunity section of this report.

Solving for the Same Core Opportunity: Banking the Connected Unbanked

M-PESA and Easypaisa arose to address the need to extend financial services to the unbanked. Interestingly, both solutions were spearheaded by telcos. In Kenya, branchless banking or, more specifically, m-banking, presents an opportunity for unbanked Kenyans to access basic banking services — deposits, withdrawals, money transfers and bill payment — by way of their mobile phones through Safaricom's M-PESA. ('M' stands for "mobile" and "Pesa" is the Swahili term for money.)[9] Since its 2007 launch, M-PESA has experienced explosive growth. A recent United Nations report states, "At the end of March 2012, M-PESA's network in Kenya stood at almost 37,000 agents servicing a base of close to 15 million registered users."[8] Kenya has an adult population of 33.7 million,[14] approximately half of whom are registered for M-PESA — more than the number of bank accounts. As mentioned earlier, the success of branchless banking in these emerging markets requires a strong agent network (people, ATMs, and branches), and M-PESA's success is clearly linked to its own efforts to extend its agent network.

Similar to Kenya and other emerging markets with large rural populations, Pakistan lacked a traditional banking infrastructure, such as a network of branches, in the very remote rural areas. In 2010, Telenor Pakistan, the country's second-largest MNO with more than 26 million subscribers, leveraged its ownership of Tameer Bank (Telenor owns 51 percent of Tameer Bank) and launched Easypaisa to offer branchless banking services with money transfer and bill payment services. An interesting twist to its service is that it enables the sending and receiving of money between peers using a bricks-and-mortar Easypaisa shop and does not necessarily require a mobile phone channel. Its website says, "the largest branchless banking service in Pakistan offers the most convenient access to financial services for all Pakistanis! Whether you have a mobile phone or not, Easypaisa offers services that would forever change the way you perform your financial transactions."[15]

A Closer Look at Kenya's Reliance on M-PESA: Positives and Negatives.

The positives. The success of M-PESA is well chronicled. Before M-PESA, nearly 50 percent of money within Kenya was sent by a combination of post office, bus drivers and cheques. M-PESA has not only greatly diminished usage of these channels, but 50 percent of money transfers are now handled via M-PESA to send and receive money, which is linked with 25 banks and accessible via 700 ATMs[16]. Active customers transfer an estimated KSh 56 billion every month, or approximately $66.43 million USD; these usage levels indicate high satisfaction and/or limited alternatives. A further testament to its growing favor is reflected in how culturally embedded it has become in the lexicon. Just as people use "Google it" as a verb, in Kenya customers say "M-PESA me." And per a 2010 staff article on "HowWeMadeitInAfrica.com," "In Western Kenya you cannot go to a bar at night if you don't pay with M-PESA. They will not sell you a beer unless you pay with M-PESA."[9] Another success story was the effective collaboration between banks and telcos in developing M-PESA. The system came together swiftly and smoothly, allowing for the quick implementation of branchless banking throughout Kenya.

The negatives. M-PESA's dominance of branchless banking services in Kenya, and the degree to which the economy is dependent on it, presents a "too big to fail" dilemma. A few much smaller providers compete nominally with M-PESA — and competition is good. According to Catherine K. Mogambi, Senior Group Manager of Card Acquiring of Ecobank, when including voice, data and mobile money, Safaricom commands a hyper-dominant market share of 75 percent, with Airtel at 15 percent, Orange at 6 percent and Yu at 3 percent holding the remainder.[17] But M-PESA behaves like a monopoly in several ways. Not only is it a disintermediation threat and obstacle to continued growth of the banking system, but many stakeholders in the process are captives of the M-PESA juggernaut. The lack of meaningful competition has facilitated poor service to end consumers with limited recourse to lodge complaints to the Minister of Finance. In Kenya, the regulation is unclear as to how consumers can escalate complaints beyond the MNO to the Central Bank.[8] Furthermore, any payment system that is closed-loop doesn't allow peer-to-peer payments outside of that system, limiting its effectiveness. The non-interoperability exacerbates the struggles of M-PESA's competitors.[17]

While M-PESA has generated a positive impact on social and economic growth in Kenya, it still needs to address cash flow and regulatory challenges. Agent cash flow represents a huge area of concern. Twenty percent of users could not complete withdrawals from an M-PESA agent, and of that group 70 percent could not do so because the agent lacked funds. Opening an M-PESA account requires an ID document with the name, date of birth, place of birth, gender, village/district, province and a number, which is at the Bureau of Stats and one's fingerprints. Moreover, its dominance has stifled competition that could provide more and better options for Kenyans. Furthermore, gray areas remain around the regulatory environment, including the National Payment Act of 2011, and which governing body has authority to regulate M-PESA. This is complicated given that there are no e-money licenses in Kenya and M-PESA's parent company is not a financial services company. KYC regulations, such as AML, which are second nature to any financial institution were completely absent in the initial 2007 launch and started to be captured around 2009. It could well be argued that the banking industry, had it been concerned to capture this market, would have been better equipped than the mobile networks to address such hurdles and leverage the telco infrastructure to underpin the services.

This segues nicely into the primary question, which is whether or not the offerings of M-PESA fall under the banking industry's existing definition of deposit taking. Passing legislation that addresses this question is critical to ensuring support of branchless banking services and to foster fair competition between players. It's imperative for market development to overcome the monopolistic concerns related to Kenya's current landscape. However, with its huge market dominance and current environment, it is unlikely that M-PESA's dominance will end anytime soon.

Serious concerns for the future: M-PESA stands as a cautionary tale for banks. The MNOs have effectively coopted what should be bank clientele. This happened because there was a latent market need and the formal banking system was slow to recognize it. It did not move with sufficient energy, resources and focus until it was too late. Now the banks are playing a tertiary role in support of M-PESA, providing ancillary services through the MNOs rather than through the formal banking system — even though their rightful role is establishing and maintaining direct financial relationships with end consumers. If banks do not more aggressively market the right mix of solutions for the connected unbanked in other emerging markets, they will cede the highest-growth markets of the future.

Core Differences and Challenges Between the Models

Compared with the M-PESA model dissected above, Pakistan's branchless-banking model offers some clear advantages. It grew from the ground up to be a competitive and holistic "mobile financial service" for the country's mass unbanked. In contrast, the Kenyan model is monopolistic but has shown tremendous uptake due to its simplicity. The challenges arising from each model almost mirror the other: Pakistan's uptake has been slower than Kenya, while Kenya will struggle to make the programme interoperable and competitive. Pakistan's main advantage over Kenya's M-PESA model is that the Pakistan's government has taken an active role in encouraging the use of branchless banking and introduced regulations to support the industry. The State Bank of Pakistan was one of the first regulators globally to introduce guidelines around branchless banking.[4] As stated in a report from Fundamo, "The regulations allowed a number of different business models and permitted agents to deliver financial services on behalf of banks, and were designed specifically to encourage banks to look at branchless banking as a viable option."[4] What's not clear is how the regulators will work across the different sectors — telecommunications and banking — to address competition, given the necessary convergence between these sectors in order to nurture and grow the branchless-banking distribution channel.

An Alternate Branchless Banking System — A Prescription for Improvement

A potential impact of branchless banking is bridging the gap between a traditional branch-based banking infrastructure, which doesn't exist in rural markets, and consumers with the most basic of financial needs. Through collaboration between banks and telcos, branchless banking is an effective way to provide rural populations with access to banking services. Providing these key banking services to the masses improves not only accessibility, but also security and convenience. Despite the recent success of M-PESA and others like Easypaisa, the current banking models are in their early development stages and have not reached their full potential. While opinions are divided on the matter, it can be argued that a branchless-banking ecosystem should be under the purview of the formal banking system with telcos providing the infrastructure as a partner, rather than acting as the primary service provider. This model would be preferable, as it is more closely based on international banking norms and standards and, thus, enables branchless banking to more easily become an extension of existing mainstream banking models.

Creating an alternative branchless-banking structure similar to the one in Pakistan could help address three core issues. First, it could help resolve the question of whether banks and telcos are rivals or partners and which organization type should "own" a branchless-banking customer. One could argue that FIs should oversee the customer relationship because of their regulatory experience and existing transactional capabilities and infrastructure. Telcos may feel threatened by this arrangement or think that they deserve to own the relationship because they brought in the customers through their own efforts. However, telcos could still provide a key role by providing the communication infrastructure between the bank and the customer. Additionally, any customer loyalty that telcos can build or capture will be valuable for both telcos and banks, as it ensures program success. It is an interesting issue that will be answered as the markets evolve and customers' preferences influence and shape them.

Secondly, a new branchless-banking structure could address issues related to the regulatory environment. Interestingly and unfortunately, some existing and emerging schemes are wholly managed by non-bank organizations and therefore are outside the scope of financial regulatory authorities. As mobile-based branchless banking accelerates its positive trajectory, governing regulatory bodies must identify how to regulate the changing nature of the formal banking system. In the case of Kenya's M-PESA, having a telco (Safaricom) oversee the service benefits consumers in many ways; yet its customers lack a level of protection found within more highly regulated environments. For example as stated in a report from the United Nations, "Currently, there is no specific protection in the event that a user's mobile phone is stolen and used by fraudsters able to figure out the user PIN. Just like with ATM cards and banks, a user's best bet is to report a stolen mobile phone or SIM as soon as possible so that all mobile money transactions are blocked. New registrants are not briefed or given a brochure that discusses how to handle such issues."[8]

Having telcos lead the charge creates regulatory uncertainty and potentially threatens the regulatory environment for the financial sector. On the other hand, if FIs oversee branchless banking, they can ensure that the financial services provided adhere to responsible codes of conduct while also taking measures to protect the consumer. Financial organizations understand the appropriate front- and back-end processes for compliance, such as any equivalents to PCI controls, customer authentication methods, security and reporting schemes for ensuring the appropriate supervision. In the case of emerging economies, the regulator's role extends to ensuring financial products and services are available to their citizens. Even though schemes such as M-PESA started without direct bank involvement and now fall under the 2011 Payments Act, which provides less oversight than what governs the formal banking segment, a financial institution should be at the helm in order to ensure Kenya's consumers are well protected and regulations are complied with.[18]

The third issue an alternative system could address: When banks are operating within a closed system and without competition, it limits the system's overall effectiveness. Furthermore, when a monopolistic structure such as Kenya's reigns, branchless banking effectively becomes an alternative currency. All enhancements to the service are dependent on a power play between the dominant monopoly and the rest of the financial ecosystem. In a more open, competitive landscape, services will grow within the existing financial frameworks to support a more natural flow between branchless accounts and regular accounts.

In M-PESA, real money is effectively converted into a virtual currency, which can be used exclusively within the Safaricom network, and cashed out via connected ATMs and its agent network at a 1:1 exchange rate. It's important to note that Safaricom also must deposit all the cardholder funds into a bank account in order to ensure its security. By following the Pakistani model, it is much easier to develop the mechanisms to uplift those branchless accounts to more traditional channels such as a prepaid card account, then to a debit card account and formal bank account. Unlike with M-PESA, there is a seamless connection in the financial flow in the Pakistani model where it's actual money at all times. This in turn translates into a much more integrated financial service for consumers. In fact, a branchless prepaid account could even be considered most similar to a prepaid card account accessed via a mobile

> "It is this gap in the financial services market that is creating a unique niche for mobile phone banking to develop on the continent, enabling a growing number of people to access financial services for the first time."[18]

channel rather than an actual plastic card. With this in mind, FIs can begin building the capabilities to lift the unbanked into the formal banking sector.

Conclusion

Branchless banking has two key benefits: It provides convenience to those who are fully banked by offering greater access to account information and bank services. At the same time, it allows for greater inclusion of additional consumer segments by leveraging technology that brings financial services to underserved populations. The time is now for telcos and FIs that want to serve this growing need. We conclude with a well articulated quote from a Mobile Banking in Africa report, "It is this gap in the financial services market that is creating a unique niche for mobile phone banking to develop on the continent, enabling a growing number of people to access financial services for the first time."[2]

SOURCES

1 Hoff, Krista and Leora Klapper. "Half of Adults Worldwide Report Having a Formal Bank Account." *Gallup.com.* 23 April 2012. Web. January 2013. <http://www.gallup.com/poll/154040/half-adults-worldwide-report-having-formal-bank-account.aspx>.

2 Makin, Paul. "Regulatory Issues Around Mobile Banking: New Initiatives to Bank the Poor are Straining the World's Financial Regulatory Systems." *Oecd.org* Web. October 2012. <http://www.oecd.org/ict/4d/43631885.pdf>.

3 Nakaweesi, Dorothy. "Africa Mobile Phone Users Hit 500 Million." *The Monitor. Allafrica.com.*15 November 2010. Web. January 2013 <http://allafrica.com/stories/201011150298.html>.

4 "The Enterprise Mobile Financial Services Platform: Telenor Pakistan – Scaling to meet accelerated growth." *Fundamo.com.* Web. September 2010. <http://www.fundamo.com/PDF/Case%20study/Telenor%20Easypaisa%20Pakistan%20Case%20Study.pdf>.

5 "Mobile Money in Africa: Press 1 for Modernity." *Economist.com.* 28 April 2012. Web. January 2013. <http://www.economist.com/node/21553510>

6 "Kenya's Biggest Bank: The Cult of Equity." *Economist.com.* 8 December 2012. Web. January 2013. <http://www.economist.com/news/finance-and-economics/21567981-huge-success-home-has-been-less-dazzling-abroad-cult-equity>.

7 "Banking Goes Mobile With a Truck." *PYMNTS.com.* 17 December 2012. Web. January 2013. <http://pymnts.com/briefing-room/PYMNTS-International/Banking-Goes-Mobile-With-A-Truck?utm_source=PYMNTS.com+EMEA+December+18%2C+2012&utm_campaign=EMEA+12%2F18&utm_medium=email>.

8 "Mobile Money for Business Development in the East African Community: A Comparative Study of Existing Platforms and Regulations." United Nations. *Unctad.org.* 2012. Web. January 2013. <http://unctad.org/en/PublicationsLibrary/dtlstict2012d2_en.pdf>.

9 "Mobile Banking a Big Success in Kenya." *HowWeMadeItInAfrica.com.* 15 April 2010. Web. September 2012. <http://www.howwemadeitinafrica.com/mobile-banking-kenya/5/>.

10 "Financial Inclusion Programme." State Bank of Pakistan. *Sbp.org.pk.* Web. September 2012. <http://www.sbp.org.pk/MFD/FIP/inclusion.htm>.

11 "Financial Inclusion Data: Kenya." The World Bank. Worldbank.org. 2011. Web. January 2013. <http://datatopics.worldbank.org/financialinclusion/country/kenya>.

12 Mas, Ignacio and Dan Radcliffe, "Mobile Payments go Viral: M-PESA in Kenya." Bill and Belinda Gates Foundation. March 2010. Web. October 2012. <http://siteresources.worldbank.org/AFRICAEXT/Resources/258643-1271798012256/M-PESA_Kenya.pdf>.

13 "Kenya, Economic Survey 2010 Highlights." Kenya National Bureau of Statistics. Knbs.or.ke. 2010. Web. October 2012. <http://www.knbs.or.ke/Economic%20Surveys/Economic%20Survey%202010.pdf>.

14 Central Intelligence Agency. World Fact Book: Kenya. *Cia.gov.* Web. September 2012. <https://www.cia.gov/library/publications/the-world-factbook/geos/ke.html>.

[15] "Money Transfer Through EasyPaisa." *Easypaisa.com.* Web. October 2012. <http://www.easypaisa.com.pk/index.php/en/money-transfer>.

[16] Mugwe, David. "M-Pesa drives innovation five years after launch." Business Daily. *Businessdailyafrica.com.* 22 March 2012. Web. October 2012. <http://mobile.businessdailyafrica.com/Corporate+News/M+Pesa+drives+innovation+five+years+after+launch+/-/1144450/1371628/-/format/xhtml/-/4lx66cz/-/index.html>.

[17] Catherine K. Mogambi, Senior Group Manager of Card Acquiring. Ecobank. January 2013.

[18] Ondiege, Peter. "Mobile Banking in Africa: Taking the Banks to the People." Africa Economic Brief. *Afab.org.* December 20120. Web. January 2013. <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/John%20brief%201_John%20brief%201.pdf>.

ABOUT THE AUTHOR

Malek Mroueh holds a Master of Engineering in Microelectronics and has more than 20 years' experience working in the cards and payments industry. He has an in-depth knowledge of global payment landscapes, the requirements of financial inclusion and the benefits of branchless banking. Mr Mroueh has worked in several fields within the payments industry including payment solution design, payment cards consulting and has extensive knowledge of digital payment channels. Today, Mr Mroueh is Senior Director, Regional Development Middle East, Africa and Pakistan.

ABOUT THE TSYS

At TSYS, (NYSE: TSS), we believe payments should revolve around people — not the other way around. We call this belief "People-Centered Payments." By putting people at the center of every decision we make, with unmatched customer service and industry insight, TSYS is able to support financial institutions, businesses and governments in more than 80 countries. Offering merchant payment-acceptance solutions as well as services in credit, debit, prepaid, mobile, installments, chip, healthcare and more, we make it possible for those in the global market-place to conduct safe and secure electronic transactions with trust and convenience.

TSYS' headquarters are located in Columbus, Georgia, with local offices spread across the Americas, EMEA and Asia-Pacific. TSYS provides services to more than half of the top 20 international banks, and has been named one of the 2012 World's Most Ethical Companies by Ethis-phere magazine. For more information, please visit us at www.tsys.com.

CONTRIBUTORS

This report was prepared by TSYS. Contributors to this paper under the guidance of Malek Mroueh include: Associate Marketing Director, Morgan Beard; Independent Writer, Carolyn Kopf.

TO LEARN MORE

contact +1.706.649.2307 or email sales@tsys.com.

GET TO KNOW TSYS

AFRICA	ASIA-PACIFIC	COMMONWEALTH OF INDEPENDENT STATES	EUROPE	INDIA & SOUTH ASIA	JAPAN	MIDDLE EAST	NORTH & CENTRAL AMERICA, MEXICO & THE CARIBBEAN	SOUTH AMERICA
+27 21 5566392	+603 2173 6800	+7 495 287 3800	+44 (0) 1904 562000	+911204191000	+81 3 6418 3420	+971 (4) 391 2823	+1.706.649.2307	+55.11.3504 6600