



# The impact of mobile money interoperability in Tanzania

Early data and market perspectives on account-to-account interoperability

SEPTEMBER 2016



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# Introduction

As mobile money services mature around the globe, the development of a mobile financial ecosystem becomes paramount. Closely linked to this is a need for a reduction of friction in payments to unlock new product development, drive greater usage of digital funds, and generate more value for customers. This is why real-time transaction delivery and open-loop networks have become increasingly important assets in the global payments context.<sup>1</sup> Industry collaboration is essential to reduce friction and to accelerate network effects that can help mobile money achieve its social and commercial potential. Evidence from the industry reinforces a growing appetite for collaboration. In 2015, nearly one-quarter of respondents to the GSMA Global Adoption Survey of Mobile Financial Services reported collaborating with another mobile money service and a third of respondents reported they would be collaborating with other services within the next twelve months.<sup>2</sup>

In this context of industry collaboration, the opportunity of interoperability has been widely discussed. While not an objective in and of itself, interoperability has long been proposed as a tool to achieve broader strategic and financial inclusion goals. Interoperability, in its most complete form, refers to interconnection across an array of use cases, including transfers between mobile money accounts or mobile money and bank accounts, both domestically and internationally. One of the first prioritised forms of interoperability allowed transactions to flow between mobile money services and the banking sector. As the industry develops, domestic interoperability between mobile money services has experienced an increasing amount of attention—and it is this form of interoperability in Tanzania that is the focus of this publication.

After more than a decade of mobile money, there is now a growing list of countries<sup>3</sup> which are helping to inform the requirements and pre-requisites to launch interoperability specifically between mobile money services. As the process to launch this form of interoperability is complicated and relatively uncharted, most insights to date have centred on the “what” and “how.” A body of knowledge has been built around key considerations in technical models, commercial models, regulatory conditions and case examples from key markets.<sup>4</sup> This body of knowledge has already distilled critical early lessons about launching interoperability (see Text Box 1).

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<sup>1</sup> See: McKinsey & Company, (2015). *Global payments 2015: A healthy industry confronts disruption*. Available at: <http://www.mckinsey.com/industries/financial-services/our-insights/global-payments-2015-a-healthy-industry-confronts-disruption> as well as SWIFT, (2015). *The Global Adoption of Real-Time Retail Payments Systems (RT-RPS)*. Available at: <https://www.swift.com/node/4716>

<sup>2</sup> GSMA. (2016). *2015 State of the Industry Report on Mobile Money*. Available at: [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/04/SOTIR\\_2015.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/04/SOTIR_2015.pdf)

<sup>3</sup> As of August 2016, account-to-account interoperability is live in Indonesia, Jordan, Madagascar, Pakistan, Peru, Philippines, Rwanda, Somalia, Sri Lanka, Tanzania, and Thailand.

<sup>4</sup> For further information, see:

International Finance Corporation, (2015). *Achieving Interoperability in Mobile Financial Services: Tanzania Case Study*. Available at: [http://www.ifc.org/wps/wcm/connect/8d518d004799ebf1bb8fff299ede9589/IFC+Tanzania+Case+study+10\\_03\\_2015.pdf?MOD=AJPERES](http://www.ifc.org/wps/wcm/connect/8d518d004799ebf1bb8fff299ede9589/IFC+Tanzania+Case+study+10_03_2015.pdf?MOD=AJPERES)

di Castri, S. and Gidvani, L. (2016). *Enabling Mobile Money Policies in Tanzania*. GSMA. Available at: <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/03/Tanzania-Enabling-Mobile-Money-Policies.pdf>

Clark, D. and Camner, G. (2014). *A2A Interoperability: Making Mobile Money Schemes Interoperate*. GSMA. Available at: [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/03/A2A-interoperability\\_Online.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/03/A2A-interoperability_Online.pdf)

Bindo, R. and Hasnain, S. (2015). *Choosing a technical model for A2A interoperability: Lessons from Tanzania and Pakistan*. GSMA.

Despite these advances, the greater question on the impact of domestic account-to-account interoperability has yet to be answered. While impact will be best measured over the long term, this paper draws on early insights from Tanzania to gain visibility on whether the launch of this new functionality between mobile money providers has created change in the market. As one of the most developed mobile money markets, Tanzania provided a strong market context at launch<sup>5</sup> and provides the best case to explore how this new service has impacted market development. In other words, by looking at high-level indicators and qualitative market feedback, we can start to understand whether domestic interoperability between mobile money providers is living up to the hype.

Measuring the impact and attribution of a single product or service is a challenge in any context, particularly in early stages. Tanzania's dynamic environment, the market's natural growth trajectory, and the introduction of this new functionality are all key inputs that make a purely quantitative analysis of interoperability potentially misleading. Rather than focus solely on quantifiable and attributable impact, this paper leverages both qualitative and quantitative analysis by including industry perspectives from the providers. This approach allows us to contextualize growth patterns against the broader strategic impact of account-to-account interoperability among mobile money providers in Tanzania to date.

#### TEXT BOX 1

### Lessons & insights on launching account-to-account interoperability

Interoperability, in its broadest form, contributes to digitising cash in the ecosystem, increasing efficiency of payment systems, and improving financial inclusion by bridging the gap between banked and unbanked consumers. As such, interoperability will continue to be a strategic priority.

Mobile money providers are committed to ensure services are interoperable with relevant financial services and payments providers, including banks and other mobile money providers. The integration with banks is already happening, with more than 40% of participants in the 2015 GSMA Global Adoption Survey of Mobile Financial Services offering a bank-to-wallet or wallet-to-bank product.<sup>6</sup>

One form of domestic interoperability, account-to-account, has become more relevant as the industry has developed and the proliferation of accounts has increased. As a result, account-to-account interoperability has been tested in a variety of market contexts over the past three years. These implementations have yielded valuable early lessons on the conditions to successfully launch this service. These include:

Available at: [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/01/2015\\_GSMA\\_Choosing-a-technical-model-for-A2A-interoperability\\_Lessons-from-Tanzania-and-Pakistan.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/01/2015_GSMA_Choosing-a-technical-model-for-A2A-interoperability_Lessons-from-Tanzania-and-Pakistan.pdf)

<sup>5</sup> Musa, O., Niehaus, C. and Warioba, M. (2014). *Is Tanzania Ready for Interoperability in Mobile Money?*. CGAP. Available at: <http://www.cgap.org/blog/tanzania-ready-interoperability-mobile-money>

<sup>6</sup> GSMA. (2016). *2015 State of the Industry Report on Mobile Money*. Available at: [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/04/SOTIR\\_2015.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/04/SOTIR_2015.pdf)

**Enabling regulatory environment:** A constructive dialogue with policymakers, as happened in Tanzania, is absolutely key to ensure there is alignment in understanding timing, benefits, costs, and risks of interoperability.<sup>7</sup> This ensures:

- The timing of interoperability is determined by commercial logic. If mandated, and therefore introduced prematurely, interoperability could undermine early-stage investment incentives and increase operational complexity and risk, without advancing market growth.
- Use cases and transactions types should be considered separately to ensure that interoperability answers customer demand. In Tanzania the use case was P2P transfers, and has remained the only use case implemented to date.

**Appropriate time to launch:** Implementing interoperability is complex, both commercially and technically, and also requires resources and investments. Because of these requirements, providers should consider when the most appropriate time would be to launch interoperability. Understanding the market readiness for the implementation is critical.

**Solid operational foundations:** Strong and secure mobile money operational foundations reinforce not only customer trust, but that of partners. Interoperability requires providers to integrate, and by extension expose, their system. A core tenet for a successful partnership relies in the mutual trust that both providers have robust and reliable systems and foundations. Going forward, the GSMA's Code of Conduct for Mobile Money Providers can become a more efficient method to demonstrate commitment to operational best practices.

**Risk mitigation and management:** Interoperability adds a layer of complexity and identifying and mitigating associated risks is crucial. Providers must have the capacity to develop and agree upon multi-lateral rules to make sure that risks are being mitigated, customers are protected, and settlement is managed properly, among others.

**Competitive landscape and choice for the industry:** The industry should promote a competitive landscape of financial services providers to efficiently facilitate low-value transactions. Mobile money interoperability can be achieved through different models and the mobile money industry needs to have a choice as to which option to implement.

**Delivering a customer-centric experience:** Customer experience remains critical for interoperability to scale. If the customer journey is overly complicated, customers will continue to find alternative solutions for cross-net transactions—either reverting to cash or a multi-SIM solution.<sup>8</sup>

<sup>7</sup> di Castri, S. and Gidvani, L. (2016). *Enabling Mobile Money Policies in Tanzania*. GSMA. Available at: <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/03/Tanzania-Enabling-Mobile-Money-Policies.pdf>

<sup>8</sup> Bindo, R. (2015). *Operational guidelines for interoperability: A customer-centric approach*. GSMA. Available at: [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/09/2015\\_GSMA\\_Operational-guidelines-for-interoperability-A-customer-centric-approach.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/09/2015_GSMA_Operational-guidelines-for-interoperability-A-customer-centric-approach.pdf)

# Mobile money in Tanzania

As one of the earliest countries to launch mobile money back in 2008, Tanzania has evolved into a mature, competitive market. With four mobile money providers—Airtel, Tigo, Vodacom, and Zantel<sup>9</sup>—Tanzania is a significant contributor to growth in the region. In 2015, almost a third of active mobile money accounts in East Africa were in Tanzania.<sup>10</sup> This was an extension of strong growth, as mobile money transactions in Tanzania had doubled between 2013 and 2015.<sup>11</sup>

## Tanzania at a glance



**Total population:**  
53.4 million



**Pop. covered by 2G:** 85%



**Connectivity Index Score:**  
31.6<sup>13</sup>



**2015 GDP per capita:**  
USD 864.9<sup>14</sup>



**Ease of Doing Business Rank:**  
139<sup>15</sup>

**Adult population:**  
29.3 million<sup>12</sup>

**Pop. covered by 3G:** 35%

### Mobile prevalence<sup>16</sup>



- 39.4 million mobile connections<sup>17</sup>
- 25.3 million unique mobile subscribers
- 16.1 million mobile internet subscribers
- 25.3% of mobile connections are smartphones

### Mobile money & financial inclusion



- 32.4% of adults have a mobile money account<sup>18</sup>
- 16.5 million registered mobile money accounts<sup>19</sup>
- Transactions doubled between 2013 and 2015<sup>20</sup>
- In 2015, almost a third of active mobile money accounts in East Africa came from Tanzania<sup>21</sup>

<sup>9</sup> Zantel was acquired by Millicom in 2015. See more: <http://www.millicom.com/media/3710275/ZantelPR.pdf>

<sup>10</sup> GSMA. (2016). *2015 State of the Industry Report on Mobile Money*. Available at: [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/04/SOTIR\\_2015.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/04/SOTIR_2015.pdf)

<sup>11</sup> International Monetary Fund, (2016). *Regional Economic Outlook: Sub-Saharan Africa*. Available at: <https://www.imf.org/external/pubs/ft/reo/2016/afr/eng/sreo0416.htm>

<sup>12</sup> World Bank, Global Financial Inclusion Database (2015), Mobile account (% age 15+) [2014]. Available at: <http://databank.worldbank.org/data/reports.aspx?source=global-findex>

<sup>13</sup> Out of a total of 100. Tanzania is ranked 113 out of 130. GSMA Mobile Connectivity Index, available at: <http://mobileconnectivityindex.com/#>

<sup>14</sup> World Bank, GDP per capita (current US\$) (2015). Available at: <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

<sup>15</sup> Tanzania is ranked 139 of 189. World Bank, Economy Rankings (2015). Available at: <http://www.doingbusiness.org/rankings>

<sup>16</sup> GSMA Intelligence. Current refers to Q2 2016

<sup>17</sup> Tanzania Communications Regulatory Authority, (2016). *Quarterly Communications Statistics Report: January- March 2016 Quarter*. Available at: <http://www.tkra.go.tz/images/documents/telecommunication/CommStatMarch16.pdf>

<sup>18</sup> World Bank, Global Financial Inclusion Database (2015), Mobile account (% age 15+) [2014]. Available at: <http://databank.worldbank.org/data/reports.aspx?source=global-findex>

<sup>19</sup> In March 2016. Tanzania Communications Regulatory Authority, (2016). *Quarterly Communications Statistics Report: January- March 2016 Quarter*. Available at: <http://www.tkra.go.tz/images/documents/telecommunication/CommStatMarch16.pdf>

<sup>20</sup> International Monetary Fund, (2016). *Regional Economic Outlook: Sub-Saharan Africa*. Available at: <https://www.imf.org/external/pubs/ft/reo/2016/afr/eng/sreo0416.htm>

<sup>21</sup> GSMA Mobile Money Estimates & Forecasts

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From the early days, the Bank of Tanzania has had a progressive regulatory approach, seeking to create a conducive “test and learn” environment.<sup>22</sup> This approach, combined with the competitive landscape, has made Tanzania a clear leader in the industry and helped to drive innovation, creating products and services aimed to improve the financial lives of its citizens. Some recent examples include:

- Tigo launched its Wekeza initiative in September 2014, making a regular profit share distribution to customers from the returns generated on the capital held in the Tigo Pesa Trust Fund.<sup>23</sup>
- At the end of 2014, a mobile credit and savings product, M-Pawa, was jointly launched by Vodacom and CBA. Vodacom reported that in the last two years, 4.9 million Tanzanians have borrowed 39 billion Tanzanian shillings (US\$ 19.5m) through M-Pawa.<sup>24</sup>
- Airtel Tanzania, in partnership with credit scoring provider Jumo, launched “Timiza Wakala Loans” in 2015, a service which provides 20,000 Airtel Money agents with loans between starting from TZS 50,000 to TZS 500,000 (approximately US\$ 23 to US\$ 229).<sup>25</sup>

After observing ongoing integrations between mobile money providers and the banking sector, in 2013, the Bank of Tanzania began to encourage discussions on account-to-account interoperability between mobile money providers. Providers would begin to interconnect their services in the following three years, first with a bilateral arrangement between Tigo and Airtel in September 2014 (with an official commercial launch the following February). In December 2014, Tigo connected with Zantel, and in February 2016, Vodacom announced its commercial launch, connecting with Airtel and Tigo.<sup>26</sup> The International Finance Corporation, supported by the Bill & Melinda Gates Foundation and the Financial Sector Deepening Trust in Tanzania, facilitated the majority of the industry discussions leading to the launches.

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<sup>22</sup> di Castri, S. and Gidvani, L. (2016). *Enabling Mobile Money Policies in Tanzania*. GSMA. Available at:

<http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/03/Tanzania-Enabling-Mobile-Money-Policies.pdf>

<sup>23</sup> Williamson, C. (2014). Financial inclusion in Tanzania: Tigo rewards its mobile money customers. *GSMA Mobile Money Blog*.

Available at: <http://www.gsma.com/mobilefordevelopment/programme/mobile-money/financial-inclusion-in-tanzania-tigo-rewards-its-mobile-money-customers>

<sup>24</sup> Aglionby, J. (2016). Tanzania's fintech and mobile money transform business practice. *FT.com*. Available at:

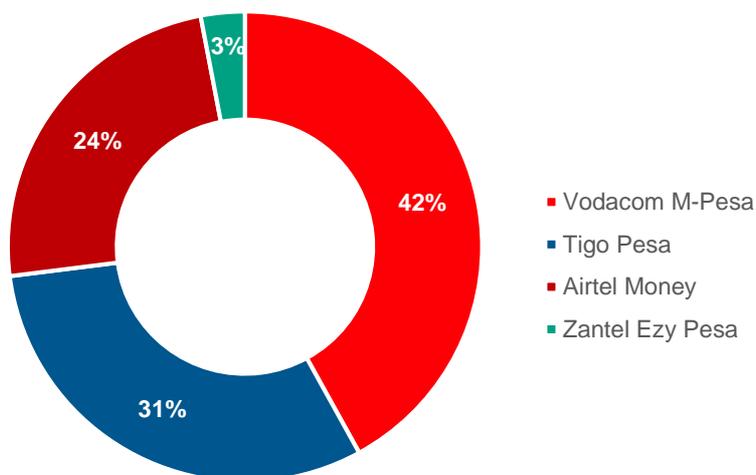
<http://www.ft.com/cms/s/0/0e8b56ee-41ca-11e6-9b66-0712b3873ae1.html#axzz4Izv6MqPA>

<sup>25</sup> Airtel Africa, (2015). *Airtel Offer Timiza Loans to Airtel Money Agents*. Available at:

<http://africa.airtel.com/wps/wcm/connect/africarevamp/africa/home/media/press-releases/tanzania+airtel+offer+timiza+loans+to+airtel+money+agents>

<sup>26</sup> Vodacom Tanzania, (18 February 2016). *Mobile Money Interoperability*. Available at: <https://www.vodacom.co.tz/aboutus/news>

Figure 1: Registered mobile money accounts and market share by provider (Q1 2016)<sup>27</sup>



Operator	January	February	March
Airtel Money	4,056,498	4,099,632	3,980,831
Tigo Pesa	5,277,584	5,217,428	5,105,149
M-Pesa	7,469,540	7,180,124	7,030,132
Ezy Pesa	325,736	415,165	419,765
<b>TOTAL</b>	<b>17,129,358</b>	<b>16,912,349</b>	<b>16,535,577</b>

<sup>27</sup> In March 2016. Tanzania Communications Regulatory Authority, (2016). *Quarterly Communications Statistics Report: January- March 2016 Quarter*. Available at: <http://www.tcra.go.tz/images/documents/telecommunication/CommStatMarch16.pdf>

# Impact in the market: Signs of early growth, but still a long way to go

Account-to-account interoperability between the mobile money providers is only starting to move beyond what could be considered a soft launch in Tanzania. While the service was technically available in 2014, only recently have providers put their full weight behind it with marketing campaigns. As this was such a new service in the market, providers took a “wait and see” approach, which allowed them to capture some insights on organic growth that were particularly noticeable amongst loyal customers. Confidence in the technical and operational functionality of the service has grown, and providers are now starting to actively promote and encourage usage. Airtel initiated with early radio and below-the-line (BTL) marketing campaigns that included price promotions. More recently, Tigo has launched a larger above-the-line (ATL) marketing campaign, encouraging any user to send money to Tigo Pesa (see Image 1).

**Image 1: Example of Tigo Pesa’s marketing campaign.**  
The billboard reads “Send money to Tigo Pesa from any network at the same fee.”



## Impact on P2P transfers

Possibly due to the conservative approach at launch, interoperable P2P transfers between providers still make up only a small percentage of overall P2P transfer value and volume – estimated across providers to be 6-8% of total P2P transfers.<sup>28</sup> This is less than half of the average value transacted between mobile money services and banks in the country. However, given the predominance of P2P transfers as a use case and the light-touch approach to marketing, the absolute 6-8% range should be balanced against the significant growth pattern of these cross-net

<sup>28</sup> Based on self-reported estimates, July 2016.

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transfers. For instance, Tigo Tanzania has experienced an average monthly growth (by value) of 17% across in-bound (or receiving) and out-bound (or sending) P2P transfers since launch. Annually, the values tripled between July 2015 and July 2016, which makes interoperability the fastest growing Tigo Pesa product to date; although it is a challenge to benchmark because any new service benefits from the mature market context. Nonetheless, other providers have cited similar growth, and in July 2016, Airtel reported that interoperable P2P transfers had tripled.<sup>29</sup> Moreover, Airtel has experienced consistently strong growth of at least 10% every month and more than US \$16 million is processed in interoperable transfers every month.

Vodacom, the most recent provider to connect with Airtel and Tigo, has reported more gradual transactional growth. Vodacom views domestic interoperability as an opportunity to increase convenience for customers, especially those who may operate across multiple accounts. In Tanzania, many high-usage mobile money customers have multiple SIMs<sup>30</sup> and Vodacom believes these customers are likely to have accounts with multiple mobile money providers. For these customers, account-to-account interoperability may not have been game-changing, but it has added convenience and greater choice of which account they prefer to send from or receive into.

## Impact on off-net vouchers

In addition to growth, cross-net transactions can be put into context against a common and comparative use case: the off-net voucher. Off-net vouchers were the primary mechanism to send money across services prior to the launch of account-to-account interoperability. In this case, an individual who receives money from a subscriber on a different network is notified via SMS to cash-out using a voucher code. The money immediately exits the system at a cost to the sending provider who pays the agent a cash-out commission.

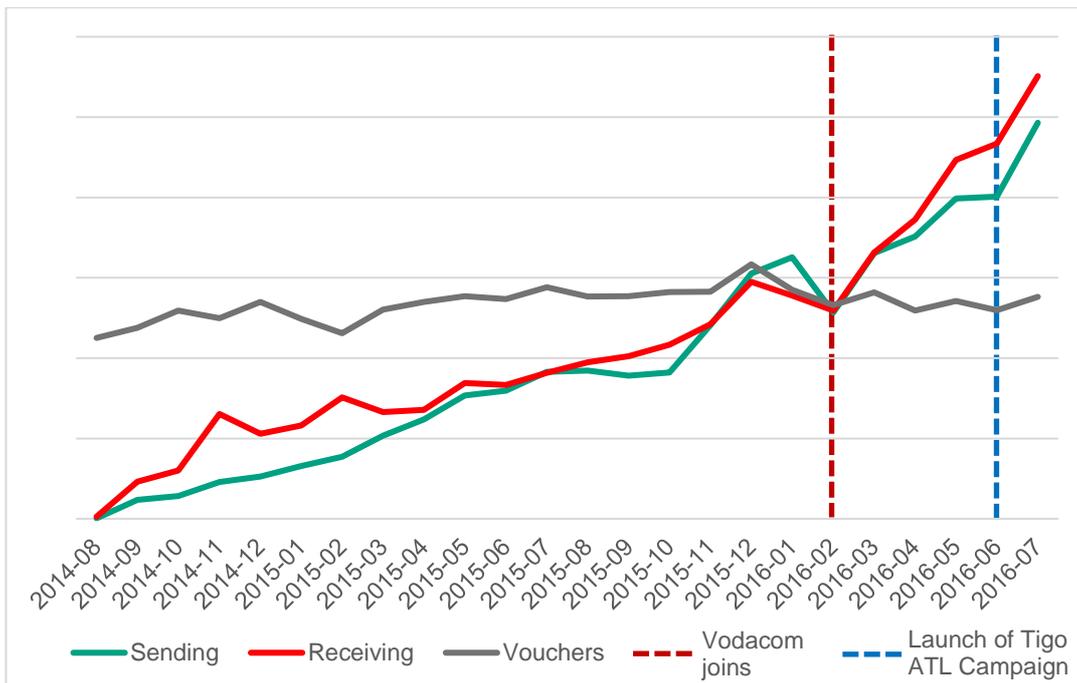
With the introduction of account-to-account interoperability, one notable achievement of cross-net transactions is that they have surpassed vouchers for both Tigo and Airtel. For Tigo, vouchers have remained relatively stable, while the rates of sending and receiving cross-net transactions have grown such that they are double those of vouchers in both volume and value (see Figure 2). In this case, vouchers continue to play a role in the market, but either more customers are using cross-net transactions or loyal customers have increased their activity. This trend displacing vouchers has had a positive impact on both the ecosystem and on providers, because cross-net transactions allow funds to remain digital, while vouchers must return to a cash form.

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<sup>29</sup> As reported during the GSMA Mobile Money Leadership Forum, July 2016 in Dar es Salaam, Tanzania.

<sup>30</sup> Customers holding multiple SIM cards is common in Tanzania. According to GSMA Intelligence, there are 1.56 SIMs per unique subscriber in Tanzania (Q3 2016).

**Figure 2: Tigo interoperable transaction growth by volume (Aug 2014 to Jul 2016)**



*Note: The red dotted line refers to the month Vodacom joined the domestic interoperability solution. The blue dotted line refers to the month Tigo Pesa launched ATL campaigns.*

To fully contextualize these different perspectives, further analysis is required to understand specific customer behaviour towards vouchers or any impact from customers with multiple SIMs. Time and greater investment in understanding customer behaviour will create more visibility on whether sending money across mobile money deployments has tapped into new demand or, more simply, displaced voucher transactions.

Nonetheless, it is clear interoperability has had an impact and these insights demonstrate the shift, despite the “wait and see” approach by providers towards marketing the service. That said, current data does not provide enough visibility on the performance of the market as a whole, and further research is required to isolate attribution and overall market uplift. As providers continue to grow, innovate and compete, there will continue to be multiple factors beyond interoperability which enable new market behaviour.

# Beyond the data: Perspectives on interoperability

Launching any new product or service comes with certain considerations, including return on investment, market relevancy and scalability. Account-to-account interoperability adds additional complexity, as it requires industry collaboration around P2P transfers, one of the driving use cases for mobile money.

Beyond data, each provider's perspective also offers important insights for how we can assess impact. Each provider's experience with interoperability captured below—from early strategic decisions through to launch—can influence how the industry approaches both collaboration and interoperability going forward. While common themes shared across the providers underscore the opportunity of interoperability, there is important diversity as well, which underscores its complexity.

## MILLICOM: TIGO PESA

### De-bunking the myths of interoperability in Tanzania

*By Ruan Swanepoel, Head of Mobile Financial Services Millicom - Africa*

Mobile money interoperability has been a ground-breaking development in Tanzania. However, it was also a complicated one, because it was largely untested for mobile operators. It required all providers and industry stakeholders to jointly develop a process to identify and manage potential risks and considerations. To date, this was the most extensive example of industry collaboration in Tanzania.

Millicom had an unwavering belief that interoperability was the only way to create a true inclusive financial ecosystem and that the result would deliver exponential growth for all participants. Myths highlighted were the challenges raised by the industry players that we had to overcome.

#### **Myth 1: Interoperability will negatively impact competition because customers will no longer differentiate between providers**

Since the beginning of mobile money in Tanzania, building the network of customers has been a key priority and, as a result, the success of most campaigns was determined by impact on customer acquisition. The more customers we could acquire, the better the network we could offer. However, in Tanzania's mature market context, the focus on acquisition was resulting in little more than customer poaching, where customers shift between networks. Acquisition had become an expensive tactic that added limited value in terms of market growth.

In reality, interoperability has contributed to market growth in a way we have not experienced before. In addition, we have developed a better understanding for how we compete. Competition lies in quality of service, and agent quality and liquidity are far more significant determinants for success. Tigo Pesa's success is measured by driving value into the system, rather than growing our own, segregated network. We have also found customer engagement more responsive

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because it is much easier to position mobile money as a tool that more seamlessly fits into everyday life.

### **Myth 2: Providers will either win or lose with domestic interoperability**

The second commercial concern associated with launching interoperability was a fear that, once launched, the result will be a “win-lose” rather than “win-win.” Practically, the concern was that there would be a one-directional flow of transactions which would unfairly benefit one provider.

In Tanzania, the flow of funds appears to be two ways, allaying concerns that only one provider would benefit and making this service a true ecosystem play. This is likely due to two aspects: the first is that each provider has strong mobile money operations in place and the second is that customers do not pay extra to send money across networks, allowing behaviour patterns to mirror those of on-net transactions. The success of this approach is intrinsically connected to the fact that the commercial arrangement between providers was equitable. By sharing the interoperable P2P revenues, providers were able to eliminate the risk that another provider would influence the flow of transaction or discourage interoperable transactions.

### **Myth 3: Off-net vouchers make the need for account-to-account interoperability redundant**

A frequent counterpoint to interoperability is that off-net vouchers is a pre-existing and viable alternative to interoperable P2P transactions. From our experience in Tanzania, it is clear that the need for interoperability exists beyond the voucher, as it retains value in the e-money ecosystem while keeping the end-to-end transaction digital, eliminating the need to convert to cash frequently. We can see that usage of off-net vouchers continues, but is not growing. By contrast, the volumes in interoperable transactions are double that of the voucher. For Millicom, this is a clear demonstration that the need to send money directly to the account of the subscriber on another network is preferred and can be viewed as a separate use case which has not cannibalized the voucher transactions.

Two years on, it is clear that, at least for the Tanzanian context, many commercial concerns associated with interoperability have not borne out in the data. For Millicom, demystifying these commercial concerns have reinforced our commitment to scale interoperability by driving P2P growth and by extending interoperability to new use cases, including merchant payments. Creating a sustainable and robust mobile money ecosystem will continue to require industry collaboration – and Millicom will continue to remain an active advocate for collaboration.

## VODACOM M-PESA

### The next step in interoperability

*By Chris Williamson, Principal Manager, M-Pesa Commercial Strategy, Vodafone Group*

Vodacom is committed to creating a cashless Tanzanian society, and sees interoperability as an important stepping stone on this journey. Interoperability—in all its forms—draws more cash into the formal financial system and helps improve our customers' lives by simplifying transactions and adding speed and convenience to their daily routine. Interoperability with Tigo and Airtel has extended the reach of P2P transfers to make M-Pesa even more convenient for our customers.

Vodacom Tanzania has been enabling interoperability for M-Pesa's customers since 2012, when we began integrating with banking platforms. Since then, we have enabled real-time account-to-account transfers to and from 36 banks, the vast majority of Tanzania's banking market. International interoperability is also a reality, thanks to money transfer partnerships with Safaricom, MoneyGram and Western Union. The knowledge and experience gained through these initiatives has paved the way for domestic account-to-account interoperability with Tigo and Airtel, which is based on similar integration capabilities and business processes (including secure, real-time transaction processing; managing prefunded settlement and reconciliation; implementing robust, aligned compliance policies and procedures).

The maturity of the Tanzanian mobile money market was a critical prerequisite for this form of interoperability. It meant that operators had the experience to manage the operational and commercial complexity involved. The maturity of the market also strengthened the commercial incentives to interoperate—with all players having made substantial investments in customer education and distribution.

Since the service was launched in February 2016, 6% of our customers have either sent or received a P2P transfer directly to or from a Tigo Pesa or Airtel Money account. These off-net P2P transfers now account for 6% of our total volume of P2P transfers, and we are seeing gradual growth in off-net transactions.

These modest figures reflect the fact that most Tanzanians regularly use more than one SIM and thus have a limited need to transact off-net. However, in the long-run, we do expect a gradual increase in customer loyalty towards one primary SIM provider. We expect this to have an interesting impact on the competitive dynamics of the Tanzanian market. We are also interested in the potential to extend interoperability to other transactions in future.

## AIRTEL MONEY

### The importance of the broader evolution of interoperability

*By Aijaz Khan, Head of Airtel Money, Tanzania*

Airtel was a frontrunner with our support to launch account-to-account interoperability in Tanzania. Our enthusiasm stemmed from three key opportunities that interoperability would help enable: an opportunity to innovate, an opportunity to build customer loyalty, and an opportunity to catalyse market growth.

Account-to-account interoperability allowed us to reinforce our commitment to providing our customers with relevant and innovative solutions through Airtel Money. As the last provider to enter the Tanzanian market, Airtel had to build a strategy that generated significant customer loyalty and impact quickly. This required us to be innovative across a number of dimensions, especially our product and services. Creating brand stickiness is crucial to remain competitive in a market with many strong players. Therefore, in this context, account-to-account interoperability was a clear opportunity for us to create value for our customers and by extension, increase customer loyalty to Airtel Money.

However, beyond the competitive considerations, mobile money interoperability is part of a larger ecosystem strategy built on the benefits of collaboration. Industry collaboration, under the right circumstances, adds significant value to the market by reducing barriers for customers to transact. Currently the total value of interoperable transactions are in excess of \$ 16 million per month, and growing consistently at 10% growth month on month.

It's important to note that interoperability existed long before the launch of Airtel's initial partnership with Tigo in 2014. Prior to that, we had already integrated with 24 banks, another key form of interoperability, allowing customers to seamlessly move funds between their Airtel Money account and bank account. We consider account-to-account interoperability as the natural next step for mobile money in Tanzania, due to its mature and competitive market context. The concept of interoperability is, and should be, considered much broader than P2P transfers.

While we are encouraged by the early growth in off-net P2P transfers, we believe that the true success of interoperability in Tanzania will be measured by its ability to evolve and incorporate new use cases such as merchant payments, business-to-consumer payments or connecting via agent networks. The mobile money industry is heading in the right direction: 60% of the addressable population is financially included, mostly due to mobile money penetration. Sooner or later, Tanzania will become an example of a cashless economy. Airtel Tanzania is an active player to make this dream a reality. To that end, we are revolutionizing merchant payments in Tanzania with the introduction of state of the art NFC cards. Our next priority is to make interoperability work in merchant payments.

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# Conclusion

Providers in Tanzania have been pioneers of mobile money. The strength of their operational foundations, their innovative product development and their willingness to explore collaboration all underpin what drives market growth. This framing is critical to evaluate domestic account-to-account interoperability, as this new service is intrinsically linked to the broader Tanzanian narrative. Given the market maturity, the support of the regulator and the appetite of the key players, Tanzania was well-placed to test the potential of offering an interoperable service between mobile money providers.

Although the early growth of cross-net transactions across mobile money providers is remarkable, the full impact at the market level is too soon to tell. Mobile money interoperability has further to go before it is close to the transaction volume processed through bank integrations or on-net P2P transfers. What is encouraging, beyond this initial uptake, is that Tanzania has been able to debunk some of the myths or fears around lost market share or cannibalisation of on-net P2P transactions due to A2A interoperability. Tanzania also yielded lessons on implementation, particularly the positive impact of the providers' decision to honour a consistent price for on-net P2P transfers and cross-net P2P transfers.

The full impact that account-to-account interoperability will have on the market will become clearer in the coming months and years. Further investment in customer campaigns are underway, and these investments will help evaluate the growth ceiling and the extent of mass-market need for the functionality. In addition, the industry is and should continue to explore how improvements in the technological and financial infrastructure could make mobile money interoperability more efficient. For customers, the current process to send money cross-net is still more complicated than on-net. For providers, faster bank transfers would reduce the cost of capital as pre-funding trust accounts could occur more regularly. Therefore, while a promising start, measuring impact over the long term will provide more clarity on the potential of interoperable solutions between providers. At the same time, Tanzania will continue to be an industry front-runner across other forms of interoperability as providers continue to invest in developing a robust and relevant mobile money ecosystem.



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