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## Safaricom and M-PESA in Kenya: Financial Inclusion and Financial Integrity

Mercy W. Buku

Michael W. Meredith

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SAFARICOM AND M-PESA IN KENYA: FINANCIAL  
INCLUSION AND FINANCIAL INTEGRITY

*Mercy W. Buku and Michael W. Meredith\**

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ABSTRACT

*The recent and widespread availability of affordable mobile phone technology in developing countries has paved the way for the development of a number of mobile money and electronic remittance services. One of the most successful of these services is Safaricom's M-PESA program, launched in the East African nation of Kenya in March 2007. Since then, the program has successfully enrolled 15.2 million users, transferred more than US\$1.4 trillion in electronic funds, and contributed significantly to poverty alleviation and financial inclusion efforts in rural*

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\* Mercy W. Buku, LLB Hons (University of Nairobi 1988), Dip Law (Kenya School of Law 1989); Advocate of the High Court Kenya, Commissioner for Oaths and Notary Public, ACIB (U.K.), CPS(K), CAMS (U.S.A.); Senior Manager Money Laundering Reporting Office Safaricom Limited, Kenya. Many thanks to Michael Meredith, Research Assistant, University of Washington School of Law for his tremendous contribution in researching and co-authoring this paper, to Professor Jane K. Winn, University of Washington School of Law, Brian Muthiora, Principal In-House Counsel Safaricom Limited, Louis de Koker, Professor of Law, Deakin University School of Law, Melbourne, Australia, and Laura Powell, student editor, University of Washington School of Law, for their invaluable input in critiquing and editing the paper.

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*Kenya. This Article seeks to trace the development of M-PESA in Kenya, provide a snapshot of the Kenyan implementation of and experience with the program, and consider the role that services like M-PESA might play in national and international anti-money laundering and counter-terrorist financing efforts.*

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## INTRODUCTION

“The adoption of mobile phones has occurred at perhaps the fastest rate and to the deepest level of any consumer-level technology in history.”<sup>1</sup> The fixed line telephone—the predecessor to mobile phones—took 100 years to reach only 80 percent of the population, even in developed countries.<sup>2</sup> Meanwhile, mobile phones have been adopted “more than five times as fast”<sup>3</sup> worldwide, and have significantly decreased communication costs in many parts of the developing world.

Nowhere is the benefit and impact of widely available mobile phone technology more apparent than in Africa, “where [alternatives to mobile phones such as] networks of both fixed line communication and physical transportation infrastructure are often inadequate, unreliable, and dilapidated.”<sup>4</sup> The adoption of mobile phone technology “in Africa has increased from 3 percent in 2002 to 51 percent today, and is expected to reach 72 percent by 2014.”<sup>5</sup>

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<sup>1</sup> William Jack & Tavneet Suri, *Mobile Money: The Economics of M-PESA* 2 (Nat’l Bureau of Econ. Research, Working Paper No. 16721, 2011), available at <http://www.nber.org/papers/w16721>.

<sup>2</sup> *Id.* at 3.

<sup>3</sup> *Id.* at 2-3.

<sup>4</sup> *Id.* at 2.

<sup>5</sup> Ignacio Mas & Daniel Radcliffe, *Mobile Payments Go Viral: M-PESA in Kenya*, 32 J. FIN. TRANSFORMATION 169, 172 (2011), available at

As a result, affordable access to mobile phone technology has allowed a number of African nations to “leap-frog the [line] en route to 21st century connectivity.”<sup>6</sup>

However, the positive impact of the adoption of cellular technology has not been limited to the communications or information technology sectors of developing countries. In fact, the successful development of mobile money services in Kenya provides a unique and interesting case study of how access to mobile phones can revolutionize and democratize the financial and banking industries of developing nations.

Currently, there are more Kenyans who own a mobile phone than have access to a bank account. In this respect, Kenya is not an exceptional case. Worldwide, only “one billion of the world’s 6.5 billion people have bank accounts . . . yet about three billion have mobile phones.”<sup>7</sup> This global lack of access to financial services, combined with the increasingly widespread use of mobile phones, has given rise to an informal practice of using mobile phones as an alternative to traditional banking systems. Mobile phone users can transfer funds to other users through pre-paid mobile phone credits sent via short message service (SMS) communication. Upon receipt, these credits are exchanged for cash or traded for goods and services in a type of informal, mobile phone based economy that provides basic financial services to otherwise unserved or unbanked populations.

Seeking to improve and formalize this funds-transfer system, Safaricom—Kenya’s leading mobile service provider and an affiliate of the Vodafone Group—launched its M-PESA service. M-PESA, short for mobile money,<sup>8</sup> is an SMS-based money transfer system that allows individuals to deposit, send, and withdraw funds using only their mobile phones. In the M-PESA system, Safaricom accepts cash deposits from customers who are

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[http://www.capco.com/sites/all/files/journal-32\\_article-16.pdf](http://www.capco.com/sites/all/files/journal-32_article-16.pdf).

<sup>6</sup> Jack & Suri, *supra* note 1, at 2.

<sup>7</sup> Briana Sapp, *Mobile Phones Revolutionise Banking*, INTER PRESS SERVICE NEWS AGENCY, May 23, 2007, available at <http://www.ipsnews.net/2007/05/finance-africa-mobile-phones-revolutionise-banking/>.

<sup>8</sup> *Pesa* is Swahili for money.

registered M-PESA users.<sup>9</sup> In exchange for their deposits, users are issued “e-float” or “e-money” that is held in the user’s electronic account. The e-money issued is a shilling-for-shilling representation of actual deposited cash, which is held in trust. E-money can then be transferred, used to pay for goods and services, or withdrawn.<sup>10</sup>

After its launch in 2007, the M-PESA program grew rapidly and reached approximately 65 percent of Kenyan households by the end of 2009.<sup>11</sup> The program provided desperately needed access to reliable financial services and markedly improved the economic productivity of many impoverished communities throughout Kenya. As a result, the program was widely viewed as a model of success to be emulated across the developing world. However, the unique and uncontroverted success of M-PESA as a financial inclusion and poverty alleviation program in Kenya has been difficult to replicate in other developing nations.<sup>12</sup>

This Article seeks to: (I) analyze relevant demographic information concerning the population of Kenya that might shed light on the financial needs of Kenya’s consumers and provide explanations for the extraordinary success of Kenya’s M-PESA

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<sup>9</sup> Int’l Fin. Corp., *M-Money Channel Distribution Case – Kenya 1* (World Bank Grp., Case Study Tool 6.7, 2011).

<sup>10</sup> *Id.* (“Registration and deposits are free and most other transactions are priced based on a tiered structure to allow even the poorest users to be able to use the system at a reasonable cost. Transaction values are typically small, ranging from USD 5 to USD 30.”); Mas & Radcliffe, *supra* note 5, at 170 (“[Retail] stores are paid a fee by Safaricom each time they exchange [cash for M-PESA credit] on behalf of customers.”).

<sup>11</sup> Jack & Suri, *supra* note 1, at 5 (“The average number of new registrations per day exceeded 5,000 in August 2007, and reached nearly 10,000 in December that year . . . [b]y August 2009, a stock of about 7.7 million M-PESA accounts had been registered. There are now about 23,000 agents, and data from late 2009 indicated that even by then more than two-thirds of Kenyan households had at least one member who used the service.”).

<sup>12</sup> For a discussion of the difficulty of replicating the success of M-PESA in Kenya and some explanations of this result, *see, e.g.*, Gunnar Camner & Emil Sjöblom, *Can the Success of M-PESA Be Repeated? – A Review of the Implementations in Kenya and Tanzania*, VALUABLE BITS (Sept. 14, 2009), [http://www.mobileactive.org/files/file\\_uploads/camner\\_sjoblom\\_differences\\_ke\\_tz.pdf](http://www.mobileactive.org/files/file_uploads/camner_sjoblom_differences_ke_tz.pdf).

program; (II) trace the development of M-PESA in Kenya since its inception in 2003; (III) provide a snapshot of Kenya's implementation of the M-PESA program to date; and (IV) discuss some of the future challenges facing M-PESA, including the role that M-PESA and Safaricom might play in international anti-money laundering and counter-terrorist financing efforts.

I. KNOW YOUR CUSTOMER, KNOW YOUR COUNTRY: KENYA'S  
DEMOGRAPHICS AND THE STATE OF FINANCIAL INCLUSION PRIOR  
TO THE DEVELOPMENT OF M-PESA

Although the success of M-PESA in Kenya is unprecedented and attributable largely to Safaricom's innovative business model and marketing strategy, some have suggested that M-PESA's effectiveness was enhanced due to the demographic characteristics of the Kenyan consumer and Kenyan society that existed prior to M-PESA's launch.<sup>13</sup> Therefore, the state of affairs that gave rise to M-PESA's success and inspired its development is worthy of brief consideration here.

A. *The Kenyan Demand for Remittance Services: Kenya's Pattern of Urbanization and the "Dual System"*

The term "dual system" is used to describe the continued connection that urban migrants maintain with their rural homes and villages, despite spending a significant amount of time living or working in urban centers.<sup>14</sup> The reasons for these sustained connections are multifold and include their ability to "ease the transition to urban life."<sup>15</sup> However, the explanation for these strong urban-rural connections that most concerns this Article is a financial one. Due to the severe disparity between urban and rural

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<sup>13</sup> See, e.g., Mas & Radcliffe, *supra* note 5.

<sup>14</sup> Olga Morawczynski, *Surviving in the "Dual System": How M-PESA is Fostering Urban-to-Rural Remittances in a Kenyan Slum 2* (Univ. of Edinburgh, Soc. Studies Unit, Working Paper, 2008), available at [http://www.mobileactive.org/files/file\\_uploads/Olga\\_Morawczynski-M-PESA-2008.pdf](http://www.mobileactive.org/files/file_uploads/Olga_Morawczynski-M-PESA-2008.pdf).

<sup>15</sup> *Id.*

wages, many laborers and household breadwinners migrate from rural centers to urban areas without their families in search of more lucrative employment opportunities. As a result, many rural households rely on remittances from urban centers for survival; the two societies become interconnected as a matter of economic necessity.<sup>16</sup>

Kenya provides a particularly compelling example of this “dual system.” In Kenya, “30 percent of households . . . depend on remittances for their survival,”<sup>17</sup> and over 78 percent of Kenya’s population lives in rural households. As such, Kenya’s consumer market expressed a meaningful demand for urban-to-rural remittance services prior to the implementation of M-PESA. In fact, some have suggested the urban-to-rural population ratio in Kenya struck a serendipitous balance that generated the largest possible demand for the domestic remittance services offered by M-PESA.

A recent study of demand patterns for remittance services in developing nations suggests “the potential market size for domestic remittances is related to urbanization ratios. More propitious [domestic remittance] markets will be those where the process of rural-urban migration is sufficiently rooted to produce large migration flows, but not so advanced that rural communities are hollowed out.”<sup>18</sup> Kenya’s history, culture, and public policy have functioned together to establish and maintain this demand-producing urban-to-rural population ratio. During Kenya’s colonial period, policies were implemented in the hopes of preventing the establishment of permanent urban centers. For example, in urban areas, labor was only recruited for temporary periods, wages were kept low, and only small accommodations not suitable for family living were available. As a result, “migrant workers would oscillate between . . . urban and rural area[s] throughout their working life.”<sup>19</sup>

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<sup>16</sup> *Id.*

<sup>17</sup> *Id.*

<sup>18</sup> Amrik Heyer & Ignacio Mas, *Seeking Fertile Grounds for Mobile Money* 5-6 (Bill & Melinda Gates Found., Working Paper, 2009), available at [http://mmublog.org/wp-content/files\\_mf/fertile\\_grounds\\_mobile\\_money.pdf](http://mmublog.org/wp-content/files_mf/fertile_grounds_mobile_money.pdf).

<sup>19</sup> Morawczynski, *supra* note 14, at 4.

Kenya's post-colonial government reversed these policies and sought to jumpstart economic development through a nation-wide program of urbanization. Subsequently, urban wages and the number of permanent residents in urban areas significantly increased. The impact of these policies was, however, muted due to the significant and sustaining links maintained by urban workers to their rural homes and rural communities. As explained by a number of scholars in the area, "In Kenya, migrants' ties with [their] rural homes [are especially strong due to] an ethnic . . . conception of citizenship . . . expressed through burial, inheritance, cross-generational dependencies, social insurance, and other ties, even in cases where migrants reside more or less permanently in cities."<sup>20</sup>

Despite government policies seeking to increase urbanization, there was not an unsustainable drain of workers from rural areas to urban centers in Kenya. Instead, migrating workers continued to send funds to their rural homes and support the rural communities that they left in search of employment. This cultural phenomenon is not unique to Kenya. In fact, a strong tie to rural homes is part of the community spirit embodied in many African cultures. Nevertheless, there exists an especially strong demand for domestic remittance services in Kenya, due to its history, culture, and pattern of population growth.

*B. Challenges Faced by Kenya's Financial Service Providers in Meeting the Kenyan Consumer's Demand for Remittance Services*

Prior to Safaricom's M-PESA launch, Kenyans had a number of options for local remittance services. These services included "commercial banks, post offices, forex bureaus, bus companies, and friends and family."<sup>21</sup> Almost all of these options, however, were either unavailable to the majority of Kenya's consumers or were extremely unreliable and insecure.

The most commonly used remittance services—informal friend

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<sup>20</sup> Mas & Radcliffe, *supra* note 5, at 173.

<sup>21</sup> Morawczynski, *supra* note 14, at 2.

and family networks and courier services provided by Kenya's bus companies—risked the potential of lost or stolen funds and, occasionally, required the payment of prohibitively high fees.<sup>22</sup> Similarly, the Kenyan postal service, although traditionally a popular method for transferring funds to rural communities, “is perceived by customers as costly, slow, and prone to liquidity shortages at rural outlets.”<sup>23</sup>

Finally, the ability to transfer funds through a commercial bank is substantially impaired by the fact that only an extreme minority of rural Kenyans has access to a bank account with which to receive remitted funds. Therefore, even with a number of remittance services available to them, most Kenyans experienced “service gaps, inefficiencies, and unmet demand, particularly among the low-income population.”<sup>24</sup>

### *C. Confidence in Safaricom and the Ubiquity of Mobile Phones in Kenya*

The development and implementation of a new payment system, such as M-PESA, is generally faced with a number of financial, cultural, and logistical challenges, not least of which is attracting users to the service and ensuring that they will trust their money to a previously unknown and untested commercial entity. At least in this area, Safaricom had a head start prior to M-PESA's commercial launch.

Established in 2000 with 17,000 customers and only 50 employees, Safaricom has grown into one of the most accessible and well-recognized brands in Kenya. Today, Safaricom employs over 3,000 individuals and offers services to more than 16 million customers. In Kenya, almost 83 percent of the population who are fifteen years or older have access to a mobile phone<sup>25</sup> and Safaricom is responsible for a significant portion of that

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<sup>22</sup> *Id.* at 10.

<sup>23</sup> Mas & Radcliffe, *supra* note 5, at 174.

<sup>24</sup> Kamau Kabbucho et al., *Passing the Buck: Money Transfer Systems: The Practice and Potential for Products in Kenya* v DAI (May 2003), [http://dai.com/sites/default/files/pubs/other/Passing\\_the\\_Buck.pdf](http://dai.com/sites/default/files/pubs/other/Passing_the_Buck.pdf).

<sup>25</sup> Jack & Suri, *supra* note 1, at 4.

penetration. Safaricom controls nearly 80 percent of the mobile phone market, placing it significantly ahead of its nearest rivals: Airtel, Yu, and Orange.<sup>26</sup> As a result, even before the launch of M-PESA, Safaricom had developed meaningful brand recognition and trust with Kenya's consumers upon which to build its remittance service.

#### *D. Kenya's Consumer Profile*

Of course, there are a number of other factors relevant to the viability of financial inclusion services, such as M-PESA, in Kenya. One important factor is the demographic character of Kenya's consumer population. It is relevant to note that Kenya is home to approximately 39 million people, which is about average for an African nation. Therefore, Kenya can serve as a useful model for other countries in this regard. However, Kenya is a relatively young country; over 42 percent of its population is under the age of fourteen. It is also important to note that more than 85 percent of Kenya's population is literate and has had experience with mobile phone technology. The majority of Kenyans would most likely be able to adjust to using M-PESA's text message services without much difficulty. Finally, an important aspect of Kenya's population is its level of employment. Although 17.94 million individuals are included in Kenya's labor force, the nation still counts nearly 40 percent of its citizens as unemployed. As a result, Kenya maintains a relatively high poverty level. Thus, for any financial service to be successful in Kenya it must not exclude a significant portion of the country's consumers by being prohibitively expensive.

## II. M-PESA'S PILOT PROGRAM

Taking these factors into account, Safaricom first launched M-PESA in Kenya as part of a six-month pilot program conceived and developed cooperatively between a number of public and private entities. The following section seeks to: (A) identify the

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<sup>26</sup> *Id.* at 5.

important corporations and governmental agencies involved in M-PESA's pilot program, (B) explain how the M-PESA pilot program was implemented in Kenya, and (C) mention a few of the lessons learned as the pilot progressed.

*A. The Players: the Role of Vodafone, Safaricom, the United Kingdom, and the Kenyan Government in M-PESA's Pilot Program*

M-PESA was conceived of at the 2003 World Summit for Sustainable Development, when the United Kingdom's Department for International Development (DFID) approached a representative of Vodafone.<sup>27</sup> The U.K. DFID was convinced that private organizations did not invest more heavily in international poverty alleviation efforts because poverty alleviation programs generally require a significant initial investment, but often fail to generate financial returns commensurate with that investment. Thus, the DFID believed that if the amount of money necessary for a program's initial investment could be sufficiently reduced, poverty alleviation might become a profitable endeavor that would unleash the creative energies and logistical resources of some of the U.K.'s largest companies, such as Vodafone. Following this line of reasoning, the U.K. DFID developed an innovative use for the U.K.'s "challenge funds" intended to achieve the United Nations' Millennium Development goal of reducing poverty by 50 percent by 2015: subsidizing the investment of private companies in poverty alleviation efforts.

Putting its ideas into action, the U.K. DFID proposed a number of public-private partnerships to Vodafone in which private poverty alleviation efforts in African nations, such as Kenya, would become more financially attractive to investors by using the U.K.'s "challenge funds" as a subsidy.<sup>28</sup> One of the DFID's proposed partnerships eventually resulted in M-PESA. Vodafone

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<sup>27</sup> Nick Hughes & Susie Lonie, *M-PESA: Mobile Money for the "Unbanked": Turning Cellphones into 24-Hour Tellers in Kenya*, 2 INNOVATIONS 63, 66 (2007).

<sup>28</sup> *Id.*

won the bid to head up the DFID's program and soon after partnered with the Safaricom team in Kenya to implement the M-PESA service.

Safaricom is a publicly traded company registered on the Nairobi Stock Exchange, but was supported by the Kenyan government during its development of M-PESA. Following a financial access survey conducted in 2006, which indicated very low levels of access to financial services throughout the country, the Central Bank of Kenya (CBK) announced its commitment to exploring "all reasonable options for correcting the [financial] access imbalance" and began to work closely with Vodafone and Safaricom to ensure the success of M-PESA.<sup>29</sup> Perhaps the CBK's largest contribution to the pilot program was simply recognizing that pre-mature regulation of programs like M-PESA might stifle the industry's growth. As a result, the CBK imposed almost no regulatory safeguards on the M-PESA pilot program.<sup>30</sup>

#### *B. Implementation of M-PESA's Pilot Program*

The M-PESA pilot program in Kenya, headed by Vodafone and Safaricom, officially began on October 11, 2005.<sup>31</sup> The pilot consisted of eight agent stores in three geographically dispersed locations: the Nairobi Central Business District (a well-developed urban center), Mathare (a slum about 8 kilometers out of the center of town), and Thika (a rural market town approximately 32 kilometers out of the city).

Initially, M-PESA was conceived of as a means for microfinance institutions to disburse loans to their customers and to enable those customers to make loan repayments using their mobile phones. As a result, Vodafone partnered with Faulu Kenya, a local micro-finance institution that provided microloans to individual consumers and small business owners who would repay their loans, generally, by a few dollars every week.<sup>32</sup> Five hundred Faulu Kenya clients were enrolled in the pilot program, provided

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<sup>29</sup> Mas & Radcliffe, *supra* note 5, at 173.

<sup>30</sup> *Id.*

<sup>31</sup> Int'l Fin. Corp., *supra* note 9, at 10.

<sup>32</sup> Hughes & Lonie, *supra* note 27, at 70.

with M-PESA-ready phones, and instructed on how to use them to repay their loans (their incentive for accepting the deal was a free phone and a few dollars placed in their M-PESA account).<sup>33</sup> As the pilot progressed, the trial participants recognized and explored the potential of the M-PESA service. As one Safaricom representative noted:

Aside from the standard loan repayments for which we had designed the system, we observed several other applications: People repaying the loans of others in return for services; Payment for trading between businesses; Some of the larger businesses using M-PESA as an overnight safe because the banks closed before the agent shops; People journeying between the pilot areas, depositing cash at one end, and withdrawing it a few hours later at the other; People sending airtime purchased by M-PESA directly to their relations up country as a kind of informal remittance; People outside the pilot population being sent money for various ad hoc reasons[,] for example, one lady's husband had been robbed, so she sent him M-PESA to pay for his bus fare home; People repaying loans in return for cash on behalf of a few colleagues who hadn't mastered the use of the phone—or simply sold it.<sup>34</sup>

Based on this expanded use of the service and the demand from those outside the program to be involved, Safaricom expanded the pilot services by allowing users to purchase prepaid airtime at a 5 percent discount if purchased with their deposited M-PESA e-money. Not only did trial participants take advantage of the service but “a number of customers [set] up as informal airtime resellers as a side business.”<sup>35</sup>

Six months later, on May 1, 2006, the pilot ended. Its success can be measured, in part, by the fact that “many trial users

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<sup>33</sup> *Id.* at 74.

<sup>34</sup> *Id.* at 76.

<sup>35</sup> *Id.*

continued to transact on the system after [the pilot concluded].”<sup>36</sup> The pilot did present, however, a number of stumbling blocks and lessons for the full launch.

### *C. Lessons from the Pilot*

The first lesson that became clear from the M-PESA pilot was that it would not primarily be used as a means to repay microloans. In fact, Safaricom’s partnership with Faulu Kenya generated more unnecessary complications than benefits to the consumer. “Many of their reconciliation methods were manual and paper based and reconciling M-PESA transactions in parallel with their existing systems only seemed to add complexity and additional work for Faulu back-office staff. Furthermore, Faulu was not able to maintain a stable [I]nternet connection.”<sup>37</sup> Therefore, “Safaricom decided to proceed with a full commercial launch of the service without [their] microfinance capabilities.”<sup>38</sup>

Additionally, agents involved in the pilot program were initially hesitant to pay out physical cash based solely upon an M-PESA text message. In order to assuage these insecurities for the full launch, agents were given individual M-PESA cash float accounts and reassurances from Safaricom’s head offices.

Finally, “consumer training was quickly identified as being probably the biggest challenge” to a countrywide implementation of M-PESA.<sup>39</sup> Individuals that were not familiar with mobile phones needed significant training in order to navigate a mobile phone’s menu system and the M-PESA application in particular. Additionally, although many Kenyans were English-speaking, some, especially those in the rural areas, spoke primarily Swahili and other tribal languages. Thus, for the full rollout, Safaricom had to condense these languages that are not as compact as English, to no more than 160 characters for an SMS message to achieve optimal levels of customer registration in rural areas.<sup>40</sup> As a result

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<sup>36</sup> Int’l Fin. Corp., *supra* note 9, at 10.

<sup>37</sup> *Id.* at 4.

<sup>38</sup> *Id.*

<sup>39</sup> Hughes & Lonie, *supra* note 27, at 74.

<sup>40</sup> *Id.* at 72-73.

of these efforts, all customer communications are currently in both English and Swahili.

### III. M-PESA LAUNCH AND MEASURING THE PROGRAM'S SUCCESS IN KENYA

In addition to addressing the problems presented during M-PESA's pilot program, M-PESA's full launch would also have to overcome the adverse network effects that plague the implementation of nearly every new payment system. In order to overcome these obstacles, prior to the 2007 launch, Safaricom made a number of "significant up front investment[s]" in the product, including opening 750 M-PESA providers nation-wide and ensuring at least one M-PESA agent was available in each of Kenya's 69 districts.<sup>41</sup> Further, in order to cement trust and familiarity with the brand, Safaricom began a nationwide advertising campaign that included television and radio spots as well as traveling roadshows that provided customer training in the use of mobile phone technology and the M-PESA service.

The launch was described as a "massive logistical challenge that led to a great deal of customer and store confusion and, in the first months . . . several days' delays to reach customer service hotlines."<sup>42</sup> Yet the gamble paid off and within one month Safaricom had registered over 20,000 customers for the M-PESA service.<sup>43</sup> Since the launch of the service, about 15 million new customers have signed up and used it to transfer over US\$1.4 trillion. As a result, M-PESA's launch in Kenya has been universally hailed as a success based upon almost any meaningful vector of comparison.

#### *A. The Rate and Sustained Growth of Customer Registration*

One indication of M-PESA's success is the sheer number of Kenyans who have chosen to register for the service despite other

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<sup>41</sup> Mas & Radcliffe, *supra* note 5, at 178.

<sup>42</sup> *Id.*

<sup>43</sup> Hughes & Lonie, *supra* note 27, at 63.

remittance services available to them. Between March 2007 (the date of the program's full launch) and May 2008, over 2 million customers registered; and the number of customers "reached the 10 million mark in just over three years [after the service was launched]." <sup>44</sup> As of December 31, 2011, the reported number of active M-PESA customers has topped 15.2 million. Currently, out of Safaricom's 17 million subscribers, 15.2 million (90 percent) are registered for M-PESA, which is 63 percent of the adult population in Kenya. These numbers reflect M-PESA's outstanding success as a mechanism of financial inclusion.

### *B. The Growth of M-PESA Retail Agents in Kenya*

The number of M-PESA retail agents in Kenya has grown almost as quickly as the number of M-PESA clients. During the first year of service, despite Safaricom's significant initial investment in new M-PESA locations, the growth of agents lagged behind the demand created by an expanding customer base. This result, however, was partially by design. Since "store revenues are dependent on the number of transactions they facilitate, Safaricom was careful not to flood the market with too many outlets, lest it depress the number of customers per agent." <sup>45</sup> As of December 30, 2011, the number of M-PESA retail agents has expanded to meet customer demand and there are now over 35,500 M-PESA agents in such diverse sectors as supermarkets, fuel stations, and Safaricom dealers. In fact, there are now "over five times the number of M-PESA outlets [in Kenya] than the total number of . . . post offices, bank branches, and automated teller machines (ATMs)." <sup>46</sup>

### *C. Volume of e-Money Transactions*

Another important measure of M-PESA's success is the amount of money transferred through its e-money system. Over two million transactions are conducted over M-PESA every day.

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<sup>44</sup> Mas & Radcliffe, *supra* note 5, at 170.

<sup>45</sup> *Id.* at 179.

<sup>46</sup> *Id.* at 170.

That number constitutes 90 percent of all mobile money transactions in Kenya and 70 percent of all non-cash financial transactions. Cumulatively, these transactions amount to more than US\$4.98 billion transferred per year, which accounts for 17 percent of Kenya's gross domestic product. Over its five-year history, Safaricom's M-PESA has moved more than US\$1.4 trillion in peer-to-peer (P2P) transactions. As a point of comparison, M-PESA "processes more transactions domestically than Western Union does globally."<sup>47</sup>

It is important to note, however, that M-PESA has not replaced banks in Kenya. In fact, although some traditional banks initially resisted Safaricom's implementation of M-PESA, many have recently developed partnerships with Safaricom to offer the M-PESA payment solution to their customers via their own mobile banking platforms. Nevertheless, the volume of transactions effected between banks under the Real Time Gross Settlement (RTGS) method is nearly 700 times the daily value transacted through M-PESA.<sup>48</sup> On the other hand, the average mobile transaction is about a hundred times smaller than the average check transaction (Automated Clearing House, or ACH), and just half the size of the average ATM transaction.<sup>49</sup>

#### *D. Expansion of Services*

Since its launch, M-PESA has also expanded beyond its initially conceived of role as a money transfer service that might facilitate microloan repayment. The first notable new service was announced when Safaricom partnered with Pesa Point, one of the largest ATM service providers in Kenya, and allowed its users to make a withdrawal from their M-PESA account at any ATM. This service provided more convenience to consumers who needed to

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<sup>47</sup> *Id.* at 169.

<sup>48</sup> Stephen Mwaura Nduati, Head, Nat'l Payments Sys., Cent. Bank of Kenya, Kenya's Payments System 16 (Feb. 17, 2009), available at <http://aitec.usp.net/Banking%20&%20Payment%20Technologies%20EA,,17-19Feb2009/Stephen%20Mwaura%20Nduati%20%5bCompatibility%20Mode%5d.pdf>.

<sup>49</sup> *Id.*

make a withdrawal after M-PESA's agents have already closed or from an agent who did not have enough currency on hand to fulfill a withdrawal request.

In 2009, Safaricom expanded M-PESA's services again when it launched its pay bill service. At least "75 companies [began to use] M-PESA to collect payments from their customers. The biggest user is the electric utility company, which now has roughly 20 percent of its one million customers paying through M-PESA."<sup>50</sup> Since then, Safaricom has partnered with 25 banks and over 700 businesses to facilitate fund deposits, bank transfers and the regular payment of utility bills, insurance premiums, and loan installments, and more recently, since November 2012, M-PESA subscribers are now able to open interest earning bank deposit accounts electronically through their phones. The accounts are funded by transfer from the subscribers' M-PESA accounts and attract varying rates of interest. The subscribers will also be able to borrow against funds held in their bank accounts.

Other notable services now offered through M-PESA also include: the ability to purchase airtime for Safaricom's cellular service, the ability to use e-money to purchase goods and services at M-PESA partner outlets, international money transfer services currently offered in partnership with Western Union, M-Ticketing, M-PESA prepaid Visa cards, promotional cash prize payments, dividend payments, the ability to make charitable contributions, the transfer of Loyalty Points, and the ability to use M-PESA as a fundraising tool. The final category, M-PESA as a fundraising tool, deserves special attention following the recent success of the Kenyans for Kenya Famine Relief Initiative spearheaded by Safaricom and other businesses. The fundraiser raised KES678 million (US\$8.5 million), of which KES170 million (US\$2.1 million), or about 25 percent, was contributed through M-PESA.

*E. Financial Independence for Rural Communities and Female Empowerment*

Of course, M-PESA was not developed solely as a

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<sup>50</sup> Mas & Radcliffe, *supra* note 5, at 171.

moneymaking enterprise. In fact, at inception, its explicit purpose was to help achieve the United Nation's Millennium Development Goals. Thus, another measure of M-PESA's success is the manner in which it has helped reduce the impact of poverty for women and children in rural Kenya.

Since M-PESA allows the safe transfer and storage of money, rural Kenyans no longer need to make lengthy trips to urban areas to make monthly payments for basic services, such as light or heat. This saves not only time that would otherwise be directed toward economically productive activity, but also money (on average US\$3 per transaction) that can be more usefully spent on food and placed into long-term savings.

M-PESA also has the potential to increase net household savings by "facilitat[ing] inter-personal transactions [that] improve the allocation of savings across households and businesses by [improving] the person-to-person credit market [and] . . . increas[ing] the average return to capital [in that market] . . . producing a feed-back to the level of saving."<sup>51</sup> Whether this has actually resulted is up for debate: "While some customers use M-PESA as a savings device, [the service] still falls short of being a useful [method of savings] for most [of Kenya's] poor."<sup>52</sup> As of 2009, the average savings balance of an M-PESA account was around US\$3.<sup>53</sup>

Nevertheless, because M-PESA also makes the transfer of funds across large distances comparatively inexpensive, rural households are more likely to make efficient investments in human capital by sending "members to high paying jobs in distant locations . . . and [allowing them] to invest in skills that are likely to earn a [greater economic] return" in places outside their village.<sup>54</sup> Moreover, M-PESA allows rural households to effectively spread risk. If a "risk-related effect arises," M-PESA allows a quick transfer of funds.<sup>55</sup> "Instead of waiting for

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<sup>51</sup> Jack & Suri, *supra* note 1, at 11.

<sup>52</sup> Mas & Radcliffe, *supra* note 5, at 180.

<sup>53</sup> *Id.*

<sup>54</sup> Jack & Suri, *supra* note 1, at 11.

<sup>55</sup> *Id.*

conditions to worsen to levels that cause long-term damage, M-PESA might enable support networks to keep negative shocks [such as a medical emergency] manageable.”<sup>56</sup>

Finally, M-PESA has increased the bargaining power of weaker family members, in many cases women. These family members can now expect “larger and more regular remittances from better-off city-dwelling relatives” and can also create a private place to store and manage their own funds, giving them a level of financial independence previously unavailable to them.<sup>57</sup>

#### IV. FUTURE CHALLENGES: ANTI-MONEY LAUNDERING AND COUNTER-TERRORIST FINANCING REGULATIONS IMPLICATING M-PESA

Despite its successes, one of the challenges M-PESA faces is compliance with the ever-changing requirements of local and international anti-money laundering (AML) and counter-terrorist financing (CTF) programs. Although M-PESA is subject to the same AML controls required of banks operating in Kenya, the CBK and Kenya’s telecommunication regulator, the Communications Commission of Kenya (CCK)—cognizant of the risk posed by premature regulation of the mobile money industry—have historically taken a very open and supportive stance towards telecommunication operators seeking to provide financial services to unbanked populations in Kenya. The following sections seek to outline the manner in which AML controls in Kenya have evolved in their application to services like M-PESA.

##### *A. The Application of Traditional Kenyan Banking Law to Mobile Money*

At the time of M-PESA’s launch, Kenya attempted to regulate mobile money service providers only through an expansion of pre-existing regulations applicable to traditional banks. Prior to 1990,

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<sup>56</sup> *Id.*

<sup>57</sup> *Id.*

the only measures taken to control mobile money laundering were contained in generally applicable criminal laws (such as the Anti-Corruption and Economic Crimes Act) and guidelines issued by the CBK, pursuant to the Kenyan Banking Act, seeking to implement recommendations of the Financial Action Task Force (FATF). These FATF Recommendations included: know your customer (KYC) regulations, customer due diligence (CDD) procedures, transaction monitoring requirements, watch list screening procedures, suspicious activity reporting (SAR), and mandatory record keeping. In December 2009, more stringent regulations were imposed with the passage of the Proceeds of Crime & Anti-Money Laundering Act (AML Act). Kenya's AML Act explicitly criminalized money laundering, provided enforcement measures to the Kenya government (such as tracing and seizure rights), and imposed severe penalties on money launderers. Moreover, the FATF Recommendations previously implemented only through CBK prudential guidelines became mandatory for all financial service providers, including mobile money service providers like Safaricom.

*B. The CBK's Electronic Payment Guidelines and Sector-Specific Regulations*

In 2011, the Kenyan government deviated from its regulatory strategy of merely applying traditional banking law to mobile money service providers by developing sector-specific guidelines concerning mobile money and electronic payments. In consultation with stakeholders including Safaricom, the CBK issued its Electronic Payment Guidelines of 2011 and Retail Electronic Transfer Guidelines of 2011. These regulations notably required authorized electronic money issuers, such as Safaricom's M-PESA Holding Company (which holds funds on behalf of M-PESA customers), to maintain a core capital of the greater of KES10 million or 1 percent of one-twelfth of the previous year's total turnover.

Following the release of the CBK's e-money guidelines and a substantial lobbying effort by Kenya's banking industry, the Kenyan Parliament began debating the potential for a new payments law that would more rigorously control electronic

payments and place mobile money on an equal regulatory footing with comparable funds-transfer services provided by traditional banking institutions. These debates culminated in the enactment of the National Payment Systems Act (NPSA) in December 2011.

The NPSA brings all payment service providers, including mobile phone service providers, into one regulatory framework and provides the CBK with direct oversight of these providers to ensure their safety and efficiency. Discussions are also currently underway concerning the passage of a Kenyan Anti-Terrorism Bill that will impose even further AML and CTF regulations on mobile money service providers.

*C. Compliance With and Voluntarily Imposed AML Programs in Mobile Money*

By all accounts, Safaricom's M-PESA service has maintained compliance with all applicable AML regulations and has remained largely immune from corruption or misuse. In fact, in 2008, when the traditional banking industry lobbied the Kenyan Finance Minister to order an audit of the service, it was "declared . . . safe and in line with the country's objectives for financial inclusion" with minimal incidences of fraud perpetrated by the use of the M-PESA system were uncovered through the audit.<sup>58</sup> Safaricom's own internal and voluntary AML procedures are largely responsible for this result.

As with any major financial service, however, there have been reported cases of fraud and social engineering scams whereby unsuspecting subscribers have lost money to confidence tricksters. Thus, the financial innovations that have transformed M-PESA into a major payment service with millions of transactions worth billions of dollars annually should be developed hand in hand with appropriate controls to protect the M-PESA service from being used as an easy tool for money laundering and terrorism financing.

In this regard, Safaricom has proactively developed and implemented a comprehensive set of internal AML policies and

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<sup>58</sup> Mas & Radcliffe, *supra* note 5, at 174.

procedures including: (1) agent training, (2) internal KYC policies, and (3) strict transaction monitoring.

#### 1. Staff and Agent Training for M-PESA Providers

For many aspects of the M-PESA service, Safaricom only works directly with “master agents” who in turn are entrusted with the control of retail sub-agents. However, there is one area over which Safaricom maintains tight and direct control: staff and agent training. Safaricom maintains this control, in part, to ensure that M-PESA’s users receive a consistent and positive experience regardless of which agent they choose to patronize, but also to comply with Safaricom’s AML and CTF policies. Before a new agent is authorized to provide the M-PESA service, Safaricom provides in-depth and comprehensive agent training that covers all aspects of the service, as well as Safaricom’s AML, CTF, and KYC procedures. Additionally, staff members at all levels are taken through formal and web-based AML awareness training. The program, adapted from the AML policy instituted by the Vodafone Group, encompasses all aspects of the M-PESA service and is annually audited by the Vodafone Group Money Laundering Reporting Office to ensure its effectiveness.

#### 2. Identity Verification and “Know Your Customer” Procedures in M-PESA

M-PESA customers and agents are also subject to comprehensive KYC verification and CDD checks to protect M-PESA and related services from being used for money laundering. These procedures include an automated watch-list screening program (screening both for Politically Exposed Persons and persons on international sanctions lists) and a KYC regime requiring retail agents to “validate a customer’s identity during each transaction using [a] national ID card presented by the customer.”<sup>59</sup> Should a customer or agent present a money-laundering risk, appropriate deterrent action is taken resulting,

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<sup>59</sup> Int’l Fin. Corp., *supra* note 9, at 13.

when applicable, in the investigation and prosecution of suspects by the relevant law enforcement agencies.

### 3. Transactional Controls

In addition to the KYC controls mentioned above, Safaricom has implemented a number of transactional controls, including transactional limits and ongoing transaction monitoring to detect suspicious activity and prevent money laundering.

M-PESA transactions are closely monitored through an automated Transaction Monitoring System with appropriate exception parameters, based on set transactional patterns. Any exception alerts generated by the system are investigated and appropriate action is taken to close the account and/or to escalate the matter to management or the relevant law enforcement agencies for resolution.

Transaction limits are set at KES70,000 (approximately US\$900) per transaction with a maximum daily limit of KES140,000 (approximately US\$1800) for cash deposits, transfers, and withdrawals, a maximum holding limit of KES100,000 (approximately US\$800), and a KES10,000 (approximately US\$130) limit for airtime purchases. System restrictions are in place to prevent any attempt to circumvent these limits. Further,

Retail agents are also required to record transactions in a paper log book. For each transaction, the agent enters: the M[-]PESA balance, the date, agent ID, transaction ID, transaction type (customer deposit or withdrawal, agent cash rebalancing), value, customer phone number, customer name, and the customer's national ID number. Most of this information is copied from the confirmation SMS that the agent receives. Customers are then asked to sign the log for each transaction, which helps to discourage fraud. The log book is branded by

Safaricom and all retail agents use the same format.<sup>60</sup>

All transactional information is stored electronically on the M-PESA platform, appropriate reports of those transactions are made available to customers and compliance officers, and suspicious transactions are automatically reported in compliance with Kenya's AML and CTF programs.

#### CONCLUSION

What lessons can be drawn from the development of M-PESA in Kenya? First, there are a number of characteristics of Kenya's population and culture that generated a unique demand for remittance services and made Kenya especially supportive of M-PESA's development. However, Safaricom's diverse agent network, robust money transfer platform, low price, and strong mobile infrastructure were able to generate the trust, convenience, and brand recognition necessary to ensure early and consistently high levels of M-PESA service adoption.

Finally, and perhaps most significantly, M-PESA's success in Kenya is due, at least in part, to the enabling environment provided by regulators such as the CBK and the CCK. The passage of Kenya's NPSA and related legislation, coupled with increasing international efforts seeking to tighten control over mobile payment service providers might significantly alter the regulatory landscape for services like M-PESA and guide their progress in the future.

The development of AML and CTF efforts, however, is not a one-way street. In fact, the most recent Mobile Financial Services Risk Matrix issued by the United States Agency for International Development (USAID) Booz Allen Hamilton group was developed largely by incorporating Safaricom's own risk mitigation policies, procedures, and processes. Thus, it is evident that Safaricom and its successful implementation of the M-PESA service in Kenya will continue to have an important influence on the development of

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<sup>60</sup> *Id.*

mobile financial services and the future of international AML efforts.