IV Fintech Forum Meeting – CEMLA

Interoperability and digital payments

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March 2021
Interoperability and digital payments - overview

1. Interoperability – the “what” and “why”
2. Where do we stand on interoperability
3. The changing interoperability landscape
4. The cross-border payments perspective
5. Conclusions
What is payment system interoperability?

- Broadly speaking, interoperability is the technical or legal compatibility that enables a system or mechanism to be used in conjunction with other systems or mechanisms. *(BIS Glossary, updated Sept 2016)*
  - Payment system interoperability entails clearing and settlement arrangements AND business agreements and protocols (referred to as schemes).

- Interoperable payment systems enable the seamless interaction of two or more proprietary acceptance and processing platforms, and possibly even of different payment products. *(PAFI report, 2016)*

- the customers of one payment service provider can transact with customers of another payment service provider.

*Source: Adapted from CPMI (2012)*
Why is payment system interoperability important?

Moreover, interoperability is a key feature of financial and ICT infrastructures and access points that support financial inclusion (PAFI)
Levels of interoperability

- Infrastructure level
- System wide
- Cross-system
Where do we stand on interoperability around the world?

Card (access/acceptance) infrastructure is largely interoperable

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<thead>
<tr>
<th></th>
<th>Full interoperability</th>
<th>Good interoperability</th>
<th>Low interoperability</th>
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<td>Global</td>
<td>72</td>
<td>65%</td>
<td>24</td>
<td>22%</td>
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<td>High income</td>
<td>35</td>
<td>85%</td>
<td>4</td>
<td>10%</td>
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<td>Upper middle income</td>
<td>19</td>
<td>58%</td>
<td>9</td>
<td>27%</td>
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<tr>
<td>Lower middle income</td>
<td>14</td>
<td>50%</td>
<td>10</td>
<td>36%</td>
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<td>4</td>
<td>50%</td>
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<table>
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<tr>
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<th>Full interoperability</th>
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<td>Global</td>
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<td>High income</td>
<td>35</td>
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<td>58%</td>
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<tr>
<td>Lower middle income</td>
<td>15</td>
<td>56%</td>
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<td>29%</td>
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Where do we stand on interoperability around the world (cont’d)?

Mobile money services still lack interoperability...

<table>
<thead>
<tr>
<th>Mobile Money</th>
<th>No interoperability</th>
<th>Full interoperability</th>
<th>Low interoperability</th>
<th>Good interoperability</th>
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<td>Global</td>
<td>54</td>
<td>55%</td>
<td>19</td>
<td>19%</td>
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<tr>
<td>High income</td>
<td>16</td>
<td>47%</td>
<td>7</td>
<td>21%</td>
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<tr>
<td>Upper middle income</td>
<td>20</td>
<td>67%</td>
<td>3</td>
<td>10%</td>
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<tr>
<td>Lower middle income</td>
<td>14</td>
<td>54%</td>
<td>8</td>
<td>31%</td>
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<tr>
<td>Low income</td>
<td>4</td>
<td>50%</td>
<td>1</td>
<td>13%</td>
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• Most countries reporting having interoperability stated that it is based on using a central infrastructure.

• Looking at the type of services made available through mobile money accounts, interoperability is most common for person-to-person (P2P) funds transfers and least common for cash-outs at agents.
Where do we stand on interoperability around the world (cont’d)?

New acceptance technologies are rising but are not interoperable

- 55 economies reported having QR code payment acceptance.
- In practically all cases there are multiple QR code service providers for payments, in some cases exceeding 5 or even more than 10.

<table>
<thead>
<tr>
<th>For service providers facilitating acceptance via QR code, regulations enforce EMV or other Interoperability standard</th>
<th>No</th>
<th>Yes</th>
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<td>#</td>
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<tr>
<td>Global</td>
<td>74</td>
<td>71%</td>
</tr>
<tr>
<td>High income</td>
<td>29</td>
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<td>Upper middle income</td>
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<td>77%</td>
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<tr>
<td>Lower middle income</td>
<td>15</td>
<td>56%</td>
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<tr>
<td>Low income</td>
<td>6</td>
<td>75%</td>
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What does interoperability mean in the changing payments landscape?

Interoperability = enabling beneficiaries’ choice in the delivery of social protection programs by disbursing funds through payment mechanisms that can be used everywhere.

Interoperability = enabling the single-access point (any device, any instrument, any provider).

Interoperability = large-volume payment streams (G2P, P2G, bill payments, transport).

Interoperability = new acceptance technologies, e.g., QR Code.

Interoperability = fast payments.

Fast payments.

Interoperability = choice of customer interface; enabling the transfer of customer-permissioned data between banks and fintechs.

Interoperability = allowing the public to use different forms of money interchangeably and enabling the easy flow of funds between different systems.

Central Bank Digital Currency.

Open banking.
New areas of standardization, new infrastructure, new governance

New (or leveraged) infrastructure

- API – Open Banking
- QR Codes
- Tokenization frameworks
- Proxies/alias
- Identity verification / authentication
- Request-to-Pay
- Minimum functionalities & front-end workflows
- Widespread adoption of ISO 20022 and harmonization

New areas of standardization/harmonization

- Fast payment systems
- Proxies/alias centralized/decentralized databases
- TSP vaults
- Digital ID central databases
- API hubs
- CBDC technical platform

Governance

- Role of public vs. private
- Balancing cooperation vs. competition
- Review of access to payment systems (direct vs. indirect participation; and non-banks)
- Technological neutrality/adaptability
- Support for public interest considerations/user welfare

Infrastructure-level integration
Relevance of interoperability to global cross-border agenda

- BB17 Factor an international dimension into CBDC designs
- BB18 Foster the soundness of global stablecoin arrangements
- BB19 Consider the feasibility of new multilateral platforms and arrangements for cross-border payments

• BB14 Adopt harmonised version of ISO 20022 for message formats
• BB15 Harmonise API protocols for data exchange
• BB16 Establish unique identifiers with proxy registries

A. Public and private sector commitment

B. Regulatory, supervisory and oversight frameworks

C. Existing payment infrastructures and arrangements

D. Data and market practices

E. New payment infrastructures and arrangements

Enhance cross-border payments

• BB9 Facilitate increased adoption of PvP
• BB10 Improve (direct) access to payment systems
• BB11 Explore reciprocal liquidity arrangements
• BB12 Extend and align operating hours
• BB13 Pursue interlinking of payment systems

Source: adapted from CPMI, 2020
Conclusions

• Interoperability is key to the efficiency of the national payments system, commerce and the broader economy – in normal and exceptional circumstances.

• Interoperability is instrumental to increasing access to, and use of, transaction accounts/digital payments.

• The fundamentals of interoperability have not changed over time. New use cases have emerged as a result of technological innovation in payments and as a result the scope of interoperability will also need to expand.

• Enabling interoperability in the changing payments landscape – both domestically and across borders – requires a combination of standardization/harmonization and new infrastructure, as well as a review of governance arrangements.