Interoperability in East Africa
Dispatches from the Home of Mobile Money

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The success of interoperability depends on finding the right balance between governance, business and technology arrangements for participants.

CGAP has found evidence across markets that pursuing interoperability without addressing each of these elements can lead to sub-optimal results. See CGAP’s interoperability blog series for more information.

**Governance.** There must be decision-making to manage shared processes, rules, operations, and risks.

**Business.** Models must balance the economic interests of interoperability participants and users.

**Technology.** Infrastructure must exist to connect participants and transfer payments and related data.
A variety of approaches are being pursued across East Africa

<table>
<thead>
<tr>
<th>Country</th>
<th>Launch date</th>
<th>Regulation</th>
<th>Governance</th>
<th>Business Model</th>
<th>Technology</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanzania</td>
<td>2014–2016</td>
<td>NPS Act and e-Money Regulations, no mandate</td>
<td>Multilateral agreement between Airtel, Tigo and Zantel. Vodacom bilateral with each provider.</td>
<td>• Receiver pays interparty fee, bilaterally negotiated • No consumer surcharge</td>
<td>Bilateral</td>
<td>Industry initiated and led with independent facilitator</td>
</tr>
<tr>
<td>Uganda</td>
<td>2017</td>
<td>No NPS Act, strong encouragement from Bank of Uganda</td>
<td>Multilateral agreement</td>
<td>• No interparty fee, then moved to receiver pays • Consumer surcharges</td>
<td>Aggregator, then bilateral</td>
<td>Strong encouragement from regulator, but led with independent facilitator</td>
</tr>
<tr>
<td>Kenya</td>
<td>2018 (MNO)</td>
<td>NPS Act, no mandate (but regulator encouragement)</td>
<td>Bilateral agreements</td>
<td>• No interparty fee and no surcharge for initial trial period.</td>
<td>Bilateral</td>
<td>Strong encouragement from regulator, no independent facilitator</td>
</tr>
<tr>
<td></td>
<td>2017 (Bank)</td>
<td>NPS Act, no mandate (but regulator encouragement)</td>
<td>Multilateral agreement</td>
<td>• Sender pays interparty fee • Consumer surcharge</td>
<td>Switch</td>
<td>KBA led with independent facilitator (FSDK)</td>
</tr>
<tr>
<td>Rwanda</td>
<td>TBD</td>
<td>NPS Act, historical mandate, but not full compliance</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>Initiated by regulator</td>
</tr>
</tbody>
</table>

Source: CGAP research
Interparty business models can have significant impact on success

Schemes across East Africa have approached interparty models in a variety of ways. Each has different impacts on provider profitability, customer value, and ultimately total volumes.

<table>
<thead>
<tr>
<th>Person-to-Person (P2P) Scheme</th>
<th>Interparty Model</th>
<th>Potential Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNO / Tanzania</td>
<td>Receiver pays interparty fee and no surcharging. The sending provider is compensated via the interparty fee.</td>
<td>Off-net transactions are &quot;revenue neutral&quot; to providers. Customers have desire to transact.</td>
</tr>
<tr>
<td>MNO / Uganda</td>
<td>Receiver pays interparty fee to sending provider. The sending provider surcharges customer.</td>
<td>Profitable for the sender, but unclear whether customer is incentivized to transact.</td>
</tr>
<tr>
<td>PesaLink / Kenya</td>
<td>Sender pays interparty fee, with sending provider surcharging customers to cover cost.</td>
<td>Provider economics may be balanced, but unclear whether customer is incentivized.</td>
</tr>
<tr>
<td>MNO / Kenya</td>
<td>No interparty fee and no surcharge.</td>
<td>Value for the customer, but not profitable for the provider, so questions remain around provider incentives to promote service.</td>
</tr>
</tbody>
</table>

### Sending Provider Revenue/Cost ($25 P2P transaction)

- **MNO / Uganda**: Profitable for the sender, but unclear whether customer is incentivized to transact.
- **PesaLink / Kenya**: Provider economics may be balanced, but unclear whether customer is incentivized.
- **MNO / Kenya**: Value for the customer, but not profitable for the provider, so questions remain around provider incentives to promote service.

**Source**: CGAP research
Tanzania has performed the best so far in driving volumes

Interoperable P2P transactions currently account for ~30% of all P2P in the market
Over 60 percent of phone owners in Tanzania transact between providers

CGAP performed a nationally representative survey in Tanzania and found that over 60 percent of phone owners were using the interoperable service, and 75 percent of mobile money customers transacting with different customers were using the service.

Source: Tanzania Interoperability Post-Implementation Review, CGAP (forthcoming)
Interoperable users are mostly similar to non-interoperable users

Users of interoperability look the same as non-users by most demographic measures, including gender, age, level of education, and the reasons they send money.

**Gender**

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interoperable</td>
<td>63%</td>
<td>37%</td>
</tr>
<tr>
<td>Non-interoperable</td>
<td>60%</td>
<td>40%</td>
</tr>
</tbody>
</table>

**Mean Age**

- Interoperable: 31.5
- Non-interoperable: 31.8

**Education**

- Technical training, university: 32%
- Secondary: 46%
- Primary: 21%

**Reason for sending**

- Friends and family: 72%
- Business partner: 29%
- Business supplies: 27%
- Services: 26%
- Salary: 14%

Source: Tanzania Interoperability Post-Implementation Review, CGAP (forthcoming)
But interoperable users do more to integrate digital into their daily lives

Users of interoperability do however differ from non-users in a few important ways: they **send more frequently**, they **send smaller amounts**, and they **keep larger balances** on their wallets. In short, they are doing more than non-users to integrate payment services into their daily financial lives.

- **Did you cash-in for this transaction or did you already have money in your wallet?**

  - Interoperable respondent (N=838)
  - Non-interoperable respondent (N=301)

  - **Cash-in**
    - 19% (Interoperable)
    - 56% (Non-interoperable)
  - **Had money in wallet**
    - 81% (Interoperable)
    - 32% (Non-interoperable)
  - **Other**
    - 0% (Interoperable)
    - 12% (Non-interoperable)

  "Yes [I pay bills using my account] No [I did not do before]. Nowadays after this new system [interoperability] that’s when I do it more... The flow of money has increased [since] I can send and receive money from any network." - **Male FGD participant, interoperable group in Mtwara rural**

  "I store money for a long time as now money goes directly to my account and I have no fear that I will delete the text." - **Male FGD participant, interoperable group in Mtwara town**

Source: Tanzania Interoperability Post-Implementation Review, CGAP (forthcoming)
Meet Aisha…
27-year-old business woman from Dar es Salaam

“Right now I can say I save more than I used to… it doesn’t cost me to save money there and when I want to send it to someone I can move it to M-Pesa so it’s easy.”

“Before let’s say I wanted to send money to my mother in the village I would send 200,000 [Shillings] at once. But now that I can send maybe every two days, 20,000 or 10,000 - something like that.”

Source: Tanzania Interoperability Post-Implementation Review, CGAP (forthcoming)
Meet John…
Cloth importer in Dar es Salaam

“When I go to the agent, I just tell him to deposit the money in my account. **Then I will get to decide how I am going to send to a recipient, which is different from asking the agent to do it. It just makes it easier.** [Before I had to ask] the agent to directly deposit in the persons account and since you give the recipients number in a rush you get a number wrong. Then…after some time the recipient tells you they have not received [the money]”

“If someone knew your phone number, he had the ability to steal from you….**Once they made it easier, the money now goes directly to my account, to my wallet. This is unlike the procedure before that used to be confusing and was untrustworthy.**”

Photo: BFA / 2017

Source: Tanzania Interoperability Post-Implementation Review, CGAP (forthcoming)
So what’s next for interoperability in East Africa?

CGAP research indicates that cross-border remittances are an opportunity. CGAP performed a nationally representative survey across East African markets and found that around **8 percent of phone owners send/receive across borders**, and **2-3x this number travel across borders**.

Over the past year, have you sent or received money or traveled to another country in East Africa?

<table>
<thead>
<tr>
<th>Country</th>
<th>% Senders</th>
<th>% Receivers</th>
<th>% Travelers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burundi</td>
<td>14%</td>
<td>14%</td>
<td>34%</td>
</tr>
<tr>
<td>Kenya</td>
<td>5%</td>
<td>5%</td>
<td>17%</td>
</tr>
<tr>
<td>Rwanda</td>
<td>14%</td>
<td>12%</td>
<td>30%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>4%</td>
<td>5%</td>
<td>8%</td>
</tr>
<tr>
<td>Uganda</td>
<td>8%</td>
<td>10%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Source: EAC Market Demand, CGAP (forthcoming)
Around 1 in 5 phone owners in East Africa are missing transactions they want to perform across borders.

The same study found that cross-border corridors already provide a channel for customers to make these transactions (and almost 50 percent of today’s cross-border transactions are moving through these corridors); however, friction is high and opportunities for transactions are consistently missed.

Missed opportunities for foreign transactions

- **Burundi**: 20%
- **Rwanda**: 15%
- **Kenya**: 25%
- **Tanzania**: 10%
- **Uganda**: 20%

**Source:** EAC Market Demand, CGAP (forthcoming)
Beyond P2P, cash-out may be the biggest cross-border opportunity

While many cross-border transactions are being made through mobile money corridors, the vast majority of travelers still carry cash. Add to this the fact that the number of travelers is at least double the number transacting, and a significant potential opportunity emerges. Around 75 percent said they would prefer to use mobile money cash-out if available.

How did travelers get funds during their most recent trip?

<table>
<thead>
<tr>
<th></th>
<th>Burundi (N=344)</th>
<th>Rwanda (N=391)</th>
<th>Kenya (N=384)</th>
<th>Tanzania (N=140)</th>
<th>Uganda (N=405)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carried cash</td>
<td>90%</td>
<td>82%</td>
<td>64%</td>
<td>79%</td>
<td>71%</td>
</tr>
<tr>
<td>Withdrew from ATM</td>
<td>4%</td>
<td>4%</td>
<td>13%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Used credit card</td>
<td>1%</td>
<td>3%</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Withdrew from mobile account</td>
<td>2%</td>
<td>13%</td>
<td>20%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Used travelers checks</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: EAC Market Demand, CGAP (forthcoming)
As solutions progress, we should not repeat past mistakes

Today, retail banking in East Africa services half the value of mobile money using three times the infrastructure. Banking technology is often implemented at sub-scale levels for every use case and in every market, increasing cost and friction for payments. As scheme discussions progress across East Africa, stakeholders should instead focus on driving economies of scale.

Switching infrastructure, including major aggregators

<table>
<thead>
<tr>
<th>Banks</th>
<th>Total annual retail transaction value in billion U.S. dollars (wallet vs. EFT and card)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Switching infrastructure, including major aggregators</td>
</tr>
<tr>
<td></td>
<td>23</td>
</tr>
<tr>
<td>MNOs</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: EAC Payments Infrastructure Landscape, CGAP (forthcoming)